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A Systematic Comparison of Functional Assessment Outcomes in Organizational Behavior Management

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A SYSTEMATIC COMPARISON OF FUNCTIONAL ASSESSMENT OUTCOMES IN ORGANIZATIONAL BEHAVIOR MANAGEMENT

by

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The primary purpose of this study was to compare the recommendation outcomes of two commonly utilized functional assessment tools in the field of Organizational Behavior Management (OBM): the Performance Diagnostic Checklist (PDC) and the Performance Flowchart. Recommendations made using these tools fell into one of three categories: antecedent-based, consequence-based, and uncategorized interventions. In order to assess the recommendations resulting from each of these tools, participants were trained to either (a) play the role of a manager with an organizational issue, or (b) play the role of a performance consultant. A between-groups design was utilized in which performance consultants used either the PDC or Performance Flowchart, depending upon their group, to analyze the organizational issue presented by a manager.

The results of this study indicated no distinct difference between the recommendations resulting from the PDC and Performance Flowchart. Both tools resulted in a higher percentage of antecedent-based recommendations than consequence-based recommendations.

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INTRODUCTION

Over the past 50 years, functional analyses and functional assessments (FAs) have been steadily gaining popularity in the field of applied behavior analysis (ABA), and have gradually become the gold standard when assessing behavioral issues in many applied settings (Cooper, Heron, & Heward, 2007; Johnson, Casella, McGee, & Lee, 2014; Mace, Lalli, & Lalli, 1991). The field as a whole has moved toward assessing the variables responsible for maintaining behaviors prior to implementing interventions to change those behaviors. Interventions selected in this manner have repeatedly been shown to be more effective than interventions selected in a less consistent, arbitrary fashion (Ervin, Radford, Bertsch, Piper, Ehrhardt, & Poling, 2001; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982/1994). Efforts to treat problem behaviors prior to any functional understanding of the behavior may lead to ineffective, inefficient, and sometimes harmful interventions (Cooper et al., 2007).

Organizational behavior management (OBM) is an applied area which has fallen behind in regard to this paradigm shift when it comes to conducting research. Despite the wide acceptance of FAs as best practice in ABA and the potential effectiveness of such assessments, very little research conducted in OBM has examined these methods. This standard is primarily built on interventions targeting single clients and reducing problem behaviors; thus, the time investment is relatively small compared to large-scale, organizational interventions. It is possible that the cost / benefit ratios favor FAs in clinical settings, but are less favorable in larger OBM interventions. It may also be the case that many OBM professionals are conducting informant or observational

assessments informally; but if so, they are not reporting this aspect of the intervention process (Austin, Carr, & Agnew, 1999).

Functional Assessment Overview

A functional assessment is a method for systematically identifying the variables maintaining a particular behavior. The utility of FA was first proposed by Skinner (1953), who suggested that a function-analytic approach to human behavior would help improve methods for establishing, increasing, decreasing, and/or limiting specific behaviors. Lennox and Miltenberger (1989) noted three specific ways in which FA can aid in the development of treatment. First, FA can help identify reinforcing consequences, subsequently allowing practitioners to limit or eliminate their presentation in order to reduce problem behaviors. Second, FA may help identify antecedent stimuli which evoke a particular behavior, again allowing practitioners to limit or eliminate their presentation. Lastly, FA may help a practitioner to discover functionally-equivalent, appropriate behaviors which could replace the problem behavior. There are several acceptable methods of functional assessment which are commonly utilized in applied settings. These generally fall into one of three categories: (a) indirect assessment, (b) direct observation assessment, or (c) experimental analysis (Cooper et al., 2007; Lennox & Miltenberger, 1989).

Indirect assessment. Indirect assessment involves the collection of information regarding the functional variables controlling behavior through indirect measures only. Such assessments include questionnaires, rating scales, interviews, and checklists. These assessments are labeled as "indirect" because they rely solely upon information gathered through verbal reports, rather than any direct observations of the behavior in question.

Indirect assessments are typically implemented in order to gather information about problem behaviors and the variables controlling those behaviors. This information provides a useful guide for subsequent, objective assessments of behavior and often lends considerable value to the development of hypotheses used in later assessments. The primary limitation of indirect assessments is that there is no guarantee that the information gathered is accurate or unbiased, since it is based on the recollections of informants. Little to no research supports the reliability of such methods, and numerous studies evaluating the interrater agreement of indirect assessments have found it to be very low (Conroy, Fox, Bucklin, & Good, 1996; Cooper et al., 2007; Crawford, Brockel, Schauss, & Miltenberger, 1992; Zarcone, Rodgers, & Iwata, 1991). The lack of empirical evidence supporting indirect assessment methods calls into question their use as a primary assessment.

Direct observation assessment. Direct observation assessments provide a slightly more in-depth view of the maintaining variables for a particular behavior. Like indirect assessment, this method does not utilize any systematic manipulation of environmental variables or behaviors. Instead, direct observation assessments utilize a direct observation of behavior under naturally occurring conditions (Repp, Felce, & Barton, 1988; Sloman, 2010). Direct observations are often used to identify environmental events which are correlated with the behavior in question and may have some functional relevance for an intervention (Cooper et al., 2007). Clinicians utilizing descriptive methods in the applied field may use one of three data collection tools: antecedent-behavior-consequence (ABC) continuous recording (Lalli, Browder, Mace, &

Brown, 1993), ABC narrative recording (Lanovaz, Argumedes, Roy, Duquette, & Watkins, 2013), and scatterplot recording (Touchette, MacDonald, & Langer, 1985).

Antecedent-behavior-consequence continuous recording involves recording occurrences of the target behavior, environmental events occurring prior to the target behavior, and consequences related to the target behavior within the natural environment during a specified period of time. An ABC narrative recording, on the other hand, records ABC data only when the behaviors of interest are observed. Recording is open-ended, rather than being constricted to a specified period of time and is thus less time-consuming than the continuous recording method. Scatterplot recording is a procedure used to record the extent to which particular behaviors occur more often at particular times than other behaviors. Days are divided into blocks of time, and each block is marked to indicate the level of occurrence for the target behavior. This allows practitioners to analyze patterns in the target behaviors to identify when they are more or less likely to occur (Cooper et al., 2007).

Experimental analysis. Analyses which directly manipulate environmental variables relating to the behavior of interest have been termed "functional analyses" (Horner, 1994). In a functional analysis, variables are arranged in such a manner that their effects on the behavior of interest can be observed and measured. Such analyses may be conducted in the natural environment or an analogue environment set up to simulate the natural environment. Research indicates that the results of functional analyses in analogue environments are comparable to those conducted in natural settings (Noell, VanDerHeyden, Gatti, & Whitmarsh, 2001). Functional analyses provide the most comprehensive information about the variables controlling behavior; however, they

are often very time-consuming, expensive, and impractical to conduct in applied settings (Vollmer & Smith, 1996).

Flagship functional analysis research. Despite the long-standing use of behavioral interventions for the reduction / elimination of inappropriate behavior, most notably self-injurious behavior (SIB), very little research utilized functional assessment prior to the seminal research of Iwata et al. (1982/1994). Three possible explanations have been discussed for this lack of early functional assessments. First, early behavioral researchers and clinicians often ignored the importance of the conditions under which SIB develops since they may be unrelated to the conditions utilized to alter the behavior. Second, experimental attempts to induce self-injury as a means of understanding its initiating variables were limited to the animal laboratory (Holz & Azrin, 1961; Schaeffer, 1970), since induction of self-injury in human subjects would be deemed unethical. Lastly, due to the nature of SIB, it is often recommended that treatment begin immediately rather than attempting to identify the primary function of the behavior in order to avoid further self-injury (Iwata et al., 1982/1994).

Reviews of the early literature on reducing SIB (Carr, 1977; Johnson & Baumeister, 1978) indicated that treatment failures and inconsistencies may have been due primarily to a lack of understanding with regard to the variables producing and maintaining SIB. Carr (1977) conceptualized SIB as a multiply-controlled operant, and as such no single form of treatment is likely to produce consistent results. These findings led Iwata and his colleagues (1982/1994) to examine the maintaining variables of SIB prior to developing an intervention.

Iwata et al. (1982/1994) described some of the earliest applied functional analyses conducted with developmentally disabled subjects. Specifically, these studies focused on the self-injurious behaviors often seen in this population. Iwata et al. examined the effects of four different conditions upon SIB: social disapproval (i.e., attention), termination of academic demand, unstructured play during which SIB was ignored, and an alone condition in which no researcher was present and SIB was presumably maintained by automatic reinforcement. The results of this research showed great variability in the patterns of SIB among the research subjects. Of particular importance was the fact that the majority of subjects showed consistent SIB associated with a specific condition, but the condition varied from participant to participant. These results indicated the necessity of functional analyses in the applied realm. There is no panacea for problem behaviors since they are often controlled by varying stimulus conditions. This study led to a paradigm shift in ABA, shifting focus towards functional analyses.

Since Iwata et al. (1982/1994) conducted their integral research, functional analyses have been utilized to develop treatments for a wide array of behavioral problems, including tantrums (Derby et al., 1992), pica (Mace & Knight, 1986), aggression (O'Reilly, 1995), disruptive vocalizations (Buchanan & Fisher, 2002), and SIB (Hanley, Iwata, & McCord, 2003; Iwata, Pace, Cowdery, & Miltenberger, 1994). In addition, FAs have been shown to improve intervention outcomes beyond those implemented without the use of an FA (Iwata, Pace, Cowdery, et al., 1994; Repp et al., 1988).

Functional Assessments in OBM

Functional assessment methods are suitable for use in the field of OBM as well as other areas of ABA. The FAs utilized by OBM professionals generally fall into either the indirect assessment or direct observation categories, since it is often difficult if not impossible to conduct functional analyses in the work environment. Often referred to as performance analyses or performance assessments in OBM, these methods can help to identify reinforcing consequences, identify antecedent stimuli necessary to evoke particular behaviors, and determine why a particular behavior is or is not occurring (Lennox & Miltenberger, 1989). Each of these assessment outcomes has potential to improve OBM interventions. By identifying appropriate antecedents and reinforcing consequences, practitioners can engineer an environment which is conducive to higher productivity and less inappropriate behavior. Determining why a particular behavior is or is not occurring should allow practitioners to develop interventions which evoke appropriate behaviors or inhibit the occurrence of unwanted behaviors.

Performance assessments in OBM are typically undertaken using one of two approaches: (a) behavioral systems analysis (BSA) and (b) performance management (PM). Behavioral systems analysis is a comprehensive approach to improving performance which utilizes both ABA and general systems theory (McGee & Diener-Ludwig, 2012). Applied behavior analysis involves the application of behavioral principles to the prediction and control of socially important behaviors (Bailey & Burch, 2007). Behavioral systems analysis specifically utilizes ABA for the improvement of performance of people in the workplace (i.e., OBM). General systems theory, on the other hand, focuses on understanding systems by considering relationships between

internal parts of the system, feedback loops within the system, and the impact of external, environmental factors on the system (Ackoff & Emery, 1972; Von Bertalanffy, 1972). A system, as defined by Von Bertalanffy, is "a set of elements standing in interrelation among themselves and with the environment" (p. 417). By combining ABA and systems theory, BSA provides a dynamic framework for understanding organizations and improving how organizations work (Diener, McGee, & Miguel, 2009), and has evolved through the work of numerous pioneers (Brethower, 1982; M. E. Malott, 2003; R. W. Malott, 1974; Rummler, 2004; Rummler & Brache, 1995). Behavioral systems analysis is designed to provide multilevel solutions to organizational issues, such as PM interventions, process redesign, automation, strategy development and/or realignment, the development of incentive and training systems, and managing the manager initiatives (Diener et al., 2009). While multiple assessment tools exist within BSA, many are variants of two primary assessment frameworks: the total performance system (TPS) (Brethower, 1982), and the 3-level approach (Rummler & Brache, 1995). The TPS can be considered both a tool and a framework, since it is used both to directly conduct assessments and as a general approach to understanding systems. The 3-level approach is a framework comprised of a variety of performance assessment tools.

The TPS was originally developed as a tool to address issues revolving around the complexity of organizations. A simple issue, when examined in the context of an organizational system, can become exceedingly complex and require evaluation with regard to the organization as a whole (Brethower, 1982). While behavioral principles (i.e., PM) provide clear guidance on how to solve training, motivational, and behavioral problems, they are not often implemented in the systemic fashion required for sustainable

results. Brethower's (1982) TPS attempts to solve these issues by examining the inter-relations between organizational systems at all levels of the organization (i.e., organization, process, job), the inputs and outputs of those systems, and the behaviors occurring within those systems. The TPS (Figure 1) provides a "big picture" overview by examining seven distinct components of the system, each of which requires effective functioning in order for the system to thrive. These components are: (1) the mission/goal, (2) inputs, (3) processing system, (4) outputs, (5) receiving system, (6) internal feedback loop, and (7) external feedback loop. By examining these seven items, a lot of information can be presented in a simple diagram, and issues between systems can be more readily detected. Once detected, these organizational issues are often solved through more traditional PM methods, as well as systems changes.

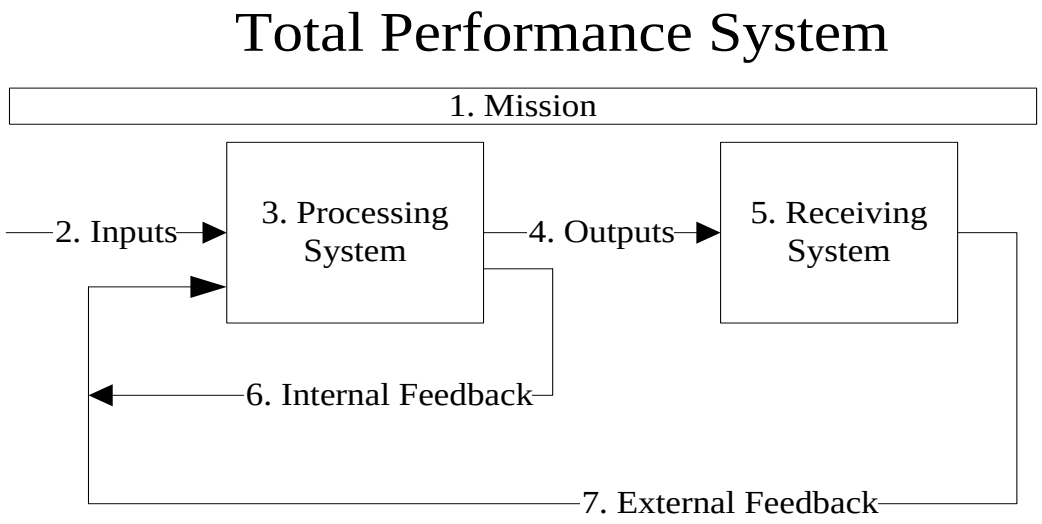

Figure 1. Brethower's (1982) total performance system.

Similar to the TPS, the 3-level approach focuses on both the overarching system and the individual. The 3-level approach targets sustainable results by analyzing key aspects of the overall system which could affect performance (Rummler & Brache, 1995). As the name implies, this approach analyzes organizational issues at three separate

levels: (a) organization, (b) process, and (c) job. The first and highest level of the 3-level approach is the organization level. At this level the overall organization is represented using a super-system map. In addition to the seven components analyzed in the TPS, the super-system incorporates two supplementary components: (a) environment and (b) competition. While not directly controlled by the organization, these additional components can have a profound impact on organizational strategies and decisions, and are therefore important components for any systemic organizational analysis (Rummler & Brache, 1995). An additional tool, the relationship map, is also used at this level of analysis. Where the super-system map focuses more heavily on the relations between the system and the external environment, the relationship map looks at interrelations inside of the system. This includes relationships between functions, departments, and processes. The combination of these tools offers a comprehensive look at the system at a high level and provides a visual depiction of important relationships.

The second level of analysis is the process level. Processes are the steps which occur to turn inputs into a product or service. While processes may be isolated to a single function or department, more often than not they are cross-functional, traversing the "white-space" between functions (Rummler & Brache, 1995). This level of analysis utilizes process mapping to organize and visualize the steps in a process. Cross-functional process maps are particularly useful, as they indicate the function responsible for each step in the process and, perhaps more importantly, where the process is handed off between functions. The process level of analysis provides a detailed account of exactly how the work in the organization gets done.

The final level of analysis is the performer level. At this level of analysis, the principles of ABA become more salient. The performer level looks directly at the work done by individual performers, including inputs, performance, outputs, consequences, and feedback. A tool known as the human performance system (HPS) is utilized to organize these factors (Rummler & Brache, 1995). Examining all of the factors of the HPS in detail provides information about performance which is often ignored or obscured by other factors. The HPS builds upon the higher levels of analysis by providing a detailed account of the individual performers.

While systems analyses focus on general systems theory in addition to ABA, there are many assessment tools which focus solely, or mostly, on ABA. These tools are used within the PM approach to performance assessment, and include the behavior engineering model (BEM) (Gilbert, 1978), Six-Boxes™ (Binder, 1998), PIC/NIC Analysis® (Daniels & Daniels, 2004), the Performance Diagnostic Checklist (PDC) (Austin et al., 1999), and the Performance Flowchart (Mager & Pipe, 1970). It should be noted that PM tools can be and often are used within a systems approach to performance assessment, but the systems tools typically are not used within the PM approach to performance assessment.

Some of the PM-style assessment tools utilized in OBM are loosely based off of Thomas Gilbert's BEM (1978). As is the case with most assessments utilized in OBM, the BEM is primarily used as an indirect or observational form of assessment, rather than as a functional analysis. The BEM analyzes three components of behavior: (a) antecedent information which is presented prior to behavior, (b) the behavior itself, (c) and the consequences of behaving. Each component is examined in regard to two separate

aspects: (a) the person's behavioral repertoire, and (b) the environment that supports that repertoire. These components of behavior are presented in the form of a matrix, as seen in Table 1. The antecedent information focuses on data such as feedback and guidance (cell 1), and knowledge such as that provided in training (cell 2). The second component, behavior, focuses on instrumentation such as tools necessary to do the work (cell 3) and the capacity of the performer to complete the job (cell 4). The third aspect of motivation focuses on incentives such as monetary incentives and career development opportunities (cell 5), and motivational factors (cell 6).

One of the assessment tools which is based off of Gilbert's BEM is Binder's Six Boxes™ model (1998). Six Boxes™ focuses on analyzing six factors affecting behavior: (a) expectations and feedback, (b) tools and resources, (c) consequences and incentives, (d) skills and knowledge, (e) selection and assignment (also called capacity), and (f) motives and preferences (also called attitude). Each of the six boxes matches up with one of the six cells (see Table 1) discussed by Gilbert (1978), and are generally analyzed in a similar fashion. The first box includes information about what the performers are supposed to accomplish and how they are currently performing in relation to expectations. The second box includes the tools used to perform the work processes, resources such as consultants and reference documentation, and environmental variables such as heat and light. The third box includes both intentional and unintentional consequences of behavior. These consequences may be monetary, non-monetary, or social consequences, both positive and negative. The fourth box covers skills and knowledge such as those produced by training interventions.

Table 1

Gilbert's (1978) behavior engineering model

	S^D *Information*	*R Instrumentation*	S_r *Motivation*
E Environmental supports	Data 1. Relevant and frequent feedback about the adequacy of performance 2. Descriptions of what is expected of performance 3. Clear and relevant guides to adequate performance	Instruments 1. Tools and materials of work designed scientifically to match human factors	Incentives 1. Adequate financial incentives made contingent upon performance 2. Nonmonetary incentives made available 3. Career development opportunities
P Person's repertory of behavior	Knowledge 1. Scientifically designed training that matches the requirements of exemplary performance 2. Placement	Capacity 1. Flexible scheduling of performance to match peak capacity 2. Prosthesis 3. Physical shaping 4. Adaptation 5. Selection	Motives 1. Assessment of people's motives to work 2. Recruitment of people to match the realities of the situation

Note. Adapted from "Human competence" by T. F. Gilbert, 1978. Amherst, MA: HRD Press Inc.

Similar to the BEM, this model emphasizes that investments in this category may be unproductive if done without alignment with the first three boxes. The fifth box focuses on what the individual worker brings to the job that the organization cannot provide, such as social skills and fundamental prerequisite skills. The sixth and final box encompasses individual attitudes such as personal preferences, preferential incentives, and the working environment, to name a few. The Six-Boxes™ Model differs from the BEM in one primary way: the language utilized in the tool. The Six-Boxes™ Model

translates the technical language of the BEM into a form more palatable to laypeople and business people.

Another performance analysis tool, known as the PIC/NIC Analysis® was developed by Daniels and Daniels (2004). The PIC/NIC Analysis® is a tool for organizing the consequences affecting performance to determine their likely effectiveness. Consequences are analyzed based on three different components. The first component deals with whether the consequence is positive or negative (P/N). In this model, "positive" consequences refer to those that are considered reinforcing (i.e., tend to increase the frequency of the behavior they follow), while "negative" consequences refer to those that are punishing (i.e., tend to decrease the frequency of the behavior they follow). The second component deals with the immediacy of the consequences for the behavior in question (I/F). Immediate consequences tend to be more effective than consequences which are delayed or can be expected to occur in the future. The final component is whether the consequence is certain or uncertain (C/U). A consequence which is guaranteed to follow a particular behavior is far more effective than a consequence which is only somewhat likely to follow behavior. The tool's name is derived from the fact that consequences which are positive, immediate, and certain (PICs), or negative, immediate, and certain (NICs), are the most effective consequences, and therefore determine the likelihood of a particular behavior. By analyzing and organizing the consequences of a behavior of interest, a PIC/NIC Analysis® provides a clear explanation of why that behavior is or is not occurring.

The PDC, first proposed and discussed by Austin et al. (1999), is an informant assessment used to determine the variables controlling particular employee performances

and guide intervention selection based on these variables. Like the Six-Boxes™ Method, the PDC is partially a variant of the BEM. The PDC focuses on four primary areas: (a) antecedents, (b) equipment and processes, (c) knowledge and skills, and (d) consequences. Within each area are "Factors", which represent sub-domains of each of the four areas; within these factors are "Parameters", which represent relevant dimensions of the factors; and within the parameters, the PDC provides "Sample Tactics", which represent potential approaches to solving deficiencies within the relevant area, factor, and parameter. The areas, factors, parameters, and sample tactics utilized in the PDC were derived from three key sources: (a) Gilbert's (1978; 1982a; 1982b) PROBE model and BEM; (b) Komaki's (Komaki, Zlotnik, & Jensen, 1986) Operant Supervisory Taxonomy Index (OSTI); and (c) empirical studies in the OBM literature examining problem behaviors in the work environment. The questions within the first area, antecedents, focus on prompts, goals, rules, priorities, instructions, and mission. The second area, equipment and processes, asks questions regarding the functioning and positioning of equipment, process issues, and other potential obstacles to performance. Although the PDC includes questions regarding process issues, it is not considered a systems analysis tool. This is primarily due to the fact that the PDC does not address relationships between internal systems, or between the organization and external variables. Knowledge and skills questions focus on verbal knowledge, physical skills, and overall capability. Lastly, consequence questions focus on reinforcement, feedback, competing contingencies, and response effort. Responses to questions in each of these areas can result in a number of recommendations to ameliorate the issue at hand. For a more detailed discussion of the PDC questions and intervention recommendations, see Appendix A.

Similar to the PDC, the Performance Flowchart (Appendix B) is a pre-intervention informant assessment intended to determine the variables affecting performance and guide intervention selection (Mager & Pipe, 1970). The Performance Flowchart is designed to troubleshoot issues by asking targeted questions in seven focus areas: (a) what is the problem, (b) is it worth solving, (c) can we apply fast fixes, (d) are consequences appropriate, (e) do they already know how, (f) are there more clues, and (g) select and implement solutions. The first focus area asks questions regarding the nature of the problem, including: (a) who is the target performer, and (b) what is the discrepancy? The next area of focus simply asks if the issue is worth the time and effort it will take to solve it. The third area focuses on quick fixes. If there is something that can be done relatively quickly, such as a change in resource allocation or clarification of expectations, it is presumably preferential to implement a quick and easy intervention. The fourth area focuses on behavioral consequences. The questions in this area are similar to those in the PDC, and focus on reinforcement, response effort, punishment, and feedback. The fifth area asks whether or not a genuine skill deficiency exists; in other words, is training a necessity or can some other aspect of the environment be altered to avoid training? The sixth area focuses on other obstacles not touched on by the other areas, such as task difficulty. The last area focuses on implementing interventions based on the findings of the other six focus areas. It should be noted that the questions in the Performance Flowchart are intentionally arranged to discover the simplest interventions first, and only identify difficult interventions as a last resort.

Functional Assessment in OBM Research

Practitioners and researchers have utilized pre-intervention diagnostic methods in a number of OBM interventions, including decreasing bussing times in a pizza restaurant (Amigo, Smith, & Ludwig, 2008), improving employee performance in a ski shop (Doll, Livesey, Mchaffie, & Ludwig, 2007), improving customer service in a department store (Eikenhout & Austin, 2005), increasing physical therapy equipment preparation (Gravina, VanWagner, & Austin, 2008), increasing offering of promotional items (Rodriguez et al., 2006) increasing product knowledge and data entry for construction-site foremen (Pampino, Wilder, & Binder, 2005), and increasing completion of maintenance tasks (Pampino, Heering, Wilder, Barton, & Burson, 2004). These studies showcase the diversity of environments and situations in which pre-intervention assessment methods can (and presumably should) be utilized. However, the success of these interventions cannot be directly credited to the pre-intervention assessments, since there was no control condition in which interventions were selected on a different basis.

Despite the wide array of available OBM assessment tools, and despite the fact that some studies have employed pre-intervention assessments, they appear to be highly underutilized in OBM research. A content analysis review (Bailey, Austin, & Carr, 1997) of the *Journal of Organizational Behavior Management* (*JOBM*) and the *Journal of Applied Behavior Analysis* (*JABA*) revealed that no OBM studies reported the use of a formal FA prior to 1997. A handful of studies (e.g., LaFleur & Hyten, 1995; Smith & Chase, 1990) have reported utilizing Gilbert's (1978) BEM to assess performance, but none reported reliable data relative to maintaining variables. Similarly, the scarcity of functional assessments in OBM was reported by Austin et al. (1999). Since the

publication of these reviews there has been an increase, albeit a limited increase, in the number of articles reporting pre-intervention assessments. Johnson et al. (2014), in a more recent review of pre-intervention diagnostic methods in OBM, found 119 articles involving either BSA or the PDC as assessment tools used to guide intervention selection in research published within *JOBM*. The PDC was chosen for their review because it was the most commonly cited PM assessment tool. The majority of the articles which do discuss the use of FAs are either theoretical / conceptual in nature (71% of BSA articles and 12.5% of PDC articles) or provide only minimal empirical data (26% of BSA articles and 87.5% of PDC articles). "Minimal empirical data" were used to define articles which presented some empirical evidence but did not establish a cause-and-effect relationship between the pre-intervention diagnostic tool and intervention enhancements. These results prominently show that very few OBM researchers are critically analyzing any of the available FA tools. Lastly, in a recent analysis of JOBM articles, Wilder, Lipschultz, King, Driscoll, and Sigurdsson (2018) found that 28% of all empirical studies published in JOBM from 2000-2015 utilized some form of pre-intervention assessment. Of these, the majority were indirect assessments (57%), descriptive analyses (33%), or historical assessments (33%), with only 19% utilizing systems analyses or experimental analyses.

There are several possible reasons for the lack of FA in OBM, three of which are discussed in detail by Austin et al. (1999). First, OBM interventions have been exceptionally effective without the use of formal FAs, utilizing the operant model of human behavior to increase safe behavior (Austin, Kessler, Riccobono, & Bailey, 1996; Sulzer-Azaroff, Loafman, Merante, & Hlavacek, 1990), improve performance of university admissions staff (Wilk & Redmon, 1990, 1997), improve staff performance in

community mental health settings (Fienup, Luiselli, Joy, Smyth, & Stein, 2013; Langeland, Johnson, & Mawhinney, 1997), increase suggestive selling in sales staff (Ralis & O'Brien, 1987), increase the number of on-time completions by engineers (McCuddy & Griggs, 1984), and increase cleaning in a university bar (Anderson, Crowell, Hantula, & Siroky, 1988), to name a few. It is likely that these researchers were conducting informal FAs to identify maintaining variables in these studies. If this is the case, and function-based interventions are superior to non-function-based interventions, then there are three logical outcomes of these informal FAs: (1) the researcher informally identifies the correct maintaining variable, leading to maximum results, (2) the researcher informally identifies an incorrect maintaining variable, leading to inferior, but still possibly effective, results, and/or (3) the researcher informally identifies some partial maintaining variable, leading to inferior, but still partially effective, results. With informal assessments, identifying the correct maintaining variable and achieving maximum results is a possibility, but success is possible without achieving maximum results. Without conducting a formal FA, the researcher may see success, but not optimal success.

The second possible reason for a lack of FAs in OBM is that behavior within organizational settings is predominantly rule-governed. It is possible that this has led to more mainstream, subjective, and non-behavioral methods of assessment, such as questionnaires or surveys. The primary issue with such assessment methods is that the behavior people report is not necessarily what they actually do (Bernstein & Michael, 1990); thus, reports about the maintaining variables of behavior are not entirely appropriate for pre-intervention assessments.

Lastly, it is possible that functional assessments have been underutilized because OBM professionals are generally concerned with increasing productive behaviors, rather than decreasing problem behaviors. As reported above, functional assessments in the ABA literature have been primarily focused on the reduction of problem behaviors such as SIB (Hanley et al., 2003; Iwata et al., 1982/1994; Iwata, Pace, Dorsey, et al., 1994; Iwata, Vollmer, & Zarcone, 1990; Vollmer & Smith, 1996). While some employee behaviors are in need of reduction (i.e., employee theft [McNees, Gilliam, Schnelle, & Risley, 1980; Rafacz, Boyce, & Williams, 2011]), such behaviors are few and far between and do not constitute a significant portion of OBM research (VanStelle et al., 2012).

In addition to the reasons for a lack of FA in OBM examined by Austin et al. (1999), there is also the simpler issue of practicality. Pre-intervention assessments can be very costly, time-consuming, and difficult to implement, especially in an organizational setting (Vollmer & Smith, 1996). Management may see this extra time as time that would be better appropriated towards an actual intervention. Of the three types of assessments discussed by Lennox & Miltenberger (1989), informant assessments seem to be the most practical in organizational settings. Observational assessments may be viewed unfavorably by employees or may affect the behaviors which are occurring (Komaki & Minnich, 2002; Rohn, 2004), and experimental assessments are highly impractical as they disrupt workflow and cost time and money to implement; moreover, there is no evidence that such methods would work in OBM settings. It is difficult, if not impossible, to engineer the environmental control necessary to conduct these analyses; organizations are complex environments which are constantly changing and there are often many things

outside of the control of the experimenter that cannot be accounted for when attempting to conduct a functional analysis (Brethower, 1982; Johnson et al., 2014; Malott, 2003).

Although informant assessments are more subjective, efforts to improve the reliability of verbally-reported maintaining variables have been made. Austin and Delaney (1998), for example, recommend the use of protocol analysis to improve the reliability of verbal reports. Though there are numerous methods of protocol analysis in the literature, Austin and Delaney provide a detailed discussion of one tool (think-aloud procedures) discussed by Ericsson and Simon (1993). Think-aloud procedures involve having the participants overtly verbalize cognitive processes that are normally covert (i.e., talk about what they are looking at, thinking, doing, and feeling) as they are performing a set of tasks. Observers are required to objectively take notes without any attempts to interpret the participant's actions. Although there are issues with such think-aloud procedures, efforts are still being put forth to increase reliability.

Validating Functional Assessments in OBM

Despite some successful utilization of functional assessment methods in OBM, they remain highly understudied. As mentioned above, the majority of studies utilizing any sort of pre-intervention assessments have been theoretical / conceptual in nature, or provided minimal empirical data to support their use. More importantly, almost no articles in the review by Johnson et al. (2014) critically examined the validity of pre-intervention assessments in OBM; that is, they found very little direct examination of these assessment tools. In other words, although some practitioners are using these assessment tools, they have not been empirically validated, so it is unclear whether their use is even necessary for the recommendation of an adequate intervention.

Two validation studies have been conducted which directly examined the Performance Diagnostic Checklist – Human Services (PDC-HS). The PDC-HS is an alteration of the original PDC (Austin et al., 1999), developed to specifically examine performance issues in human service settings. In the first study, Carr, Wilder, Majdalany, Mathisen, and Strain (2013) developed and implemented the PDC-HS at a center-based autism treatment facility to identify the variables contributing to poor cleaning behavior by the staff. The pre-intervention assessment indicated that a lack of training and a lack of performance feedback were the primary factors leading to poor performance. In addition to the intervention indicated by the PDC-HS, two alternative interventions were implemented in two additional treatment rooms. These two alternative interventions were based on the Task Clarification and Prompting and Resources, Materials, and Processes sections of the PDC-HS which were explicitly *not* identified as problematic by the PDC-HS assessment. The results of the study indicated that the PDC-HS-prescribed intervention was effective at altering staff behavior, while the alternative interventions were ineffective.

In a similar study, Ditzian, Wilder, King, and Tanz (2015) further examined the PDC-HS at a treatment center for children with autism. The performance of four staff members when securing clients in therapy rooms was analyzed using the PDC-HS. The assessment indicated that graphed feedback was required to improve performance. An alternative intervention, which was chosen because it explicitly did not address issues identified by the PDC-HS, was also implemented. Similar to the findings of Carr et al. (2013), the results indicated that the PDC-HS-recommended intervention was effective and the alternative intervention was ineffective. Although these studies only compare one

assessment tool to a control condition, they effectively demonstrate a conceivable method for validating functional assessment techniques within OBM.

The dearth of studies examining the validity of pre-intervention assessments in OBM is quite understandable considering the plethora of issues in organizational settings which preclude in-depth, experimental analysis. There are two primary methods by which pre-intervention assessments could be validated: (a) a comparison of one assessment tool to an alternative assessment tool, and (b) a comparison of one assessment tool to a control condition. Both of these methods are highly difficult to research and are subject to three fundamental issues pointed out by Johnson et al. (2014): (a) environmental complexity, (b) suitability of comparison sites or conditions, and (c) cost and time.

The first issue that arises when trying to examine the validity of pre-intervention assessments is environmental complexity. Organizations are highly complex and constantly changing (Malott, 2003), making it difficult to control for confounding variables in research such as this. This aspect of organizations makes it very difficult, if not impossible, to recreate an adequate organizational environment within the laboratory setting as well. This issue could be mitigated by assessing pre-intervention tools at multiple, similar sites within the same organization; but therein lays the second issue: suitability of comparison sites or conditions. Performance problems in organizations are not necessarily going to be congruent across sites. The issue of environmental complexity also comes into play when attempting to examine multiple organizational sites. Even if it is the case that performance issues are the same across sites, the functional causes of these issues could be very different. A lack of consequences for appropriate behavior at one site may lead to the same outcome as inappropriate equipment at another site. Such a

situation could lead to opposing recommendations across sites with similar or equivalent outcomes. Lastly, time and cost of a pre-intervention assessment may make it very difficult to assess validity. Rummler (2004) points out that in-depth BSA could take weeks, or even months, to complete. Considering that pre-intervention diagnostics are not interventions in and of themselves (although they are intended to lead to more sound interventions), it is understandable that organizations are reticent to commit much time and money to their completion. Comparing two such tools in an organization would presumably double the cost and time, making it even less likely to garner organizational support.

The lack of validation and comparison of pre-intervention assessments not only makes it difficult for OBM professionals to justify the cost of such procedures, but also makes it difficult for them to choose a diagnostic tool. As mentioned above, there are numerous assessment tools used in the field of OBM. The proposed research will focus on comparing only two of these assessment tools: the PDC and the Performance Flowchart.

Present Study

The primary purpose of this study is to examine the maintaining variables that two different assessment tools (PDC and Performance Flowchart) determine to be controlling behavior when utilized in the same setting. In other words, if both assessment tools are used to assess the same organizational issue, we will determine whether or not they obtain the same results and lead to similar recommendations regarding appropriate interventions. One of the primary differences between these tools is the order in which particular variables are assessed. The PDC focuses on antecedent variables first, while the

Performance Flowchart focuses on consequences first. It may be that this research will reveal differences in the outcomes of these pre-intervention assessments based upon this sequencing difference. This research may also illuminate future research possibilities in the arena of pre-intervention assessment validation. These future research possibilities could range from component analyses of currently used assessment methods to development of entirely new assessment methods based on the findings.

METHOD

Participants and Setting

Participants consisted of both undergraduate and graduate students, recruited from a mid-western university. Undergraduate students were recruited using a combination of flyers (Appendix C) and announcements in undergraduate level classes (Appendix D). Graduate students were recruited using a combination of advisor solicitation, mass email (Appendix E), and in-class participation. Prior to recruitment, Western Michigan University's Human Subjects Institutional Review Board (HSIRB) approved the study (Appendix F). All undergraduate participants were provided with a proof of participation form, which was required in order to earn extra credit in courses for participation.

Forty-one undergraduate students comprised the mock-manager group, and essentially served as pseudo-confederate research assistants who were questioned by the mock-consultants. These forty-one students were randomly split into two groups (Group A & Group B). Similarly, forty-one graduate students comprised the mock-consultant group, who utilized either the PDC or Performance Flowchart to gather information from the mock-managers and to make intervention recommendations based on the information gathered. Twenty-one students were trained in using the PDC (Group I), while the other twenty were trained in using the Performance Flowchart (Group II). Group I was paired with the managers comprising Group A, while Group II was paired with the managers comprising Group B. Note that there was no difference between Groups A and B other than the tool with which the consultants interviewed them.

Undergraduate participants (mock-managers) were screened based on three exclusionary criteria. First, participants needed to report availability for a predetermined,

2-3-hour training session, as well as a 30-60-minute interview session with a mock-consultant. The training session was mandatory for all undergraduate participants (i.e., mock-managers) to familiarize them with the mock organizational situation. The purpose of this availability check was to reduce attrition and to ensure efficiency in the training sessions. Ensuring that all participants were able to attend one of the 2-3 available time frames helped to reduce the number of sessions necessary to train all of the participants, thus reducing the likelihood of discrepancies between training sessions, and allowing for a faster overall research process. Second, participants needed to report no familiarity with either the PDC or the Performance Flowchart. This criterion was instituted to ensure that all of the mock-managers were encountering the specific questions in the tools for the first time, thereby increasing the likelihood of unrehearsed, genuine responses. Also, it is unlikely that a manager in the real world would be familiar with these particular tools; this criterion helped make the interactions between mock-manager and mock-consultant more realistic. Lastly, after completing the mock-manager training, participants were required to demonstrate a complete understanding of the mock organizational issues. This was accomplished through the delivery of a brief, post-training quiz (Appendix G).

Graduate student participants (i.e., mock-consultants) were recruited by two distinct methods. The first of these methods was by email and advisor solicitation. These graduate students were screened based on two exclusionary criteria. First, participants needed to report availability for a predetermined, 2-3-hour training session, as well as a 30-60-minute interview session with a mock-manager. Similar to the requirements for the undergraduate participants, this training session was mandatory, as it was required to familiarize them with the PDC (Group I) or the Performance Flowchart (Group II). Each

group received training for their particular tool only. Ensuring that all participants were able to attend one of the 2-4 available time-frames reduced the number of sessions necessary to train all the participants and allowed for a faster overall research process. Second, after completing the PDC or Performance Flowchart training, participants were required to demonstrate a complete understanding of the relevant tool. This was accomplished through the administration of a brief, post-training quiz (Appendices H & I). The second method of graduate student recruitment was through in-class participation. Through this method, students enrolled in Psychology 6440 (Personnel Training and Development) and Psychology 6510 (Behavioral Systems Analysis) with Dr. Heather McGee were required to participate as part of the standard educational practices of those courses. Participation provided graduate students with an opportunity to learn to use a pre-intervention assessment tool, and an opportunity to hone their interview skills in a live interview environment. Participants were provided with an opportunity to deny the use of their data for this study, via the informed consent process. For this method of recruitment, participants had to meet only one exclusionary criterion. Similar to the first method, participants had to pass a brief, post-training quiz to demonstrate a complete understanding of the relevant tool.

Training sessions were conducted in a university classroom (in Wood Hall) with seating for a minimum of forty people, a podium, and a projector screen on which the instructor presented materials. At the start of the training session a roster of student names was read aloud and checked off to indicate attendance. At the end of the session, attendance was double-checked with the comprehensive, post-training quiz for each class (Appendices G – I). These aspects of the training environment were the same for both

mock-consultants and mock-managers. Mock-managers received a hard copy description of their organization, including all information which was pertinent to the tools with which they were interviewed, during their training session. Mock-consultants received a hard copy of either the PDC (Group I) or the Performance Flowchart (Group II) during their training session. Detailed information about the training sessions can be found in the experimental procedures section.

Interview sessions between mock-managers and mock-consultants were conducted in multiple small university laboratories (in Wood Hall) containing a table and two chairs.

Independent Variable

The independent variable was the pre-intervention functional assessment tool used by the mock-consultants. Due to the similarity of these two tools, this may also be viewed simply as a difference in the ordering of the interview questions. The PDC begins with questions about antecedents and then works towards consequences, while the Performance Flowchart works in the opposite fashion.

Two functional assessment tools were utilized; mock-consultants in Group I used the PDC, while those in Group II used the Performance Flowchart. Participants in each group were trained in the use of their respective tools (see participants and settings section). Prior to the mock-interview session, the participants received a hard copy of either the PDC (Appendix J) or the Performance Flowchart (Appendix K) for training purposes. The tools were modified slightly to provide ample space for taking notes and writing down the responses of the mock-managers.

Experimental Procedures and Materials

Pre-training. Participants were recruited using a combination of flyers, in-class announcements in undergraduate courses, instructor/advisor solicitation, mass email, and in-class participation (Appendices C – E). Potential undergraduate participants (mock-managers) responding to flyers and recruited from in-class announcements contacted the student investigator via email or phone to reserve a spot in the initial training session. Potential graduate student participants (mock-consultants) were either contacted via mass email by the student investigator, informed of the opportunity by their graduate advisor, or informed in PSY 6440 or PSY 6510 of the study and their required participation.

Training session: Mock-managers. All mock-managers received the same training, regardless of the group to which they were assigned (A or B). Participants were randomly assigned to one of the two groups after training was complete, via a random number generator. This was done post-training in order to eliminate the possibility of confounding variables during training sessions which may alter the way in which mock-managers responded to certain questions asked by the mock-consultants during the final interview session. Participants were also assigned a 5-digit participant identification number prior to training, to ensure participant anonymity.

Prior to the training session, mock-managers were required to meet with the student investigator or a research assistant in order to complete the informed consent process. The informed consent document (Appendix L) was read aloud to all potential participants, who then signed the form and returned it to the researchers. No undergraduate participants refused to sign the informed consent. After the consent

document was signed, participants were assigned a participant identification number, and scheduled for a training session.

The mock-manager training sessions began with a quick roll-call, to ensure that all participants who signed up were present. Training consisted of an in-depth presentation of a single performance scenario (Appendix M), which was learned by all mock-managers. The performance scenario included antecedent- and consequence-based performance issues of roughly equivalent relevance. The scenario presentation began with an explanation of the task to be completed by mock-managers, followed by an explanation (in lecture form) of the performance scenario to be learned (Appendix N). The lecture portion of the training was followed by a practice period, during which mock-managers had the opportunity to study the key components of the performance scenario to fluency. For the purposes of this study, fluency meant that the mock-managers were able to readily answer questions about the performance scenario on their first attempt. Mock-managers were provided with flashcards of the performance scenario material (Appendix O) matching up to different questions which could potentially be asked by the mock-consultants. During this time, the student investigator and research assistants wandered the room, providing feedback in the form of praise and correction when appropriate. Mock-managers did not have an opportunity to practice an interview session, since real managers would not have an opportunity to practice prior meeting with a consultant. The primary goal of this training was to get the managers fluent in talking about the performance scenario.

The final segment of the training was a brief, post-training quiz (Appendix G). This quiz was designed to test the mock-manager's knowledge of the performance

scenario to ensure they had memorized their managerial role and they were able to recall information without referring to the paper copy of the scenario. A quiz score of 100% correct was required in order to proceed to the interview session. Participants were allowed to retake to quiz up to three times if they failed to get a passing grade.

Training session: Mock-consultants. Mock-consultants were split into two groups, with Group I using the PDC and Group II using the Performance Flowchart. Depending on the method by which they were recruited, participants were assigned to one of the two groups through slightly different means. Participants recruited through mass email and advisor solicitation were first scheduled for an informed consent session. Similar to the mock-managers, the mock-consultants were read the informed consent document (Appendix P) aloud, and then provided with the opportunity to sign. No graduate students refused to sign the informed consent document. After the form was signed, the participants were assigned a participant identification number, and randomly assigned to one of the two groups. Participants were then scheduled for a training session based on the group to which they were assigned. Participants recruited through in-class participation were assigned to groups differently. Since the study was being run as part of the standard educational practice of two different courses, groups were chosen based on which class the participants were in. In the Fall 2017 semester, only PSY 6510 was offered, so all participants were recruited from that class. These students were all assigned to Group I and were trained on the PDC. In the Spring 2018 semester, both PSY 6510 and PSY 6440 were offered, and participants were recruited from both classes. These students were assigned to Group II and were trained on the Performance Flowchart. Participants in all of these classes were trained during one class period of the

course. These participants did not go through informed consent (Appendix Q) until after the conclusion of the interview, which will be discussed shortly.

The PDC and Performance Flowchart training sessions were designed exactly the same with the exception of the material being taught. Training consisted of an in-depth presentation of either the PDC (Appendix J) or the Performance Flowchart (Appendix K). The graduate students acting as mock-consultants came in with base knowledge in behavior analysis and some of its applications but were not necessarily familiar with OBM as an applied area of study, or the tools utilized by OBM practitioners. Training began with an explanation of the relevant tool (in lecture form) to be learned (Appendices R & S), as well as an explanation of the intervention rubric (Appendix T). The purpose of the intervention rubric was to make categorization of the interventions more straightforward.

The lecture portion of the training was followed by a practice period, during which mock-consultants practiced utilizing the relevant tool in an interview scenario (Appendix U). The mock-consultants worked with partners and practiced questioning one another about a performance scenario. This practice scenario was different from the one utilized in the actual interview session. During the practice period, the student investigator and research assistants walked around the room and provided feedback when necessary. Unlike the mock-managers, the mock-consultants were not required to memorize the PDC or Performance Flowchart. They had the tools available during the final interview sessions, and were encouraged to use them; therefore, memorization would have been superfluous.

The final segment of the training was a brief, post-training quiz (Appendices H & I). This quiz was designed to test the mock-consultant's knowledge of the relevant tool, and potential performance issues. A quiz score of 100% correct was required in order to proceed to the interview session. Participants were allowed to retake to quiz up to three times if they failed to get a passing grade. Essentially, this post-training quiz helped ensure that the mock-consultants had a solid understanding of the purpose and potential outcomes of the tool they utilized during the final interview.

Interview session. After the initial training session, all post-training quizzes were graded and separated into "pass" and "fail" categories. All participants passed within three attempts on the quiz. Participants were contacted within three days of their completion of training, and interview sessions were scheduled for a time within two weeks of their completion of training. Celerity of scheduling was intended to reduce the likelihood that the skills learned during the initial training deteriorated.

Mock-managers in Group A and Group B were paired with mock-consultants in Group I and Group II, respectively. Mock-consultants were tasked with using their respective tool to gain information about the performance scenario and recommend appropriate intervention(s). Mock-consultants in Group I were provided with a copy of the PDC, along with a section for notes (Appendix J), and a writing utensil. Similarly, those in Group II were provided with a copy of the Performance Flowchart, including a section for notes (Appendix K), and a writing utensil. These were the only materials permitted in the interview room for the mock-consultants. The mock-managers were provided with a cheat-sheet (Appendix V) with the fundamental performance scenario information on it but were encouraged to avoid using it as much as possible. This sheet

was provided as a cautionary measure to ensure that all questions asked by the mock-consultants could be satisfactorily answered.

Mock-consultants were given between 30-minutes and 1-hour to conduct the interview. After the interview was concluded, the mock-managers were escorted from the room to meet with the student investigator for debriefing (see debrief section). Mock-consultants remained in the interview room where they wrote out their recommendations. Mock-consultants were instructed to write recommendations which followed the intervention rubric provided (Appendix T). After completing the intervention recommendations, the mock-consultant were escorted from the room to meet with the student investigator for informed consent (if they were participating as part of a class) and debriefing (see debrief section). Participants recruited from in-class participation went through informed consent (Appendix Q) for the use of their data only. No participants refused the use of their data.

Debrief. Upon completion of the interview session, participants attended a debrief session with the student investigator or research assistant. During this session, participants were provided with the proof of participation form for the hours earned for their participation. Following this, participants were debriefed (Appendix W) on their participation in the study. The debriefing session consisted of: (a) a description of the purpose of the study, (b) an explanation of the independent variables, and (c) an opportunity for participants to ask any questions they may have regarding their participation. After being debriefed, the participants' obligations to the study were complete and they were free to leave.

Experimental Design / Analysis

The experimental design was a between-groups design consisting of two groups: Group I, who utilized the PDC, and Group II, who utilized the Performance Flowchart. Participants in each group conducted interviews with the mock-managers using the relevant tool and were not exposed to the other tool. The mock-managers being interviewed were trained on the same performance scenario, regardless of the group interviewing them.

The number of antecedent-based, consequence-based, uncategorized, and training-based interventions recommended by Group I and Group II were analyzed visually. The groups were compared in two different ways. First, the raw number of each recommendation type was compared across groups. Second, the overall percentages of each type of intervention recommendation were compared across groups. The percentages were necessary due to the difference in the overall number of recommendations between the two groups. The PDC resulted in more recommendations of both primary types (i.e., antecedent- and consequence-based), making the raw score comparisons less valuable. The percentage score provided information on the number of antecedent-based recommendations relative to the number of consequence-based recommendations for each participant and allowed us to compare these across groups. It also allowed us to assess the difference in training-based recommendations and uncategorized recommendations across groups.

Dependent Variable

The dependent variable was the average number of antecedent-based, consequence-based, or uncategorized intervention recommendations proposed by each

group. The antecedent-based category comprised two sub-categories: (a) paperwork-training-based recommendations and (b) all other antecedent-based recommendations (see **Antecedent-based**). After the mock-consultants completed their intervention recommendations, they were scored by the student investigator as well as independent scorers (see **Inter-Observer Agreement**). Recommendations were given a raw score for (a) the number of antecedent-based recommendations, (b) the number of consequence-based, (c) the number of uncategorized, and (d), the number of paperwork-training-based. A percentage score of each recommendation type was also calculated, using these raw scores.

Antecedent-based. Recommendations fell into the antecedent-based category if they met any of the following requirements: (a) the recommendations involved the manipulation or alteration of the employee's job description or documented performance expectations, (b) the recommendations involved instituting training of any sort, (c) the recommendations involved the implementation of a job or task analysis, (d) the recommendations involved the implementation of a job aid, (e) the recommendations involved the implementation of job or task goals, (f) the recommendations involved the alteration or introduction of any equipment, obstacles, or processes required to do the job, or (g) the recommendations involved the introduction of any information or instruction required to do the job correctly not otherwise specified by these requirements.

Antecedent-based recommendations that specifically called for training of sales employees on paperwork completion fell into the subcategory of paperwork-training-based recommendations. This subcategory was also deemed necessary upon examination of the data. The performance scenario utilized by the mock-managers was designed to

preclude training interventions on paperwork completion. Specifically, there were two pieces of pertinent information provided to the mock-managers which indicated that training was not a sufficient intervention: (a) “All sales personnel are trained on paperwork completion when they begin working at the organization…” and (b) “If you ask sales staff how to complete the paperwork properly, they can easily tell you or demonstrate the performance” (see Appendix M). The inclusion of training-based interventions by some of the mock-consultants was incorrect based on the scenario, so we included an analysis of these data across groups.

Consequence-based. Recommendations fell into the consequence-based category if they involved the manipulation or alteration of any consequences provided after the job has been completed. These consequences consisted of praise, feedback, monetary or other incentives, Premack consequences (i.e., the ability to perform other tasks as a result of completing the task in question), or punitive consequences.

Uncategorized. The uncategorized category of recommendations was deemed necessary upon examination of the data. Recommendations which did not meet the requirements for being categorized as antecedent- or consequence-based were placed in this category. The majority of these recommendations involved requests for further analysis, such as conducting process- or organization-level analyses, or assessing the manufacturing function.

Quality of recommendations. In addition to assessing the quantity of antecedent-based, consequence-based, and uncategorized recommendations, we also conducted a secondary, descriptive assessment on the quality of recommendations. This assessment was not originally planned, and was conducted post hoc. A cursory inspection of the

recommendations provided by mock-consultants showed a number of recommendations that were not anticipated, given the design of the performance scenario. For example, numerous consultants recommended training as an intervention, which was not a viable solution to the organizational issue.

The performance scenario utilized for this study had many potential recommendations, but two of these recommendations were determined to be high-quality. That is, if implemented, these two recommendations would presumably ameliorate the organizational issue at hand. Participant recommendations were reviewed and a descriptive analysis was conducted on the quality of recommendations across groups.

Inter-Observer Agreement

Eleven of the tools completed by the mock-consultants (roughly 27%) were scored by both the student investigator and an independent observer. The secondary observers were trained by the student investigator on the scoring of recommendations and had a list of criteria for each category available to them while scoring the recommendations (Appendix X). Training consisted of an explanation of the difference between antecedent- and consequence-based recommendations (Appendix Y), as well as a brief practice session (Appendix Z) during which time the secondary observers scored a set of mock-recommendations. Secondary observers were also provided with a rubric to help with recommendation categorization (Appendix AA).

Recommendations which were scored the same by both observers were marked as agreements, and those scored differently by the two observers were marked as disagreements. Inter-observer agreement (IOA) was determined by dividing the number of agreements by the total number of agreements plus disagreements. Disagreements

between the observers were discussed between the student investigator and the secondary observer until an agreement was reached. If no agreement was reached during this process, the student investigator decided on the final scoring of the recommendation.

RESULTS

Raw Score Assessment

Total recommendations. The average number of intervention recommendations per participant for each group can be seen in Figure 2. Visual inspection of these data indicates that pre-intervention assessments utilizing the PDC resulted in a larger overall quantity of recommendations. Although both tools were used to assess the same organizational scenario, the PDC resulted in an average of 4.71 recommendations for each participant, compared with an average of 3.85 recommendations for each participant utilizing the Performance Flowchart.

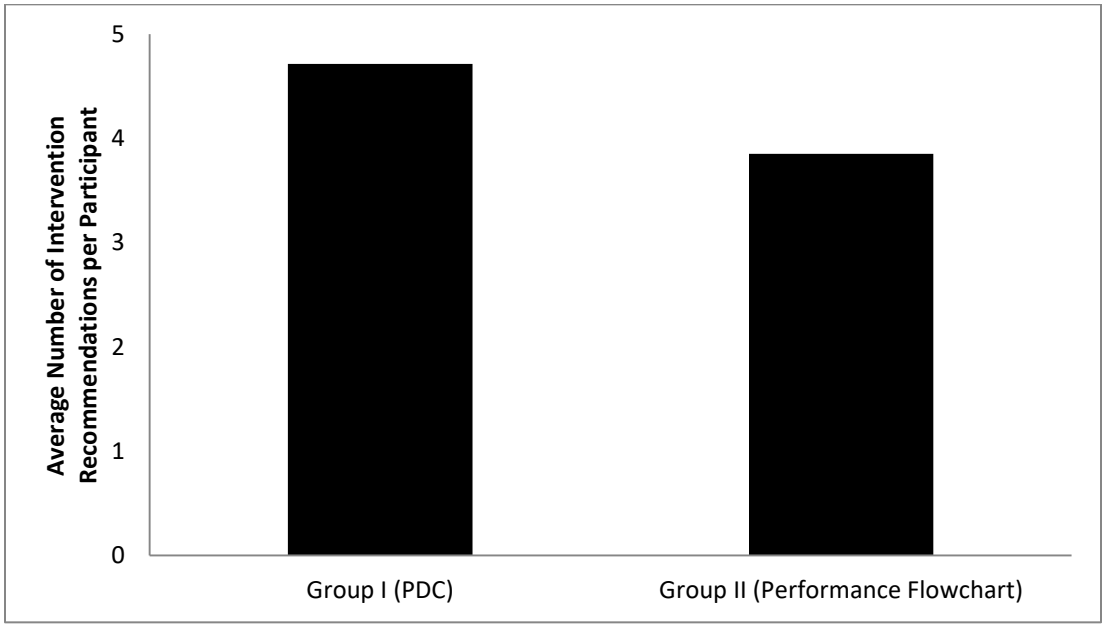

Figure 2. Average number of recommendations per participant for each group.

This difference was also analyzed statistically, using a two-sample *t*-test. The results of this *t*-test can be seen in Table 2. This analysis resulted in a *p*-value of 0.046 ($\alpha = .05$). There was a statistically significant difference in the total number of recommendations resulting from the use of each tool. The PDC resulted in more intervention recommendations with the performance scenario utilized.

Table 2

Two-sample t*-test table (raw scores)*

	Descriptive Statistics		
Sample	95% CI	*t*-value	*p*-value
Group I vs. Group II (Total)	(0.014, 1.714)	2.06	0.046*
Group I vs. Group II (Antecedent)	(-0.157, 1.295)	1.59	0.121
Group I vs. Group II (Consequence)	(-0.312, 0.826)	0.92	0.366
Antecedent vs. Consequence (Group I)	(0.078, 1.446)	2.27	0.030*
Antecedent vs. Consequence (Group II)	(-0.171, 1.071)	1.47	0.151
Group I vs. Group II (Training-based)	(-0.046, 0.555)	1.74	0.094

Note: CI = Confidence Interval, * = Statistically significant at the $\alpha = 0.05$ level

Raw score recommendations across groups. The total number of antecedent-based, consequence-based, and uncategorized intervention recommendations by group can be seen in Figure 3. Training-based recommendations are included in the antecedent-based category. Visual inspection of these data indicates a slightly higher number of antecedent-based intervention recommendations for both groups, with 55 antecedent to 39 consequence recommendations for Group I, and 41 antecedent to 32 consequence recommendations for Group II. Uncategorized recommendations were very low for both groups, with five in Group I and four in Group II.

These data were also analyzed statistically using numerous two-sample *t*-tests. The results of these *t*-tests can be seen in Table 2. There was no statistically significant difference between Groups I and II with regard to the number of antecedent-based

recommendations or consequence-based recommendations. Similarly, there was no statistically significant difference between the number of antecedent- and consequence-based recommendations within Group II. However, there was a statistically significant difference between the number of antecedent- and consequence-based interventions recommended by Group I (*p*-value 0.03 [$\alpha = 0.05$]). No statistical analysis was conducted to compare the uncategorized recommendations between groups.

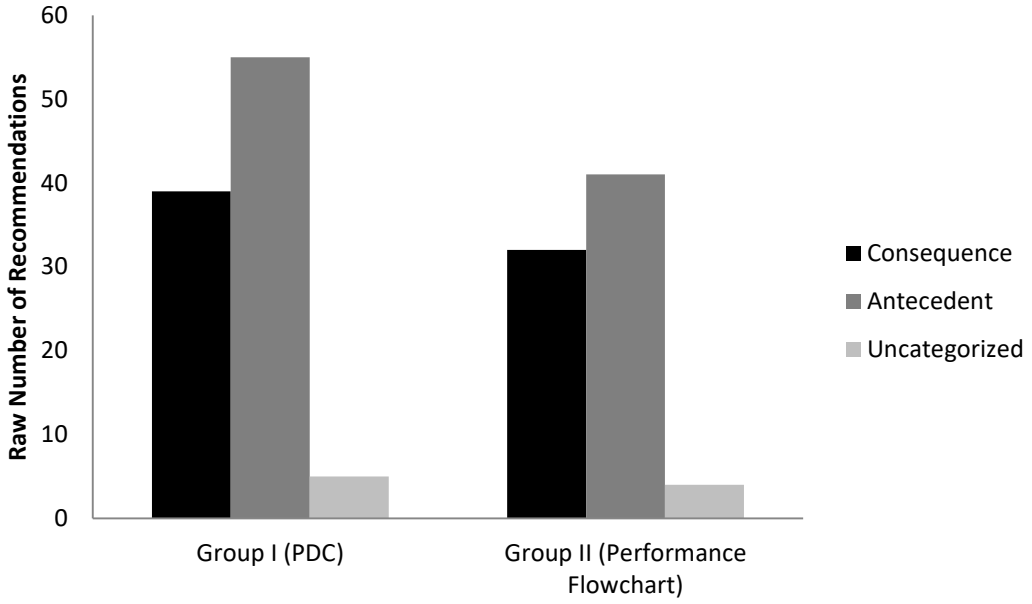

Figure 3. Total number of consequence-based, antecedent-based, and uncategorized intervention recommendations for each group.

Raw score recommendations across groups including training-based recommendations. The total number of antecedent-based, consequence-based, uncategorized, and training-based intervention recommendations by group can be seen in Figure 4. For this analysis, training-based recommendations were categorized separately from all other antecedent-based intervention recommendations. With this alteration, antecedent-based recommendations are still highest for both groups, with 53 in Group I

and 34 in Group II. Training-based recommendations were higher in Group II, with seven, compared to two in Group I.

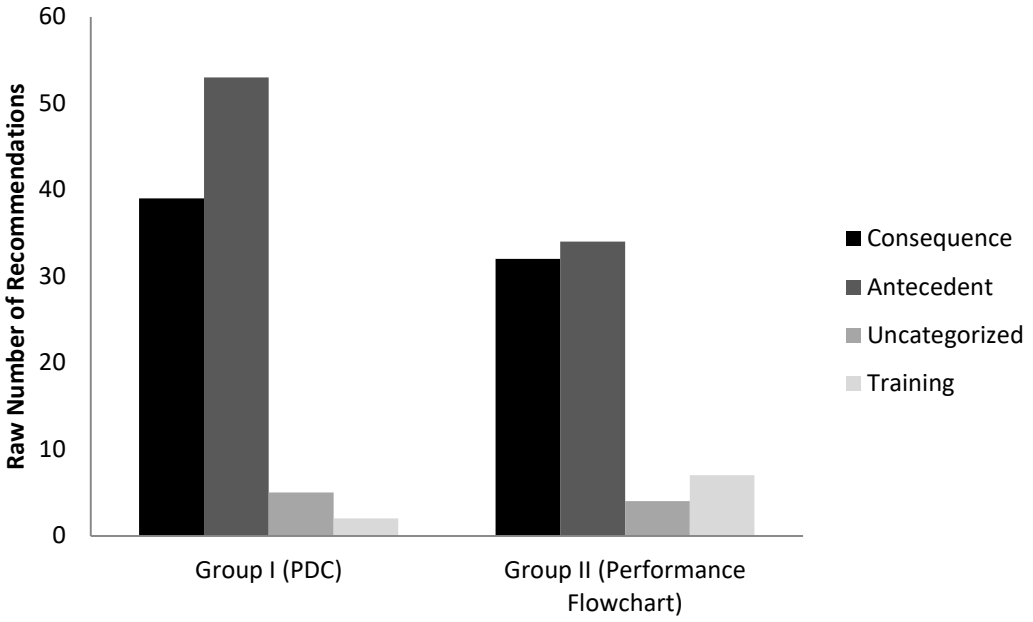

Figure 4. Total number of consequence-based, antecedent-based, uncategorized, and training-based intervention recommendations for each group.

The training-based intervention data were also analyzed statistically using a two-sample *t*-test. The results of this analysis can be seen in Table 2. There was no statistically significant difference between the raw numbers of training-based intervention recommendations in Groups I and II.

Percentage Assessment

Each type of recommendation was assessed as a percentage of the total number of recommendations for each group. The percentage of each recommendation type can be seen in Figure 5. Visual inspection of these data indicates that there was no distinct difference in the average number of antecedent- and consequence-based interventions recommended by Groups I and II. The largest difference between the two groups was in the number of training-based interventions recommended. Training-based

recommendations consisted of only 2.02% of the recommendations from Group I, compared to 9.09% of the recommendations from Group II.

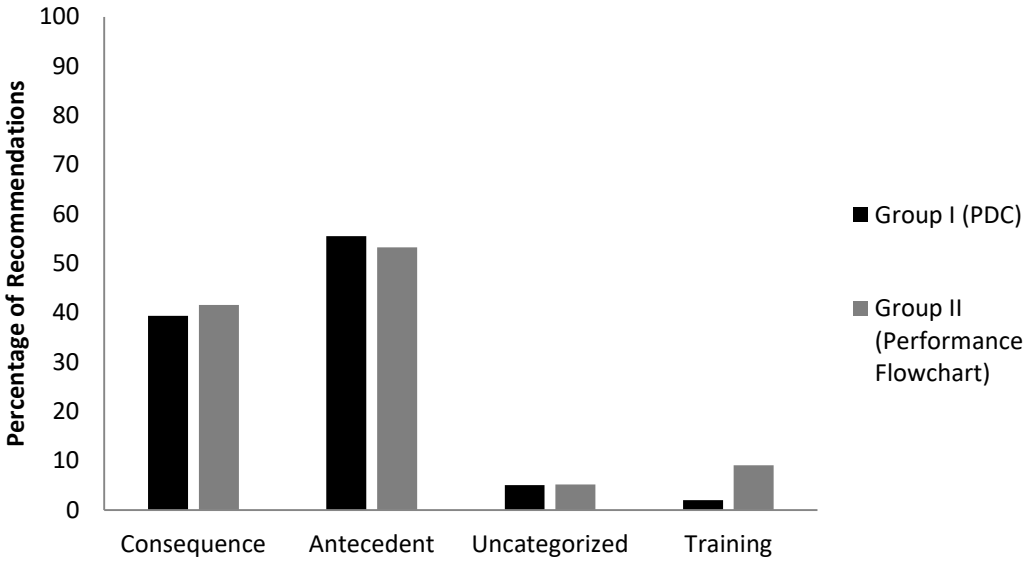

Figure 5. Percentages of consequence-based, antecedent-based, uncategorized, and training-based intervention recommendations by group.

The percentages of each recommendation type were also analyzed statistically using numerous two-sample *t*-tests. The results of these *t*-tests can be seen in Table 3. There was no statistically significant difference between Groups I and II with regard to the percentage of antecedent-based, consequence-based, or training-based recommendations. Similarly, there was no statistically significant difference between the percentages of antecedent- and consequence-based recommendations within Group II. However, there was a statistically significant difference between the percentages of antecedent- and consequence-based interventions recommended by Group I (*p*-value 0.016 [$\alpha = 0.05$]).

Table 3

Two-sample t*-test table (percentage scores)*

	Descriptive Statistics		
Sample	95% CI	*t*-value	*p*-value
Group I vs. Group II (Antecedent)	(-0.1101, 0.1583)	0.36	0.718
Group I vs. Group II (Consequence)	(-0.1231, 0.1360)	0.10	0.920
Group I vs. Group II (Training-based)	(-0.1301, 0.0096)	-1.77	0.088
Antecedent vs. Consequence (Group I)	(0.0275, 0.2478)	2.53	0.016*
Antecedent vs. Consequence (Group II)	(-0.0300, 0.2700)	1.62	0.113

Note: CI = Confidence Interval, * = Statistically significant at the $\alpha = 0.05$ level

Inter-Observer Agreement

Inter-observer agreement data was collected on 11 of the 41 tools completed by the mock consultants (roughly 27%). Secondary observers were trained on the scoring of recommendations by the student investigator and had a list of criteria available to them while scoring the recommendations (Appendix AA). IOA was calculated by dividing the number of agreements by the total number of agreements plus disagreements. The resulting IOA was 97.5%.

DISCUSSION

Intervention Recommendations

Quantity of recommendations. The purpose of this study was to determine whether there was any meaningful difference between the intervention recommendations resulting from the use of the PDC versus the Performance Flowchart. Visual inspection of the quantity of interventions recommended by the two experimental groups indicated that the PDC resulted in more overall recommendations. This finding was corroborated by a two-sample *t*-test, indicating a statistically significant difference between the numbers of recommendations from each group.

There are a few possible explanations for this finding. First, the Performance Flowchart is designed, as the name implies, as a flowchart. Users of this tool are prompted to stop their assessment if a recommendation is made which solves the issue in question. Although most participants continued through the entire flowchart regardless of recommendations made at early levels (based on notes taken within the tool), some of them appeared to stop their assessment when they decided that a particular solution would solve the issue (e.g., numerous participants had little to no writing in the notes sections near the end of the tool). Second, the PDC may simply provide more in-depth questions, allowing users to gather more information than they would with the Performance Flowchart. If this were the case, it is natural that the PDC users would make more overall recommendations. Lastly, it is possible that the courses from which participants were recruited played a role in the number of interventions they recommended. Aside from four participants recruited via mass email, every participant in Group I was recruited from PSY 6510 (Behavioral Systems Analysis). Participants from

Group II, on the other hand, were recruited from a combination of PSY 6510 and PSY 6440 (Personnel Training and Development). Since participants recruited from these classes were participating as part of their coursework, it is possible that the subject matter of the course had some effect on their recommendations. It is more likely that the course from which participants were recruited had an effect on the substance of their recommendations (e.g., participants from PSY 6510 may have provided more systemic changes, or changes outside of the performer-level of analysis), rather than the quantity of recommendations.

Difference between groups. Aside from the difference in the total number of recommendations, there were no significant differences between the two groups. Taking the overall number of recommendations into account, our analysis found that Groups I and II recommended a similar proportion of antecedent-based, consequence-based, and uncategorized interventions. These results indicate that, given a performance issue within an organization, use of either tool will result in a similar set of recommendations. There are a few possible explanations for this finding. First, it could simply be that the two tools are similar enough that we would expect them to result in similar recommendations. The questions across the two tools are very similar in nature, with the primary difference between the tools being the format (questionnaire vs. flowchart), and the ordering of the questions. Given the similarity between the tools, this possibility is highly likely. Second, the nature of the performance scenario itself may have had an effect on the recommendations. The performance scenario (see Appendix M), was designed with a roughly equal number of antecedent- and consequence-based issues. If mock-consultants were providing every possible recommendation they could think of for the scenario, it

makes sense that the two tools would result in a similar proportion of each type. Lastly, it is possible that the number of recommendations allowed by the tool had an effect on the recommendations. The mock-consultants were told that there was no limit on the number of intervention recommendations they could provide. The tool itself limited participants to ten recommendations (i.e., there were ten spaces for recommendations within the tool), but the largest number of recommendations provided by any one participant was eight. Presumably, by giving the mock-consultants free-reign over the number of recommendations they provided, we effectively created conditions under which every possible performance issue would be accounted for in the recommendations.

Visual assessment of the training-based recommendations indicated a moderate difference between Group I and Group II. The difference here was interesting due to the nature of the tools. The Performance Flowchart is specifically designed to make training a last resort recommendation. However, 9% of recommendations made with the Performance Flowchart were training-based, compared to only 2% of the PDC recommendations. In addition, the performance scenario utilized by the mock-managers was designed to preclude training interventions on paperwork completion (see Appendix M). With both of these factors working against the recommendation of training, it is interesting that so many mock-consultants recommended it as a solution. It is likely that this was a byproduct of the course from which these participants were recruited. Some of the participants in Group II participated as part of their Training and Development class. It is possible that these participants were more focused on training-based solutions, as that was the focus of the class. No participants in Group I were participating as a part of Training and Development, and thus may have been less focused on training solutions.

Difference within groups. Visual inspection of the recommendations within groups indicated that both tools resulted in more antecedent-based than consequence-based intervention recommendations. This finding was confirmed for Group I through a two-sample *t*-test, but was not confirmed for Group II.

There are a few possible explanations for this finding. First, it is possible that use of informant assessments such as the PDC and Performance Flowchart results in a proclivity towards antecedent-based interventions. Assessing organizational issues based purely on information gathered through questioning an individual (in this case a manager), may lead to more focus on the alteration of job descriptions, documentation, equipment, processes, obstacles, or goals, or the implementation of training, job and task analyses, or job aids, especially when the person being interviewed is not the actual performer. A non-performer may not be intimately familiar with the contingencies surrounding performance. Although they may have some knowledge of task difficulty, competing contingencies, and incentives, they may be less acquainted with the natural and Premack consequences in place for specific performers. This is a potential shortfall of indirect assessments in general, as numerous studies evaluating the interrater agreement of indirect assessments have found it to be very low (Conroy et al., , 1996; Cooper et al., 2007; Crawford et al., 1992; Zarcone et al., 1991). It is possible that indirect assessments conducted through interviews with the actual performers would provide more consequence-based findings. In addition, it is possible that the interviewees for these assessments show a penchant for antecedent-based interventions, and answer questions in such a way as to encourage those types of intervention recommendations.

Second, it is possible that the performance scenario utilized by the mock-managers contained more issues that were best solved through antecedent-based recommendations. Based on our understanding of the performance scenario, there were presumably six key changes that could be made to improve the performance in question: (a) alteration of the paperwork in question (antecedent-based), (b) alteration of incentives to include correct completion of paperwork (consequence-based), (c) alteration of goals to include correct completion of paperwork (antecedent-based), (d) implementation of a job aid for paperwork completion (antecedent-based), (e) process alteration to improve communication between sales and manufacturing (antecedent-based), and (f) alteration of managerial feedback on performance (consequence-based). While there were other potential interventions which could have been recommended, these were the primary recommendations which the investigators determined would solve the organizational issue at hand.

Third, it is possible that the mock-managers failed to discuss issues related to potential consequence-based interventions. While it seems unlikely that the majority of mock-managers would make this exact same mistake, there may have been an issue with the managerial training which led the mock-managers to believe that consequence-based aspects of the scenario were less important.

Lastly, it is possible that the participant pool from which mock-consultants were chosen had a preference for antecedent-based intervention recommendations. This seems unlikely, given that the mock-consultants were chosen from a behavior analytic graduate program, and behavior analysts are trained to be more inclined towards consequence-based interventions.

Quality of recommendations. Visual inspection of the quality of recommendations indicated that the two tools resulted in a similar number of high- and low-quality recommendations. Two different recommendations were considered high-quality: (a) altering performance consequences related to sales goals, and (b) alteration of the paperwork completed by sales staff to reduce complexity. These were considered high-quality because, based on the performance scenario, the implementation of these two interventions would ameliorate almost all of the issues being experienced by the organization. There were a number of different low-quality recommendations as well, including training of sales staff, implementation of unnecessary analyses, and providing employees with unnecessary information. This also included recommendations stemming from a lack of understanding, such as paying employees a salary (the scenario indicated that employees already received a salary in addition to their performance-based pay). These interventions were considered low-quality because either (a) the implementation of the intervention was unlikely to have an effect on performance, or (b) the intervention outcomes would not have justified the costs.

Consultants from Group I made a total of 99 intervention recommendations. Of those, 24 were for the high-quality interventions. Group II consultants made a total of 77 intervention recommendations. Of those, 18 were for the high-quality interventions. Given the difference in the total number of recommendations provided by each group, the difference in high-quality recommendations between the groups becomes negligible. Similarly, the two groups did not differ greatly in the number of low-quality recommendations. Of the 99 total recommendations made by Group I, 12 were low-quality recommendations. Of the 77 total recommendations made by Group II, 10 were

low-quality recommendations. There are a couple of possible reasons for this lack of difference in recommendation quality between the two groups.

First, it is possible that the two tools are similar enough in their questioning that we would anticipate the participants finding similar results. As mentioned in the **Difference between groups** section, the two tools are similar enough that they would likely result in similar information being gathered from the interview.

Second, it is possible that the design of the performance scenario had an effect on the quality of recommendations. The study was not designed with quality of recommendations in mind, but focused instead on the quantity of recommendations. As such, the quality of interventions was determined post hoc. The fact that there were only two intervention recommendations that we considered to be high-quality may have played a role in the lack of differences between groups. It is possible that if one or two additional high-quality interventions were built in, but were slightly more difficult to notice for the consultants, that one tool would have been more likely to result in that recommendation. Similarly, both of the high-quality recommendations were fairly simple to find utilizing the questions in both tools, so it was anticipated that all mock-consultants would recommend at least one of these interventions.

Third, it is possible that the inexperience of the consultants played a role. The consultants taking part in this study were novices; although they had a behavior analytic background, they did not necessarily have consulting experience or consulting skillsets. The PDC and Performance Flowchart do not provide any sort of analysis help to the consultants, and they are left to assess the information gathered and arrive at solutions on their own. While this is not likely to be an issue for an experienced consultant, a novice

may have more trouble isolating high-quality recommendations from the information collected in the tool. It is possible that some sort of intervention selection support within the tool may have helped the consultants decide on stronger recommendations, and resulted in a larger quantity of high-quality recommendations.

Limitations

There were five primary limitations to this study. The first limitation involved the contrived setting of the study. As discussed in the introduction, numerous difficulties arise when attempting to compare the use of functional assessment tools in an organizational setting. Organizations are highly complex and constantly changing (Malott, 2003), making it very difficult to control for confounding variables. Due to this constraint, we chose to develop a contrived organizational performance scenario in a laboratory setting, rather than utilizing an actual organizational setting. However, the contrived nature of this study carries its own set of complications. Specifically, the complexity of organizational settings makes it difficult, if not impossible, to recreate in the lab. Although our performance scenario was designed to mimic a realistic performance issue, it could not capture every detail that would be present in an actual organization, nor could it capture the differences between employees. If asked a question that was not covered in the performance scenario, the mock-managers were trained to simply tell the consultant that they did not know. While this might happen in an actual organizational setting, it is more likely that the interviewee would be able to acquire this information from another organizational source. Since the mock-managers were unable to provide information not captured in the original performance scenario, it was difficult, and sometimes impossible, for consultants to branch out beyond the questions provided

in the tools. It is possible that, given a real performance scenario within an organization, the PDC and Performance Flowchart would have resulted in more disparate intervention recommendations.

The second limitation involved data collection on the treatment integrity of the performance scenario. Specifically, researchers did not sit in on, or record, the interview sessions between the mock-managers and mock-consultants. It is possible that the mock-managers did not provide information that was in line with the performance scenario they were trained on, and this caused variance between recommendations. Although the mock-managers were provided in-depth training on the performance scenario, and were required to pass a quiz pertaining to the information in that scenario, it is possible that they provided the incorrect information to the mock-consultants. However, if this issue did occur, it is not readily apparent in the data. Recommendations were fairly consistent between and within groups, indicating that the information mock-managers provided was fairly comparable.

The third limitation involved recruitment. Due to a lack of interest in the study from the targeted participant pool for mock-consultants (i.e., psychology graduate students), we were forced to alter our recruitment strategy for the majority of these participants. The updated recruitment strategy involved participation as part of a course (i.e., Personnel Training and Development and Behavioral Systems Analysis). Participants recruited via this new method were not randomly assigned to either the PDC or Performance Flowchart, but were instead assigned to a group based on the class from which they were recruited. Since the participants joined the study as part of a course, the training session for mock-consultants was conducted within the confines of class time.

The instructor could not afford to give up two consecutive class sessions in order to split the students between Group I and Group II, thus, all students within a particular class received the same tool training. Seventeen of the 21 participants in Group I were recruited from Behavioral Systems Analysis, while Group II saw a roughly even split between students in the two courses. It is possible that this lack of random assignment played a role in the differences, or lack of differences, between the intervention recommendations of the two groups.

The fourth limitation was a lack of quality measures on the recommendations provided by the mock-consultants. This study was designed to examine the quantity of recommendations and the types of recommendations, and the quality assessment was conducted as a post-hoc, descriptive assessment. That is, high- and low-quality recommendations were not planned out in advance. If quality was taken into account in the original design of the scenario, it is likely that a more thorough analysis could have been conducted on quality measures. This type of analysis may have provided valuable insights into the difference between the tools; specifically, in the usefulness of each tool when collecting information necessary to make high-quality recommendations.

The final limitation involved the training of the mock-consultants. The training the consultants received for this study was limited to the specific tool they were using (i.e., the PDC or Performance Flowchart). Participants were not provided training on any other skills required to conduct a successful interview, such as business acumen, interviewing skills, or asking follow-up questions, to name a few. While it was assumed that the participants had the necessary behavior analytic skillset to determine appropriate interventions based on responses, the skills required to attain that information may have

been lacking. As such, it is possible that if a mock-manager provided an answer that was vague or lacking in some way, the mock-consultants may not have asked appropriate follow-up questions, and instead may have simply moved on to the next question on their tool.

Future Research

The present study reveals a number of possibilities for future research and replication, as the lack of significant differences between the PDC and Performance Flowchart recommendations may be attributable to numerous factors. Future research comparing the results of different informant assessment methods could benefit from an alteration of the interviewees (i.e., the mock-managers). Specifically, future research should utilize a few, highly trained mock-managers, rather than a different mock-manager for every consultant. This would help to decrease variability in the mock-manager responses across participants and groups. Our study utilized a large number of mock-managers, one per mock-consultant, in an effort to reduce manager fatigue and interview acclimation. That is, we did not want mock-managers providing repeated, rehearsed answers, or anticipating the consultants' lines of questioning, as this is not an appropriate analogue to a real interview environment. However, it is possible that the variability across interview sessions was of greater issue than fatigue or acclimation would have been. By ensuring congruent manager responses to questions, results may better reflect the differences between the tools, rather than the differences between the managers.

Future research may also benefit from an alteration of the performance scenario. The performance scenario we utilized was fairly simple, with a handful of key

performance issues. However, real organizational issues are often much more complex (Malott, 2003), and may result in a variety of different recommendations depending on the questions being asked. We chose a more simplistic scenario for ease of learning on the part of the mock-managers; however, were a study to utilize only a few managers as discussed above, this issue may be alleviated.

Third, future researchers may benefit from the addition of a control condition. Since our study was examining the difference between two specific tools, and, more specifically, the ordering of the questions in those tools, we did not utilize a control condition. Depending upon the question being asked, it may be beneficial to add in a control group which makes recommendations without the use of any pre-intervention assessment. For example, if the researcher is seeking to determine whether formalized pre-intervention assessment tools result in higher quality recommendations than informal interviews, a control group would be required. Since informal interviews are the typical "control" when assessing organizational issues, a control condition such as this would provide insights into the necessity of formal pre-intervention assessment tools. If the control group recommended similar or better recommendations than those using the pre-intervention assessment tools, it would indicate that formalized tools may not be necessary, especially for experienced consultants. This may help us determine if there is, in fact, any benefit to the use of pre-intervention assessments in OBM. This control condition may take other forms as well. Some consultants utilize simple structured interviews of their own design when conducting interviews of this nature. Methods such as these may also be examined as a sort of pseudo-control condition.

Future researchers may also benefit from an assessment of the quality or cost of intervention recommendations. As mentioned in the limitations section, our study was not designed to assess the quality of recommendations provided by mock-consultants. However, our performance scenario could be assessed through a quality lens by future researchers, and a rubric could be created which focuses on quality. First, researchers would have to examine the performance scenario and add information related to costs. For the purposes of this study, we did not include any information in the scenario related to the costs of the issues or the cost of potential interventions. This would include things like cost of errors, cost of training, cost of recreating the paperwork, and cost of process changes. Once the scenario was adjusted for cost, the researchers would then need to run pilot participants. This step is necessary in order to determine a set of common, anticipated recommendations, which could then be assessed and ranked, based on quality. Without this pilot assessment, the researchers would be forced to make guesses about which recommendations the consultants might make. Once a set of recommendations is gathered, it can be ranked. This ranking would have to be done very deliberately, utilizing a cost/benefit analysis to assess each recommendation. For example, the two high-quality recommendations from this study would have been ranked (1) altering performance consequences related to sales goals, and (2) alteration of the paperwork completed by sales staff to reduce complexity. This is because adding proper paperwork completion to the sales goals has almost no costs associated with it, but high benefits. The second intervention would also have high benefits, but there would be costs associated with the redesign of the paperwork. These costs may not be high, but they would likely be higher than those for the first intervention. With a clear list of ranked

recommendations, the researchers would then have a rubric with which to score all consultants, based on every recommendation that they make.

Another potential alteration to be considered in future research is ranking of recommendations. For the purposes of this study, mock-consultants were simply asked to list out any recommendations they deemed appropriate for the scenario. This resulted in a plethora of recommendations, and may have resulted in an everything-but-the-kitchen-sink-style approach to interventions, making the overall ratios of recommendations for each tool very similar. Were mock-consultants to rank their recommendations based on priority or ease of implementation, we may have seen a greater difference between the tools in high-priority recommendations. For example, it is possible that, due to the design of the Performance Flowchart, mock-consultants would have listed more consequence-based interventions, or non-training interventions, as higher priority.

Future research would also benefit from additional consultant training. Specifically, it would behoove researchers to train mock-consultants not only on the nature of the tools themselves, but on how to conduct an interview. Utilizing an informant assessment to interview and consult requires a unique skillset; one that many of our mock-consultants likely did not have. By training consultants in these skills prior to the interview process, future researchers may avoid issues seen in this study, such as the recommendation of training when training was not a viable solution. However, it should be noted that this type of skills training is not necessarily formalized for real-world consultants. Though consultants have likely obtained these skills through experience with interviewing, they may not have received any formal training on the

skills in question. Similarly, if the potential end-users of these tools extend beyond the consultant audience, their skills may be similarly lacking.

Researchers examining pre-intervention assessments in the future may also consider assessing different, or additional, tools. This study focused on the PDC and Performance Flowchart due to the similarity in the tools' questions, and dissimilarity in the ordering of said questions. Future research may seek an alternative approach, and compare tools which differ more greatly in the questions asked, or differ in different ways than the two tools utilized for this study.

Finally, future research may consider comparing not only informant assessment tools, but who is being interviewed with the tools. As mentioned above (see **Difference within groups**), a manager or non-performer may not be intimately familiar with all of the contingencies in place for performers. This may lead to less consequence- and more antecedent-based recommendations, due to the nature of the information being shared. A study could potentially compare the use of a single tool to interview varying roles about a single performance issue, and determine if there are discernable differences between the resulting recommendations.

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Appendix A

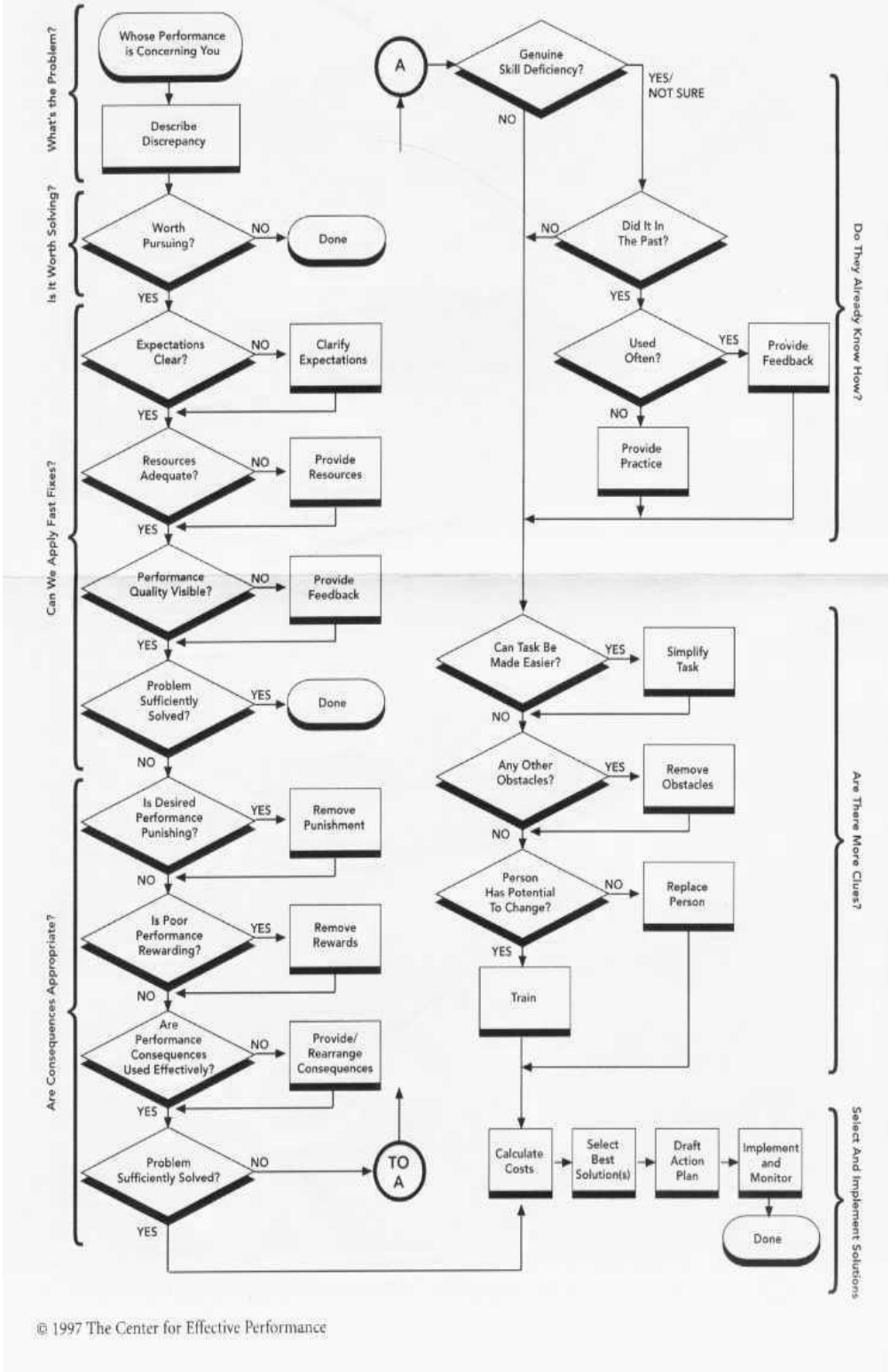
PDC questions

PERFORMANCE DIAGNOSTIC CHECKLIST – Austin et al.		
ANTECEDENTS AND INFORMATION	YES	NO
Is there a written job description telling exactly what is expected of the employee?		
Has the employee received adequate instruction about what to do? (Not training - explicit instructions like "I want you to do this, this, and this		
Are employees aware of the mission of the department?		
If yes, can they tell you what the mission is?		
Are there job or task aids?		
If yes, are those aids visible while completing the task?		
Are there reminders to prompt the task?		
Is the supervision present during task completion?		
Are there frequently updated, challenged and attainable goals?		
If yes, do employees feel these goals are fair?		
EQUIPMENT AND PROCESSES	YES	NO
If equipment is required is it reliable?		
Is it in good working order?		
Is it ergonomically correct?		
Is the equipment and environment optimally arranged?		
Are larger processes suffering from certain incomplete tasks?		
Are these processes arranged in a logical manner?		
Are these processes maximally efficient?		
Are there any other obstacles that are keeping the employee from completing		
KNOWLEDGE AND SKILLS- TRAINING	YES	NO
Can the employee tell you what is supposed to be done and how it should be		
Can the employees physically demonstrate the task?		
If yes, have they mastered the task?		
If fluency is necessary are they fluent?		
Does the employee have the capacity to learn to complete task?		
CONSEQUENCES	YES	NO
Are there consequences delivered contingent on the task?		
Frequency?		
Immediately?		
Consistency/probability?		
Positive/Negative		
Are there Premack reinforcers? (i.e., Is there opportunity to work on more preferred tasks after less preferred tasks are completed?)		
Do employees see the effect of performance?		
If yes How? Natural? Arranged?		
Do supervisors deliver feedback?		
If yes, written or verbal or other?		
Direct or indirect or other?		
Is there performance monitoring?		
If yes, how? Self? Supervisor direct? supervisor indirect?		
Is there a response effort associated with the performance?		
Are there other behavior competing with the desired performance?		

Appendix B

Mager's (1970) Performance Flowchart

Performance Analysis Flow Diagram



Appendix C

Recruitment flyer

Research Participants Needed!

I am looking for individuals to participate in a study to examine managerial-consultant interactions. Participation will involve training in a managerial performance scenario and a one-on-one interview with a trained business consultant.

In order to be eligible for participation in this study, you must be available to attend a 2-3 hour training session (in Wood Hall) and a 30-60 minute interview session in the Spring 2016 semester. Additionally, you cannot have any familiarity with the tools being utilized by the interviewing consultants.

If you choose to participate in this study, you may receive extra credit for undergraduate courses in the Psychology Department at Western Michigan University, when appropriate.

All participant information will remain completely confidential.

If you are interested in learning more about this study, please contact Nathan Bechtel at nathan.t.bechtel@wmich.edu or (269) 910-8529. Be sure to provide your name, e-mail address or telephone number, and the times you can be reached. Please remember that you must be available for both the training (2-3 hours) and interview (30-60 minutes) sessions during the Spring 2016 semester.

Contact Nathan Bechtel
Psychology Department
nathan.t.bechtel@wmich.edu
(269) 910-8529

Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529	Nathan.t.bechtel@wmich.edu (269) 910-8529

Appendix D

Participant recruitment script

To be read aloud by the student investigator at undergraduate classes:

"Hi, my name is Nathan Bechtel. I am a graduate student in the Psychology Department and I am getting ready to start my doctoral dissertation research. I am visiting your class today to recruit participants for my study. To be a participant, you must be available to attend one, 2-3 hour training session and one 30-60 minute interview session in the Spring 2016 semester. Additionally, you cannot have any familiarity with the tools being utilized during the interview process.

Participation will involve training in a managerial performance scenario and a one-on-one interview with a trained business consultant. The overall time commitment will be 3-4 hours spread over the two sessions. If you choose to participate in this study you may earn extra credit in psychology courses at WMU at the discretion of your professor.

Your participation is completely voluntary and you may withdraw from the study at any time. If you do withdraw, you may still receive extra credit for the hours completed up to the point of attrition. Your willingness to participate in the study or your withdrawal from the study will not affect your grade in any course or your affiliation with Western Michigan University, and your participation will remain confidential.

If you are interested in learning more about my study, please list your contact information on the individual participant recruitment slips, which I will collect in a few minutes. You can also contact me at nathan.t.bechtel@wmich.edu or (269) 910-8529. Please remember that you must be available for both the training and interview sessions during the Spring 2016 semester. I will contact you within the week to talk more about your potential participation. Thank you for your time."

Appendix E

Mass recruitment email

Greetings!

I hope everyone had a great winter break and you're looking forward to an excellent Spring semester!

Let me begin by introducing myself. My name is Nathan Bechtel and I'm a doctoral student, studying under Dr. Heather McGee. I am currently working on my dissertation, and we are looking for graduate students willing to participate. Participation would require you to attend a 2-3 hour training session and conduct a brief, 30-60 minute interview. To qualify for participation, you cannot have taken the Psychology Department's course titled Personnel Training and Development (PSY 6440).

For students in the BATS program, Dr. Malott indicated that you may be able to earn OAPs for your participation in this study. For more information on this, please talk to Dr. Malott directly.

All students in the Psychology Department's graduate program are required to complete a Graduate Student Annual Report (GSAR) each year, and this research experience can be used on that report. It is also an excellent opportunity to help out a fellow graduate student, and gain some perspective on research from the side of the participant.

If you are interested in participating in this study, please contact me via email at nathan.t.bechtel@wmich.edu, or by phone at (269) 910-8529. I look forward to working with all of you!

Best,

Nathan Bechtel, M.A.

Graduate Teaching Assistant
Applied Behavior Analysis Department | Western Michigan University

Appendix F

HSIRB approval

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date: January 13, 2016

To: Heather McGee, Principal Investigator
Nathan Bechtel, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 15-11-25

This letter will serve as confirmation that your research project titled "A Systematic Comparison of Functional Assessment Outcomes in Organizational Behavior Management" has been **approved** under the **expedited** category of review by the Human Subjects Institutional Review Board. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the application.

Please note: This research may **only** be conducted exactly in the form it was approved. You must seek specific board approval for any changes in this project (e.g., ***you must request a post approval change to enroll subjects beyond the number stated in your application under "Number of subjects you want to complete the study***)." Failure to obtain approval for changes will result in a protocol deviation. In addition, if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

Reapproval of the project is required if it extends beyond the termination date stated below.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: **January 12, 2017**

1903 W. Michigan Ave., Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293 FAX: (269) 387-8276
CAMPUS SITE: 251 W. Walwood Hall

WESTERN MICHIGAN UNIVERSITY

Human Subjects Institutional Review Board

Date: June 27, 2017

To: Heather McGee, Principal Investigator
Nathan Bechtel, Student Investigator for dissertation

From: Amy Naugle, Ph.D., Chair

Re: HSIRB Project Number 15-11-25

This letter will serve as confirmation that the changes to your research project titled "A Systematic Comparison of Functional Assessment Outcomes in Organizational Behavior Management" requested in your memo received June 26, 2017 (to add data collection conducted as part of standard educational activities for PSY6440 and PSY 6510; recruitment and consent procedures and documents added for this data collection) have been approved by the Human Subjects Institutional Review Board.

The conditions and the duration of this approval are specified in the Policies of Western Michigan University.

Please note that you may **only** conduct this research exactly in the form it was approved. You must seek specific board approval for any changes in this project. You must also seek reapproval if the project extends beyond the termination date noted below. In addition if there are any unanticipated adverse reactions or unanticipated events associated with the conduct of this research, you should immediately suspend the project and contact the Chair of the HSIRB for consultation.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: **January 12, 2018**

1903 W. Michigan Ave., Kalamazoo, MI 49008-5456
PHONE: (269) 387-8293 FAX: (269) 387-8276
CAMPUS SITE: 251 W. Walwood Hall

Appendix G

Post-training quiz – Mock-managers

Managerial Performance Scenario Quiz 1

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. How will you begin the interview session?
    a. Describing how manufacturing can better do their job.
    b. Describing the performance issues which are causing concern and requesting training.
    c. Explaining how the issues aren't your fault.
    d. Describing all of the consequences in place for poor performance.
2. Are employees currently trained on filling out paperwork?
    a. Yes, they receive monthly trainings on paperwork.
    b. No, that's why we need training.
    c. Yes, they receive training when they start their job.
    d. No, training on paperwork isn't necessary.
3. Are sales personnel capable of doing the paperwork correctly?
    a. Yes, they do it right when we harp on them about it.
    b. Yes, they always do it right.
    c. No, I've never seen anyone do paperwork properly.
    d. No, that's why we need the training.
4. Are there any job aids available for paperwork completion?
    a. Yes, every employee carries one around.
    b. Yes, they are available in the staff meeting room.
    c. No, we don't have job aids.
    d. No. We have them, but they aren't available to staff.
5. Is the paperwork described adequately in the employee job description?
    a. Kind of. The paperwork is mentioned in the job description.
    b. No, the paperwork isn't in the job description.
    c. Yes, a full explanation is included in the job description.
6. How difficult is it to complete the paperwork?
    a. The paperwork is very simple. Even an idiot could figure it out.
    b. The paperwork is extensive and confusing, but fixable.
    c. The paperwork is difficult, but there's no way it could be improved.
    d. The paperwork is paperwork. I don't know how difficult it is.

7. How do the paperwork errors affect the company?
    a. Errors cause problems for sales, since they are the ones creating the issue.
    b. Errors cause the business to lose customers because their products aren't up to snuff.
    c. Errors cause problems in manufacturing, since they don't get accurate product specifications.
    d. Errors cause problems for me, because when my sales personnel don't do their jobs I get yelled at by my boss.
8. Who hears the most complaints about the paperwork?
    a. Sales
    b. Transport
    c. Manufacturing
9. Are sales personnel prompted to fill out the paperwork?
    a. Paperwork is required to complete a sale, so they are prompted to fill it out during the sale.
    b. No, there is no prompt for them to fill it out during the sale.
    c. The supervisor prompts all sales personnel to fill out paperwork.
10. Are sales personnel aware of the effect of poor paperwork?
    a. They are aware; they just don't care about the effects.
    b. Sales personnel never hear the complaints, only manufacturing does. They aren't aware of any issue.
11. Are there any goals in place for paperwork completion?
    a. We don't do "goals" here.
    b. There are weekly sales goals, but they don't include anything about filling out paperwork.
    c. There are weekly goals for correct paperwork completion.
12. Does the supervisor or manager look over the paperwork or provide feedback?
    a. The sales supervisor looks over the paperwork on a daily basis and provides feedback to the sales personnel on the paperwork.
    b. The sales supervisor does not check the paperwork until it is too late to correct the errors, and only provides delayed feedback.
    c. The sales supervisor never looks over the paperwork, and provides no feedback.
    d. The sales supervisor only looks over paperwork during quarterly performance reviews.

13. Are there any consequences for correct paperwork?
    a. There are no positive consequences for correct paperwork, and any aversive consequences (such as getting chewed out) are fairly delayed.
    b. Employees receive a bonus at the end of the month if they have fewer than 3 errors on their paperwork for that month.
    c. Employees who consistently fail to do their paperwork properly are given a warning and, eventually, fired.
14. What effects do the sales goals have on the paperwork?
    a. Poor paperwork for a sale reduces that sale to half of a sale in the weekly goals. Personnel are punished for poor paperwork.
    b. Poor paperwork does not affect sales goals, and sales personnel will often rush paperwork in order to make a new sale.
15. If the consultant asks you a question not covered by the scenario, what do you do?
    a. Invent an answer; they won't know that you didn't know the right answer.
    b. Simply tell them you don't know.
    c. Tell them you don't know off-hand, but you can venture a guess.
    d. Tell them that information is classified.

Managerial Performance Scenario Quiz 2

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. Are there any job aids available for paperwork completion?
    a. No, we don't have job aids.
    b. Yes, every employee carries one around.
    c. Yes, they are available in the staff meeting room.
    d. No. We have them, but they aren't available to staff.
2. How do the paperwork errors affect the company?
    a. Errors cause problems for sales, since they are the ones creating the issue.
    b. Errors cause the business to lose customers because their products aren't up to snuff.
    c. Errors cause problems in manufacturing, since they don't get accurate product specifications.
    d. Errors cause problems for me, because when my sales personnel don't do their jobs I get yelled at by my boss.
3. Are sales personnel prompted to fill out the paperwork?
    a. No, there is no prompt for them to fill it out during the sale.
    b. The supervisor prompts all sales personnel to fill out paperwork.
    c. Paperwork is required to complete a sale, so they are prompted to fill it out during the sale.
4. What effects do the sales goals have on the paperwork?
    a. Poor paperwork does not affect sales goals, and sales personnel will often rush paperwork in order to make a new sale.
    b. Poor paperwork for a sale reduces that sale to half of a sale in the weekly goals. Personnel are punished for poor paperwork.
5. If the consultant asks you a question not covered by the scenario, what do you do?
    a. Simply tell them you don't know.
    b. Invent an answer; they won't know that you didn't know the right answer.
    c. Tell them you don't know off-hand, but you can venture a guess.
    d. Tell them that information is classified.

6. How will you begin the interview session?
    a. Describing how manufacturing can better do their job.
    b. Describing the performance issues which are causing concern and requesting training.
    c. Explaining how the issues aren't your fault.
    d. Describing all of the consequences in place for poor performance.
7. Who hears the most complaints about the paperwork?
    a. Sales
    b. Transport
    c. Manufacturing
8. Are sales personnel capable of doing the paperwork correctly?
    a. No, I've never seen anyone do paperwork properly.
    b. Yes, they do it right when we harp on them about it.
    c. Yes, they always do it right.
    d. No, that's why we need the training.
9. Does the supervisor or manager look over the paperwork or provide feedback?
    a. The sales supervisor does not check the paperwork until it is too late to correct the errors, and only provides delayed feedback.
    b. The sales supervisor looks over the paperwork on a daily basis and provides feedback to the sales personnel on the paperwork.
    c. The sales supervisor never looks over the paperwork, and provides no feedback.
    d. The sales supervisor only looks over paperwork during quarterly performance reviews.
10. Are employees currently trained on filling out paperwork?
    a. Yes, they receive monthly trainings on paperwork.
    b. No, that's why we need training.
    c. Yes, they receive training when they start their job.
    d. No, training on paperwork isn't necessary.
11. Is the paperwork described adequately in the employee job description?
    a. Yes, a full explanation is included in the job description.
    b. No, the paperwork isn't in the job description.
    c. Kind of. The paperwork is mentioned in the job description.
12. How difficult is it to complete the paperwork?
    a. The paperwork is very simple. Even an idiot could figure it out.
    b. The paperwork is extensive and confusing, but fixable.
    c. The paperwork is difficult, but there's no way it could be improved.
    d. The paperwork is paperwork. I don't know how difficult it is.

13. Are sales personnel aware of the effect of poor paperwork?
    a. Sales personnel never hear the complaints, only manufacturing does. They aren't aware of any issue.
    b. They are aware; they just don't care about the effects.
14. Are there any goals in place for paperwork completion?
    a. There are weekly sales goals, but they don't include anything about filling out paperwork.
    b. We don't do "goals" here.
    c. There are weekly goals for correct paperwork completion.
15. Are there any consequences for correct paperwork?
    a. Employees receive a bonus at the end of the month if they have fewer than 3 errors on their paperwork for that month.
    b. Employees who consistently fail to do their paperwork properly are given a warning and, eventually, fired.
    c. There are no positive consequences for correct paperwork, and any aversive consequences (such as getting chewed out) are fairly delayed.

Managerial Performance Scenario Quiz 3

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. If the consultant asks you a question not covered by the scenario, what do you do?
    a. Invent an answer; they won't know that you didn't know the right answer.
    b. Tell them you don't know off-hand, but you can venture a guess.
    c. Tell them that information is classified.
    d. Simply tell them you don't know.
2. How do the paperwork errors affect the company?
    a. Errors cause the business to lose customers because their products aren't up to snuff.
    b. Errors cause problems for me, because when my sales personnel don't do their jobs I get yelled at by my boss.
    c. Errors cause problems in manufacturing, since they don't get accurate product specifications.
    d. Errors cause problems for sales, since they are the ones creating the issue.
3. Who hears the most complaints about the paperwork?
    a. Sales
    b. Transport
    c. Manufacturing
4. Are there any consequences for correct paperwork?
    a. Employees who consistently fail to do their paperwork properly are given a warning and, eventually, fired.
    b. There are no positive consequences for correct paperwork, and any aversive consequences (such as getting chewed out) are fairly delayed.
    c. Employees receive a bonus at the end of the month if they have fewer than 3 errors on their paperwork for that month.
5. How will you begin the interview session?
    a. Explaining how the issues aren't your fault.
    b. Describing the performance issues which are causing concern and requesting training.
    c. Describing how manufacturing can better do their job.
    d. Describing all of the consequences in place for poor performance.

6. Are employees currently trained on filling out paperwork?

a. Yes, they receive training when they start their job.
b. No, that's why we need training.
c. Yes, they receive monthly trainings on paperwork.
d. No, training on paperwork isn't necessary.

7. Are there any job aids available for paperwork completion?
    a. Yes, every employee carries one around.
    b. No, we don't have job aids.
    c. Yes, they are available in the staff meeting room.
    d. No. We have them, but they aren't available to staff.
8. Are sales personnel aware of the effect of poor paperwork?
    a. They are aware; they just don't care about the effects.
    b. Sales personnel never hear the complaints, only manufacturing does. They aren't aware of any issue.
9. What effects do the sales goals have on the paperwork?
    a. Poor paperwork for a sale reduces that sale to half of a sale in the weekly goals. Personnel are punished for poor paperwork.
    b. Poor paperwork does not affect sales goals, and sales personnel will often rush paperwork in order to make a new sale.
10. How difficult is it to complete the paperwork?
    a. The paperwork is very simple. Even an idiot could figure it out.
    b. The paperwork is extensive and confusing, but fixable.
    c. The paperwork is paperwork. I don't know how difficult it is.
    d. The paperwork is difficult, but there's no way it could be improved.
11. Are there any goals in place for paperwork completion?
    a. We don't do "goals" here.
    b. There are weekly goals for correct paperwork completion.
    c. There are weekly sales goals, but they don't include anything about filling out paperwork.
12. Does the supervisor or manager look over the paperwork or provide feedback?
    a. The sales supervisor does not check the paperwork until it is too late to correct the errors, and only provides delayed feedback.
    b. The sales supervisor never looks over the paperwork, and provides no feedback.
    c. The sales supervisor looks over the paperwork on a daily basis and provides feedback to the sales personnel on the paperwork.
    d. The sales supervisor only looks over paperwork during quarterly performance reviews.

13. Are sales personnel capable of doing the paperwork correctly?

a. No, I've never seen anyone do paperwork properly.
b. No, that's why we need the training.
c. Yes, they do it right when we harp on them about it.
d. Yes, they always do it right.

14. Are sales personnel prompted to fill out the paperwork?
    a. No, there is no prompt for them to fill it out during the sale.
    b. Paperwork is required to complete a sale, so they are prompted to fill it out during the sale.
    c. The supervisor prompts all sales personnel to fill out paperwork.
15. Is the paperwork described adequately in the employee job description?
    a. Yes, a full explanation is included in the job description.
    b. Kind of. The paperwork is mentioned in the job description.
    c. No, the paperwork isn't in the job description.

Appendix H

Post-training quiz – Mock-consultants: PDC

PDC Consultant <u>Quiz 1</u>

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. How will you begin the interview session?
    a. Introducing yourself and listening to the manager's performance issues.
    b. Describing the PDC and how you will use it.
    c. Explaining how you can fix the manager's performance issues.
    d. Explaining that you may not be able to help.
2. If you've come at a question from multiple angles and the manager doesn't know the answer, what do you do?
    a. Keep pressing; they know the answer, but for some reason don't want to tell you.
    b. Write down the most likely answer, based on other information.
    c. Simply write not applicable.
3. What is the first section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
4. What is the second section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
5. What is the third section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
6. What is the fourth section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes

7. Which section includes questions about job-aids?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
8. Which section includes questions about ergonomics?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
9. Which section includes questions about frequency and immediacy of rewards?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
10. Which section includes questions about feedback?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
11. Which section includes questions about employee job descriptions?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
12. Which sections includes questions about the efficiencies of processes?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
13. Which section includes questions about training?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
14. Which section includes questions about task mastery and fluency?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes

15. Which section includes questions about Premack reinforcers?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
16. Which section includes questions about the employee's capacity to learn a task?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
17. Which section includes questions about goals and prompts?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes

PDC Consultant Quiz 2

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. Which section includes questions about job-aids?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
2. What is the third section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
3. What is the fourth section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
4. Which section includes questions about the employee's capacity to learn a task?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
5. Which section includes questions about training?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
6. If you've come at a question from multiple angles and the manager doesn't know the answer, what do you do?
    a. Keep pressing; they know the answer, but for some reason don't want to tell you.
    b. Write down the most likely answer, based on other information.
    c. Simply write not applicable.

7. Which section includes questions about feedback?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
8. Which section includes questions about employee job descriptions?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
9. What is the first section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
10. How will you begin the interview session?
    a. Introducing yourself and listening to the manager's performance issues.
    b. Describing the PDC and how you will use it.
    c. Explaining how you can fix the manager's performance issues.
    d. Explaining that you may not be able to help.
11. Which sections includes questions about the efficiencies of processes?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
12. Which section includes questions about task mastery and fluency?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
13. Which section includes questions about Premack reinforcers?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
14. What is the second section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes

15. Which section includes questions about ergonomics?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
16. Which section includes questions about goals and prompts?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
17. Which section includes questions about frequency and immediacy of rewards?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes

PDC Consultant <u>Quiz 3</u>

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. If you've come at a question from multiple angles and the manager doesn't know the answer, what do you do?
    a. Keep pressing; they know the answer, but for some reason don't want to tell you.
    b. Write down the most likely answer, based on other information.
    c. Simply write not applicable.
2. What is the third section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
3. Which section includes questions about the employee's capacity to learn a task?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
4. Which section includes questions about employee job descriptions?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
5. What is the first section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
6. Which section includes questions about Premack reinforcers?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes

7. What is the second section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
8. Which section includes questions about ergonomics?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
9. Which sections includes questions about the efficiencies of processes?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
10. Which section includes questions about frequency and immediacy of rewards?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
11. What is the fourth section of the PDC?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
12. Which section includes questions about job-aids?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
13. Which section includes questions about training?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
14. Which section includes questions about feedback?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes

15. Which section includes questions about task mastery and fluency?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
16. Which section includes questions about goals and prompts?
    a. Consequences
    b. Knowledge and Skills
    c. Antecedents and Information
    d. Equipment and Processes
17. How will you begin the interview session?
    a. Introducing yourself and listening to the manager's performance issues.
    b. Describing the PDC and how you will use it.
    c. Explaining how you can fix the manager's performance issues.
    d. Explaining that you may not be able to help.

Appendix I

Post-training quiz – Mock-consultants: Performance Flowchart

Performance Flowchart Consultant Quiz 1

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. How will you begin the interview session?
    a. Introducing yourself and listening to the manager's performance issues.
    b. Describing the PDC and how you will use it.
    c. Explaining how you can fix the manager's performance issues.
    d. Explaining that you may not be able to help.
2. If you've come at a question from multiple angles and the manager doesn't know the answer, what do you do?
    a. Keep pressing; they know the answer, but for some reason don't want to tell you.
    b. Write down the most likely answer, based on other information.
    c. Simply write not applicable.
3. What is your role?
    a. Manager
    b. Performance Consultant
    c. Employee
4. What do the diamond boxes on the flowchart represent?
    a. Questions
    b. Decisions
    c. Transition points
    d. Notes sections
5. What do the ribbon boxes on the flowchart represent?
    a. Questions
    b. Decisions
    c. Transition points
    d. Notes sections
6. What type of solution does the Performance Flowchart use as a last resort?
    a. Contingency management
    b. Training
    c. Equipment alterations
    d. Goal setting

7. According to the Performance Flowchart, what do you do when expectations are unclear?
    a. Provide training
    b. Fire the employee
    c. Clarify the expectations
8. Which section of the flowchart includes questions about resources and expectations?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
9. Which section of the flowchart includes questions about punishing desired performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
10. Which section of the flowchart includes questions about making the task easier?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
11. Which section of the flowchart includes questions about how often the skill in question is used?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
12. Which section of the flowchart includes questions about whether or not performance quality is visible?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
13. Which section of the flowchart includes questions about rewarding poor performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles

14. Which section of the flowchart includes questions about the potential of employees to change their performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
15. Which section of the flowchart includes questions about effective contingencies?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
16. Which section of the flowchart includes questions about past skill use?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
17. How do you go about writing your recommendations?
    a. Provide a brief description of the recommended interventions, answering all of the questions on the rubric
    b. Write at least 2-pages per recommendation, in extreme detail
    c. Simply write a sentence or two describing the recommended intervention

Performance Flowchart Consultant Quiz 2

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. Which section of the flowchart includes questions about making the task easier?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
2. Which section of the flowchart includes questions about how often the skill in question is used?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
3. What is your role?
    a. Manager
    b. Performance Consultant
    c. Employee
4. What type of solution does the Performance Flowchart use as a last resort?
    a. Contingency management
    b. Training
    c. Equipment alterations
    d. Goal setting
5. Which section of the flowchart includes questions about punishing desired performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
6. Which section of the flowchart includes questions about past skill use?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles

7. How do you go about writing your recommendations?
    a. Provide a brief description of the recommended interventions, answering all of the questions on the rubric
    b. Write at least 2-pages per recommendation, in extreme detail
    c. Simply write a sentence or two describing the recommended intervention
8. If you've come at a question from multiple angles and the manager doesn't know the answer, what do you do?
    a. Keep pressing; they know the answer, but for some reason don't want to tell you.
    b. Write down the most likely answer, based on other information.
    c. Simply write not applicable.
9. Which section of the flowchart includes questions about whether or not performance quality is visible?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
10. How will you begin the interview session?
    a. Introducing yourself and listening to the manager's performance issues.
    b. Describing the PDC and how you will use it.
    c. Explaining how you can fix the manager's performance issues.
    d. Explaining that you may not be able to help.
11. Which section of the flowchart includes questions about rewarding poor performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
12. Which section of the flowchart includes questions about the potential of employees to change their performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
13. What do the diamond boxes on the flowchart represent?
    a. Questions
    b. Decisions
    c. Transition points
    d. Notes sections

14. What do the ribbon boxes on the flowchart represent?
    a. Questions
    b. Decisions
    c. Transition points
    d. Notes sections
15. According to the Performance Flowchart, what do you do when expectations are unclear?
    a. Provide training
    b. Fire the employee
    c. Clarify the expectations
16. Which section of the flowchart includes questions about resources and expectations?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
17. Which section of the flowchart includes questions about effective contingencies?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles

Performance Flowchart Consultant Quiz 3

Participant Number: _____

Date: _____

Answer the following questions about the performance scenario from today's training.

1. Which section of the flowchart includes questions about how often the skill in question is used?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
2. What type of solution does the Performance Flowchart use as a last resort?
    a. Contingency management
    b. Training
    c. Equipment alterations
    d. Goal setting
3. Which section of the flowchart includes questions about whether or not performance quality is visible?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
4. What is your role?
    a. Manager
    b. Performance Consultant
    c. Employee
5. Which section of the flowchart includes questions about past skill use?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
6. How do you go about writing your recommendations?
    a. Provide a brief description of the recommended interventions, answering all of the questions on the rubric
    b. Write at least 2-pages per recommendation, in extreme detail
    c. Simply write a sentence or two describing the recommended intervention

7. Which section of the flowchart includes questions about effective contingencies?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
8. Which section of the flowchart includes questions about punishing desired performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
9. If you've come at a question from multiple angles and the manager doesn't know the answer, what do you do?
    a. Keep pressing; they know the answer, but for some reason don't want to tell you.
    b. Write down the most likely answer, based on other information.
    c. Simply write not applicable.
10. How will you begin the interview session?
    a. Introducing yourself and listening to the manager's performance issues.
    b. Describing the PDC and how you will use it.
    c. Explaining how you can fix the manager's performance issues.
    d. Explaining that you may not be able to help.
11. Which section of the flowchart includes questions about making the task easier?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
12. Which section of the flowchart includes questions about the potential of employees to change their performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
13. What do the diamond boxes on the flowchart represent?
    a. Questions
    b. Decisions
    c. Transition points
    d. Notes sections

14. Which section of the flowchart includes questions about resources and expectations?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles
15. What do the ribbon boxes on the flowchart represent?
    a. Questions
    b. Decisions
    c. Transition points
    d. Notes sections
16. According to the Performance Flowchart, what do you do when expectations are unclear?
    a. Provide training
    b. Fire the employee
    c. Clarify the expectations
17. Which section of the flowchart includes questions about rewarding poor performance?
    a. Antecedents
    b. Consequences
    c. Knowledge / Skill Deficiencies
    d. Obstacles

Appendix J

PDC for mock-consultants

Participant ID Number:

PERFORMANCE DIAGNOSTIC CHECKLIST – Austin et al. (1999)

ANTECEDENTS AND INFORMATION	YES	NO
Is there a written job description telling exactly what is expected of the employee?		
Has the employee received adequate instruction about what to do? (Not training - explicit instructions like "I want you to do this, this, and this before we leave		
Are employees aware of the mission of the department?		
If yes, can they tell you what the mission is?		
Are there job or task aids?		
If yes, are those aids visible while completing the task?		
Are there reminders to prompt the task?		
Is the supervision present during task completion?		
Are there frequently updated, challenged and attainable goals?		
If yes, do employees feel these goals are fair?		

Notes:

EQUIPMENT AND PROCESSES	YES	NO
If equipment is required is it reliable?		
Is it in good working order?		
Is it ergonomically correct?		
Is the equipment and environment optimally arranged?		
Are larger processes suffering from certain incomplete tasks?		
Are these processes arranged in a logical manner?		
Are these processes maximally efficient?		
Are there any other obstacles that are keeping the employee from completing the		

Notes:

KNOWLEDGE AND SKILLS- TRAINING	YES	NO
Can the employee tell you what is supposed to be done and how it should be		
Can the employees physically demonstrate the task?		
If yes, have they mastered the task?		
If fluency is necessary are they fluent?		
Does the employee have the capacity to learn to complete task?		

Notes:

CONSEQUENCES	YES	NO
Are there consequences delivered contingent on the task?		
Frequency?		
Immediately?		
Consistency/probability?		
Positive/Negative		
Are there Premack reinforcers? (i.e., Is there opportunity to work on more preferred tasks after less preferred tasks are completed?)		
Do employees see the effect of performance?		
If yes How? Natural? Arranged?		
Do supervisors deliver feedback?		
If yes, written or verbal or other?		
Direct or indirect or other?		
Is there performance monitoring?		
If yes, how? Self? Supervisor direct? Supervisor indirect?		
Is there a response effort associated with the performance?		
Are there other behavior competing with the desired performance?		
Notes:		

Directions: In the interview, the manager described a performance issue and provided you with information to allow you to make recommendation(s) for solving the issue. Use the following rubric to describe your recommendations for the issue described by the manager. Begin by briefly describing the issue. Next, you'll be able to describe each of the potential interventions, and the antecedents and consequences being altered by those interventions. There is space for 10 potential recommendations, however you may create more or fewer than this.

Briefly describe the issue being addressed:

Briefly describe the first intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the second intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the third intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the fourth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the fifth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the sixth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the seventh intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the eighth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the ninth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

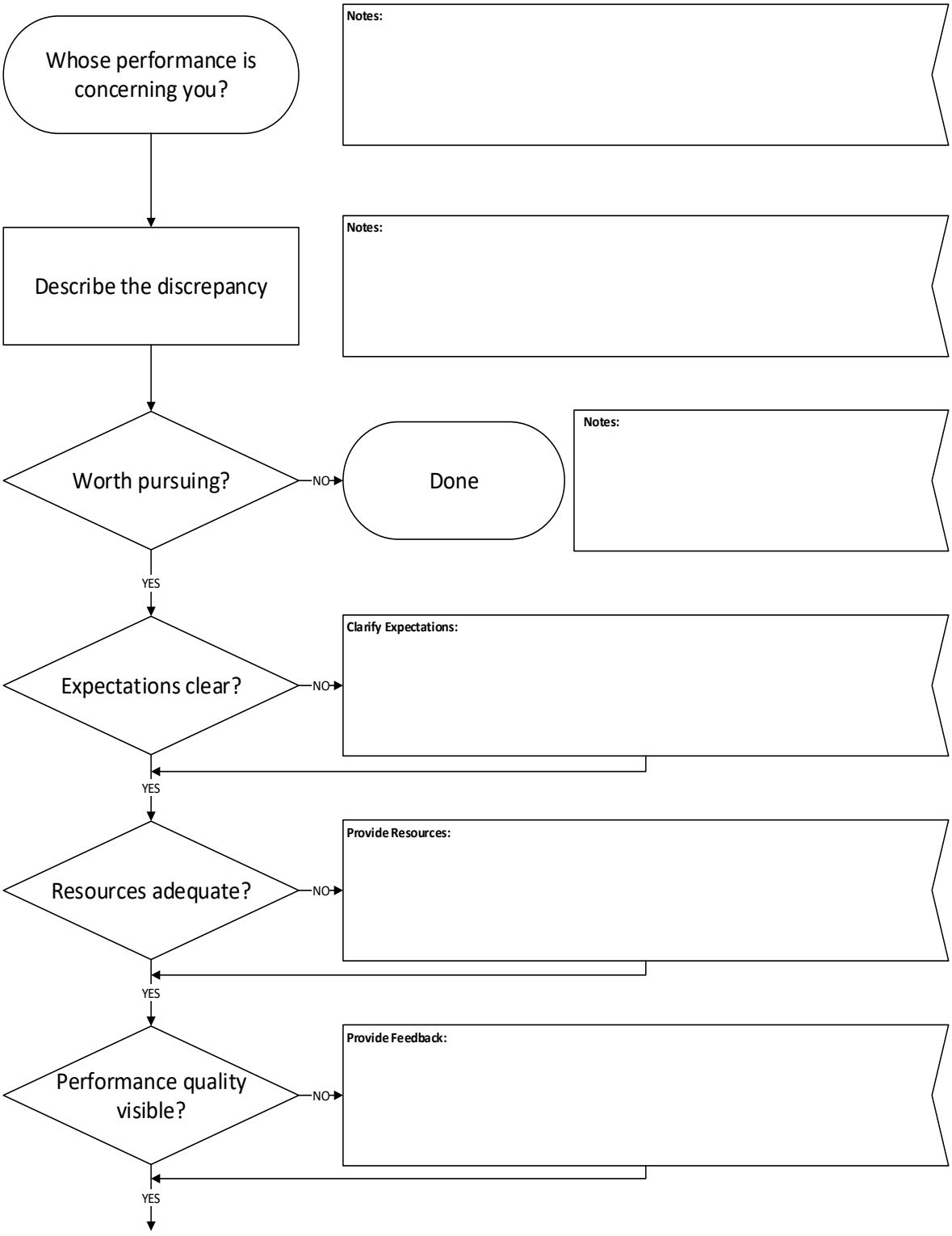
Briefly describe the tenth intervention recommendation:

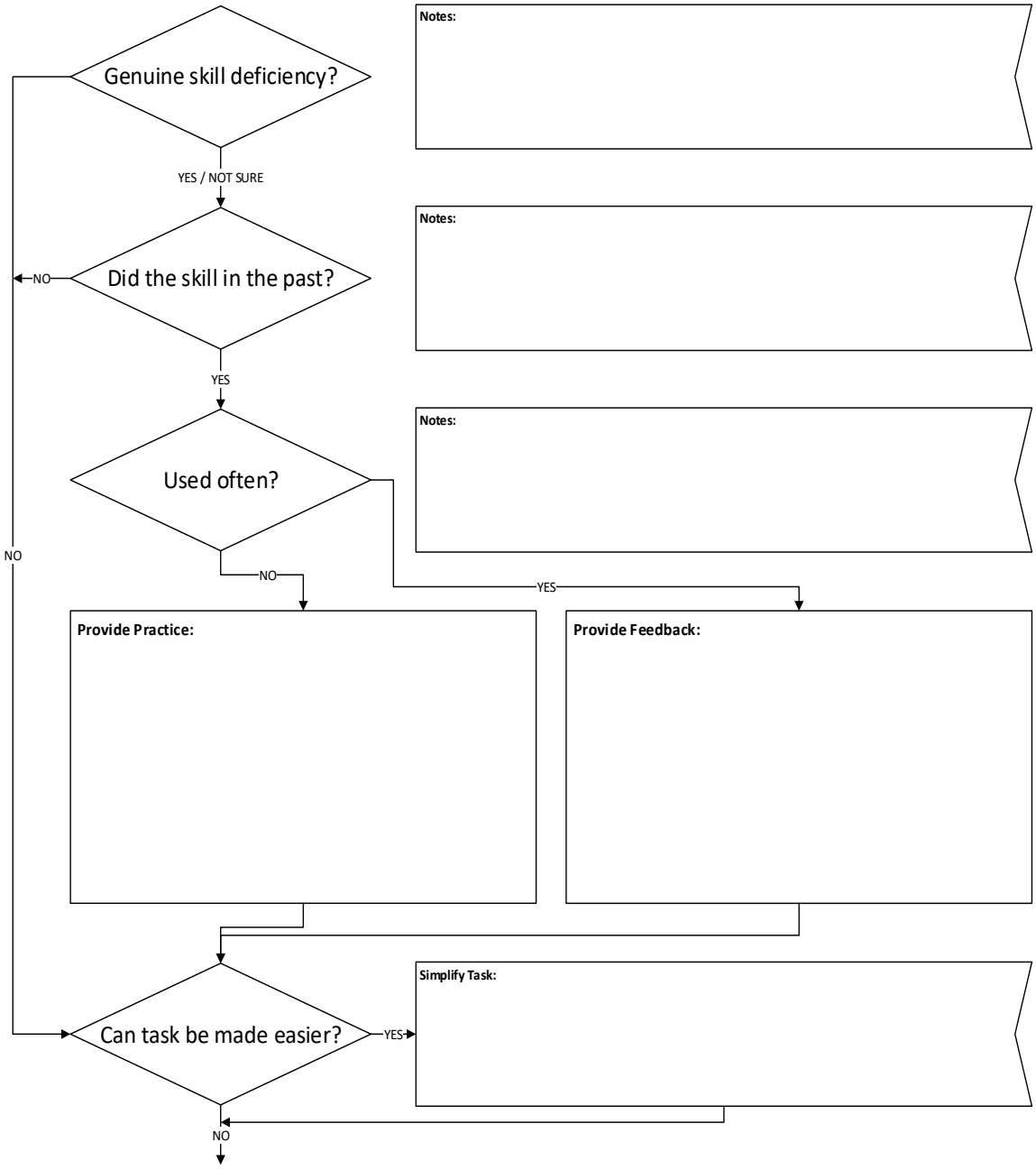
What consequences (if any) are being altered?

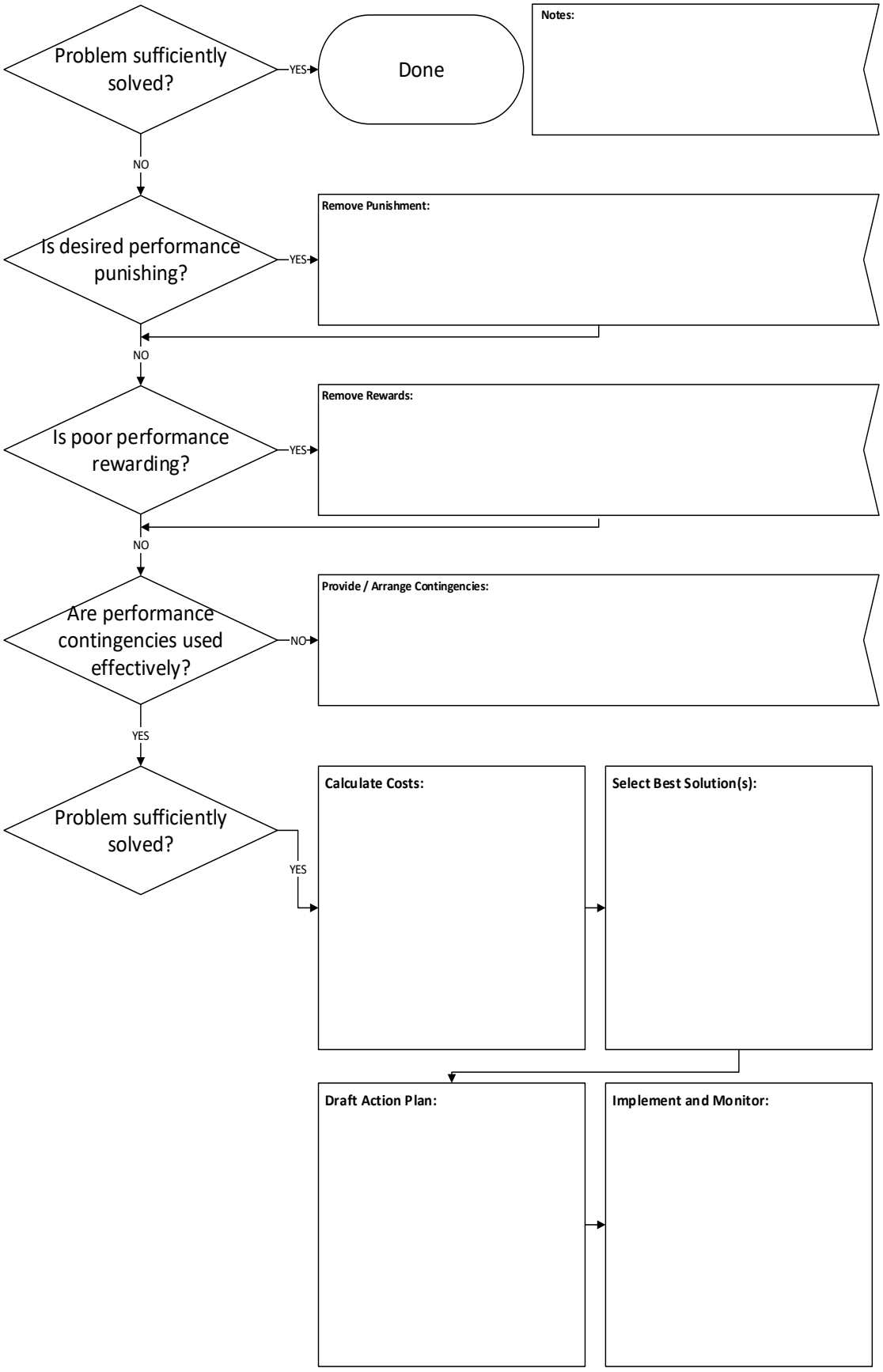
What antecedents (if any) are being altered?

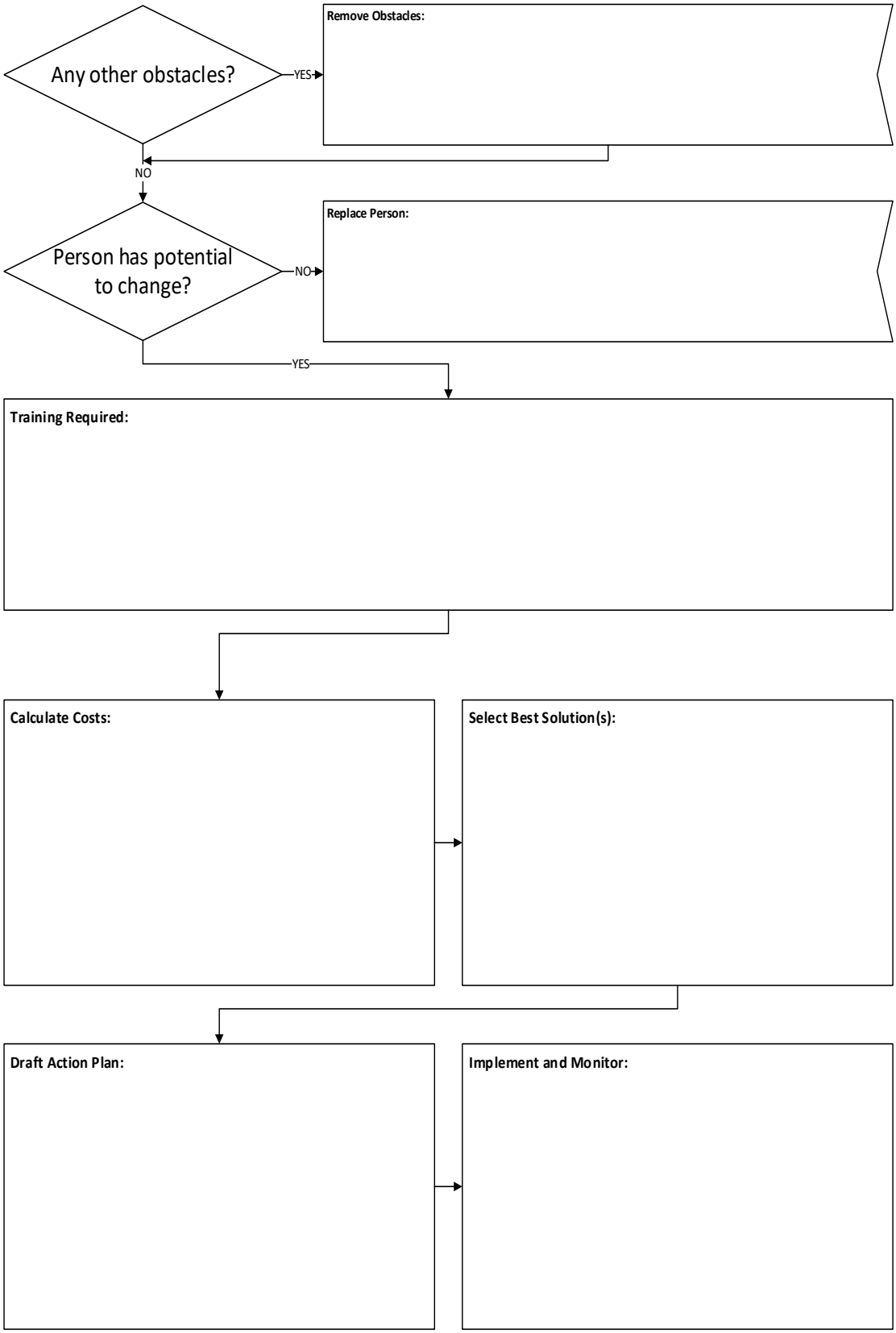
Appendix K

Performance Flowchart for mock-consultants


Whose performance is concerning you?
Notes:
Describe the discrepancy
Notes:
Worth pursuing?
NO
Done
Notes:
YES
Expectations clear?
NO
Clarify Expectations:
YES
Resources adequate?
NO
Provide Resources:
YES
Performance quality visible?
NO
Provide Feedback:
YES


Genuine skill deficiency?
Notes:
YES / NOT SURE
Did the skill in the past?
NO
Notes:
YES
Used often?
Notes:
NO
YES
NO
Provide Practice:
Provide Feedback:
Can task be made easier?
YES
Simplify Task:
NO


Problem sufficiently solved?
YES
Done
Notes:
NO
Is desired performance punishing?
YES
Remove Punishment:
NO
Is poor performance rewarding?
YES
Remove Rewards:
NO
Are performance contingencies used effectively?
NO
Provide / Arrange Contingencies:
YES
Problem sufficiently solved?
YES
Calculate Costs:
Select Best Solution(s):
Draft Action Plan:
Implement and Monitor:


Any other obstacles?
YES
Remove Obstacles:
NO
Person has potential to change?
NO
Replace Person:
YES
Training Required:
Calculate Costs:
Select Best Solution(s):
Draft Action Plan:
Implement and Monitor:

Directions: In the interview, the manager described a performance issue and provided you with information to allow you to make recommendation(s) for solving the issue. Use the following rubric to describe your recommendations for the issue described by the manager. Begin by briefly describing the issue. Next, you'll be able to describe each of the potential interventions, and the antecedents and consequences being altered by those interventions. There is space for 10 potential recommendations, however you may create more or fewer than this.

Briefly describe the issue being addressed:

Briefly describe the first intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the second intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the third intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the fourth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the fifth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the sixth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the seventh intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the eighth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the ninth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the tenth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Appendix L

Informed consent form – Mock-managers

Western Michigan University
Psychology Department

Principal Investigator:	Dr. Heather McGee, Ph.D.
Student Investigator:	Nathan T Bechtel, M.A.
Title of Study:	A Systematic Comparison of Functional Assessment Outcomes in OBM

You have been invited to participate in a research project titled "*A Systematic Comparison of Functional Assessment Outcomes in OBM*." This project will serve as Nathan Bechtel's dissertation for the requirements of the Applied Behavior Analysis Doctoral degree, under the supervision of Dr. Heather McGee, Ph.D.

This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

What are we trying to find out in this study?
The purpose of this study is to examine the outcomes resulting from the use of functional assessment methods in an organizational interview.

Who can participate in this study?
Three exclusionary criteria will be used in determining appropriate participants. First, you must be available to attend a 2-3 hour training session, as well as a 30-60 minute interview session with a consultant. Second, you must not be familiar with either of the tools being utilized by the consultants. These tools are the PDC and the Performance Flowchart. Lastly, you must complete the managerial training session and pass a brief, post-training quiz.

Where will this study take place?
The study will be conducted in two separate Wood Hall locations: A 40-person lecture hall, and suite 1504, room 1532.

What is the time commitment for participating in this study?
You must be available for a 2-3 hour training session, as well as a 30-60 minute interview session during the Spring 2016 semester, for a total of approximately 3-4 hours.

What will you be asked to do if you choose to participate in this study?
First, you will be trained on a performance scenario for which you will act as the manager. The scenario is designed to provide you with all of the information necessary to allow a consultant to interview you about your performance scenario. Second, you will be required to participate in a brief interview session with a consultant. This interview will allow the consultant to gain knowledge about your organizational issues and help to solve these issues. During the interview, you will be allowed a small cheat-sheet containing key points about the performance scenario; however, you will be expected to have most of the

information committed to memory. Also, you will be asked not to talk to anyone about the features of this study, or your performance scenario, outside of the experimental sessions.

What information is being measured during the study?
The interview sessions will be recorded to ensure quality of consultant questions and manager answers. All recommendations provided by the consultants will be analyzed by the student investigator.

What are the risks of participating in this study and how will these risks be minimized?
The nature of this task is one that requires little physical effort, and should not require any exertion greater than what you experience in your everyday activities. During sessions, you may experience some stress related to your interaction with the consultant.

What are the benefits of participating in this study?
Data collected during this study may benefit the general scientific community by providing information on the use of functional assessments to solve organizational issues. This research will add to our understanding of pre-intervention assessments in organizational behavior management. The findings from this study may be applied to real-world consultant work.

Are there any costs associated with participating in this study?
Aside from the time commitment of approximately 3-4 hours, there are no costs associated with participation in this study.

Is there any compensation for participating in this study?
You may receive extra credit at the discretion of your professors for participation in this study.

Who will have access to the information collected during this study?
The principal investigator, the student investigator, and the research assistants will have access to the information collected during this study. At the beginning of the study you will be assigned a participant identification number so that your performance data can be tracked throughout the study, while your personal information remains confidential. Your identity will remain completely confidential.

What if you want to stop participating in this study?
You can choose to stop participating in this study at any time, for any reason, without penalty. You will not suffer any prejudice or penalty by your decision to stop your participation. You will receive no academic or personal consequences should you choose to withdraw from the study. The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Dr. Heather McGee, Ph.D. at heather.mcgee@wmich.edu, or the student

investigator at nathan.t.bechtel@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

_____

Please Print Your Name

_____ _____

Participant's signature Date

Appendix M

Mock-manager performance scenario

Managerial Performance Scenario

You are a manager in the sales department of a midsized organization. You have just finished conducting an annual review of your sales personnel and have several sales personnel who are not performing up to par when it comes to filling out the required paperwork for product specifications, which is a critical component in the sales process. In order for manufacturing to develop appropriate products which meet customer expectations, they require accurate sales paperwork. This problem is widespread. You will be meeting with a performance consultant to try to determine what the problem is, and find potential solutions.

Your Job as Manager

- Briefly describe the scenario presented above
- Tell the consultant that you want training developed for correctly completing paperwork
- Let the consultant ask you questions and answer those questions based on the information below
- Don't give more information than they ask for; remember, you are a busy manager and you don't have time for all of this. For example, if the consultant is only focusing on asking about your training process, do not provide information about the weekly sales goals.
- If you are asked a question that is not covered by the information provided, do not make up answers. Simply say that you do not know
- If you can't remember a piece of information, check your cheat-sheet which will be available during the interview process

Pertinent Information

- All sales personnel are trained on paperwork completion when they begin working at the organization, but you think it must not be good enough since they are not filling out the paperwork correctly or completely
- If you ask the sales staff how to complete the paperwork properly, they can easily tell you or demonstrate the performance
- A full explanation of paperwork completion is included in the employee job description, and the forms are readily available to all sales staff
- If you harp on employees about the paperwork, they do it correctly for a while, but then begin to skip steps or do the paperwork incorrectly again
- The paperwork is extensive and confusing, but could be improved with a little work
- There are no job aids available to the sales staff for paperwork completion
- The paperwork errors are causing many problems with manufacturing, as they don't get accurate specs when they should. Manufacturing are often yelled at

when customer deadlines aren't met, but the sales personnel don't hear those complaints

- Customer complaints have been growing, and your sales personnel blame the complaints on manufacturing's "inability to get things right or meet deadlines"
- Filling out the paperwork is required to complete the sale, so the sales staff are adequately prompted to complete the paperwork
- The sales personnel are not aware of how their paperwork errors affect manufacturing
- The sales personnel have weekly sales goals, but these do not include any requirements regarding the paperwork
- The sales supervisor does not check over the paperwork until it is too late to correct the errors, and only provides very delayed feedback on the errors
- There are no positive consequences for correctly filling out paperwork
- If errors are made, the supervisors or manager occasionally yell at the sales staff, but no other disciplinary action is taken
- Sales still count towards the weekly sales goal even if the paperwork is incorrectly completed
- Sales staff will often rush to make a new sale immediately after completing the current sale, regardless of whether or not the paperwork has been completed to standards
- You do not believe that people should be rewarded for doing work that is clearly a part of their job expectations

Appendix N

Mock-manager training PowerPoint and script

Welcome / Introduction

"Hello everyone, and welcome to our study. Since the majority of you are here from 1000 level classes, we are going to assume this is your first time participating in psychology research here at Western. My name is Nate Bechtel, and this study will be serving as my doctoral dissertation. If you have any questions please hold them until after we have gone over the informed consent forms. We'll start by going over the informed consent as a group. You each have a copy of the form in front of you, so I'd like you to follow along with me as I read it aloud. It explains the research, risks and benefits, the necessary time commitment, compensation, and your rights as a participant."

Informed Consent

Read informed consent document

"Okay, are there any questions regarding the document I just read?"

<hold for questions>

"Alright. If you agree to participate in the study after having gone over this information, I will need you to sign the last page of the informed consent form and pass them up to the front. If you do not wish to participate having listened to this information, you are free to leave now."

<hold for forms>

Explanation of mock-manager's job

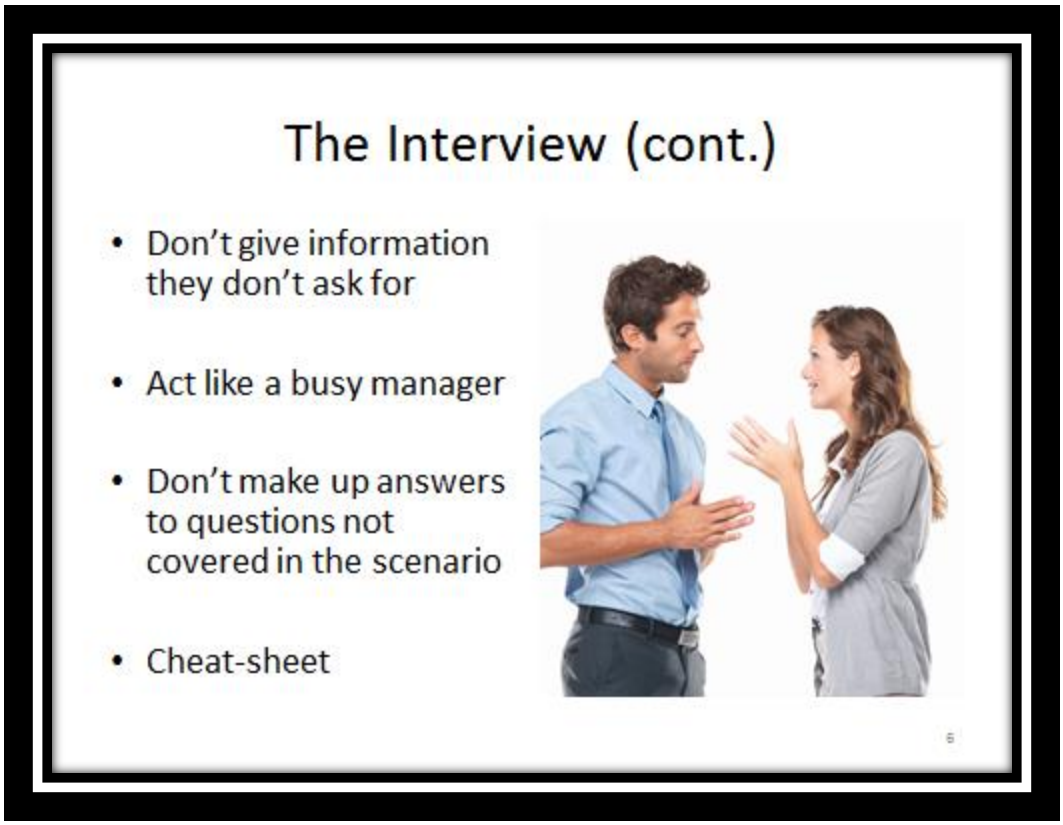
"For this study you will be playing the role of a manager in the sales department of a mid-sized organization. In front of you, you should have a Managerial Performance Scenario which contains all of the pertinent information for your role as manager. We'll go over that information now. You have just finished conducting an annual review of your sales personnel, several of whom are not performing up to par when it comes to filling out the required paperwork for product specifications. This is a critical component of the sales process. In order for manufacturing to develop appropriate products which meet customer expectations, they require accurate sales paperwork. *This problem is widespread throughout the sales department."*

Explanation of the solution

"In order to determine why this issue is occurring, and fix the issue, you have scheduled a meeting with a performance consultant. The performance consultant's job is to determine what is causing the issue and provide a recommended solution. You will not be responsible for anything beyond the interview with the consultant; that is, you won't actually be implementing any of the recommendations. Your primary concern will be briefing the consultant on the issue of concern, and answering any questions they have regarding the job and performance of the sales personnel."

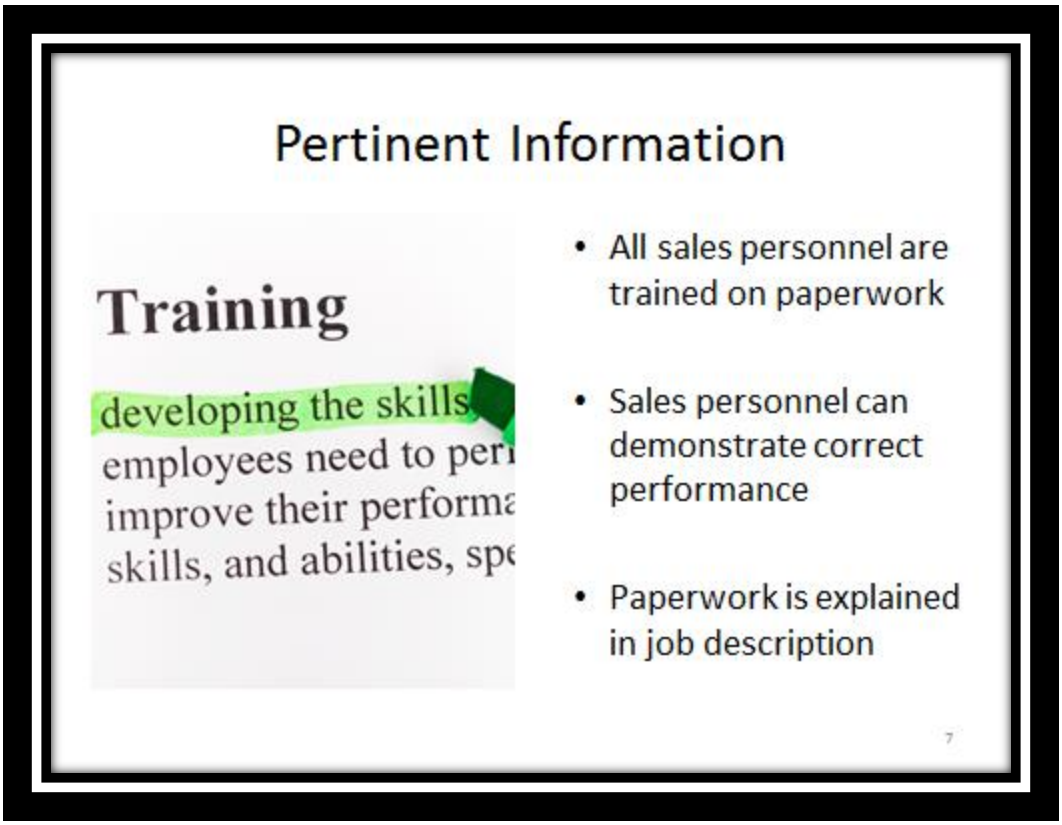
Performance Scenario – Part I – Manager during interview

"You'll start off the interview by introducing yourself to the consultant and providing a brief description of the issues you are experiencing. Specifically, you'll want to describe all of the information presented in the previous slide. As the manager, you believe that the issue is related to training. Make sure to tell the consultant that you want training developed for correctly completed paperwork. Once you have described the issue and presented your potential solution, the consultant will ask you questions about the sales personnel, their job, and their performance. You'll answer those questions based on the information provided in your performance scenario. We'll go over this information in a moment."



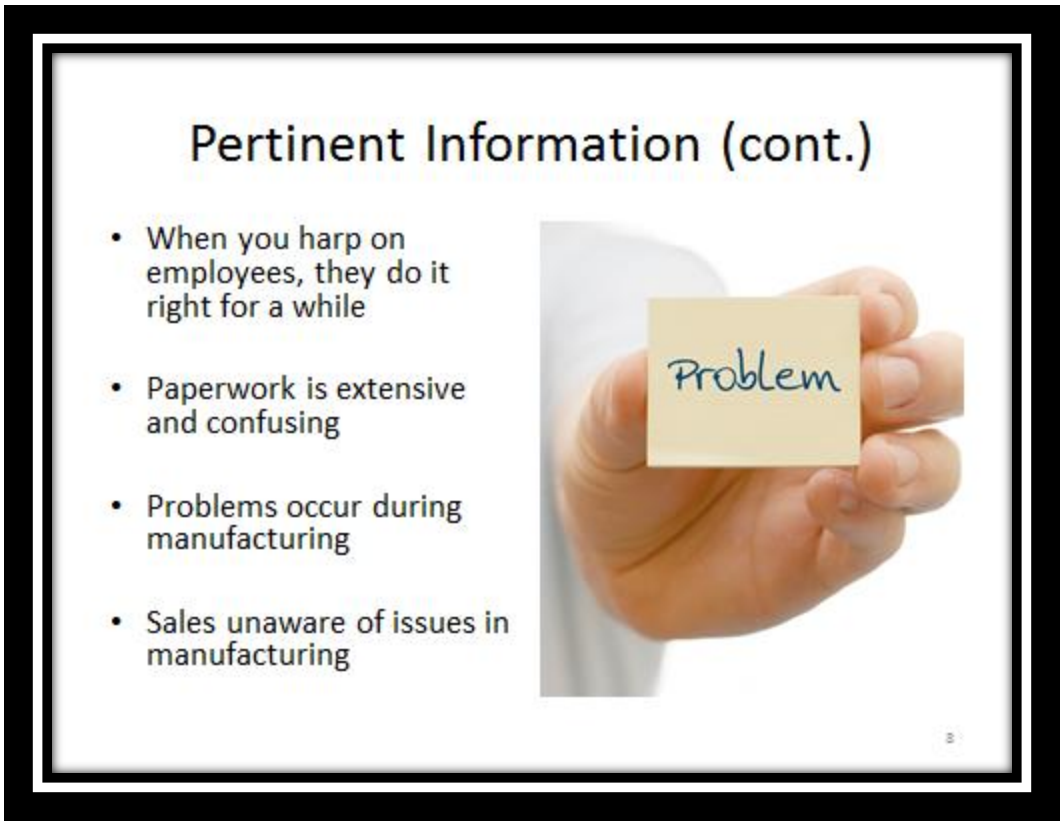
Performance Scenario – Part II – The Interview: Additional issues

"Make sure you don't give any more information than what they ask for. Imagine you are a busy manager without a lot of time to deal with these types of issues. For example, if the consultant is only focusing on asking questions about your training process, don't provide information about the weekly sales goals. If you're asked a question that isn't covered by the material, simply tell them that you don't know. Please don't make up answers. You will have a cheat-sheet available during the interview process, but try to avoid using it if you can. If you can't remember a specific piece of information, but you know that it was covered by the material, then check the cheat-sheet."



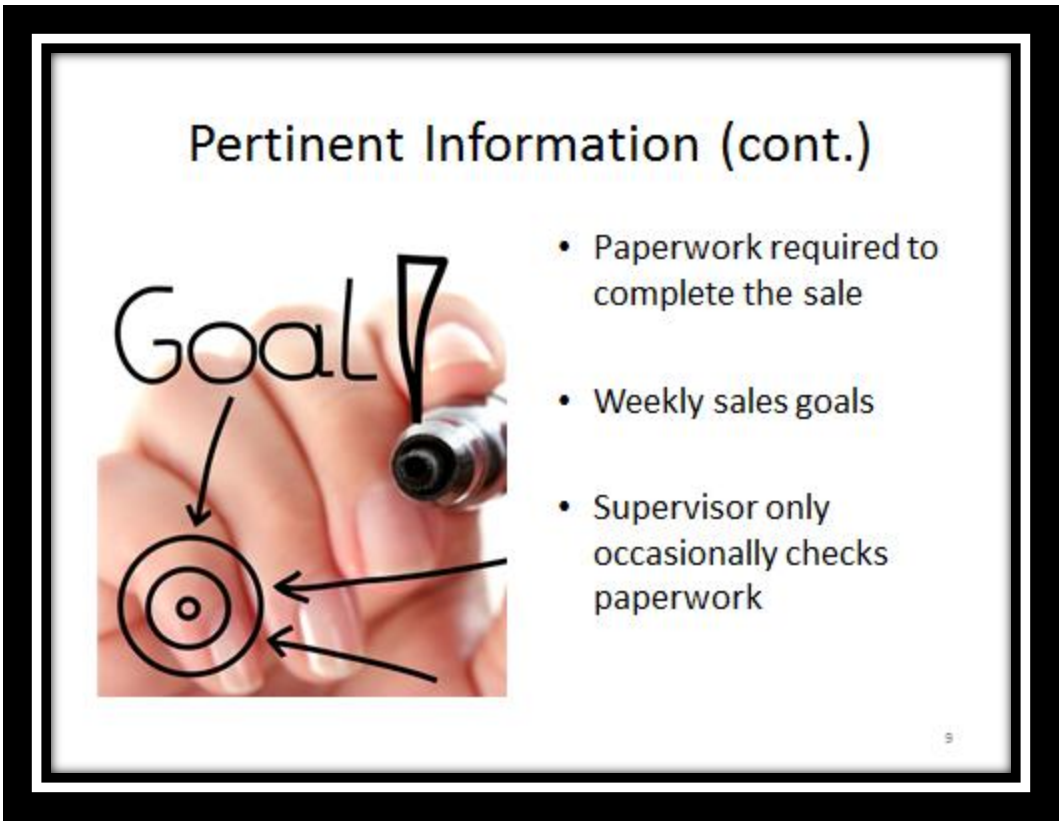
Performance Scenario – Part III – Pertinent Information

"There is quite a bit of information that you'll need to know during the interview process. The rest of today's training will be devoted to teaching you this information so you're prepared for all of the consultant's questions. The first thing to note is that all sales personnel are trained on paperwork completion when they begin working at the organization. However, you think it must not be good enough training since they are not filling out the paperwork correctly or completely. If you ask the sales staff how to complete the paperwork correctly, they can easily tell you. They are also able to demonstrate the performance when required. A full explanation of the paperwork completion is included in the employee job description, which is readily available. The employees also have the forms readily available when they are making sales."



Performance Scenario – Part IV – Pertinent Info continued

"When you harp on the sales personnel about the paperwork, they usually do it correctly for a while, but then begin to skip steps or do the paperwork incorrectly again. Verbal warnings and similar consequences from the manager don't have lasting effects. The paperwork is extensive and can be quite confusing. This could be improved with a little work. Also, there are no job aids available to the sales personnel for paperwork completion. If they forget a step, there is no easy way for them to notice. The major problems with the paperwork errors come in during manufacturing, since they don't get accurate specifications when they should. The sales personnel are not aware of how their errors are affecting manufacturing. Manufacturing often gets yelled at when customer deadlines are not met or products don't meet specifications, but the sales personnel who fill out the paperwork don't hear those complaints. The complaints have been growing, and your sales staff blame the complaints on manufacturing's 'inability to get things right and meet deadlines.'

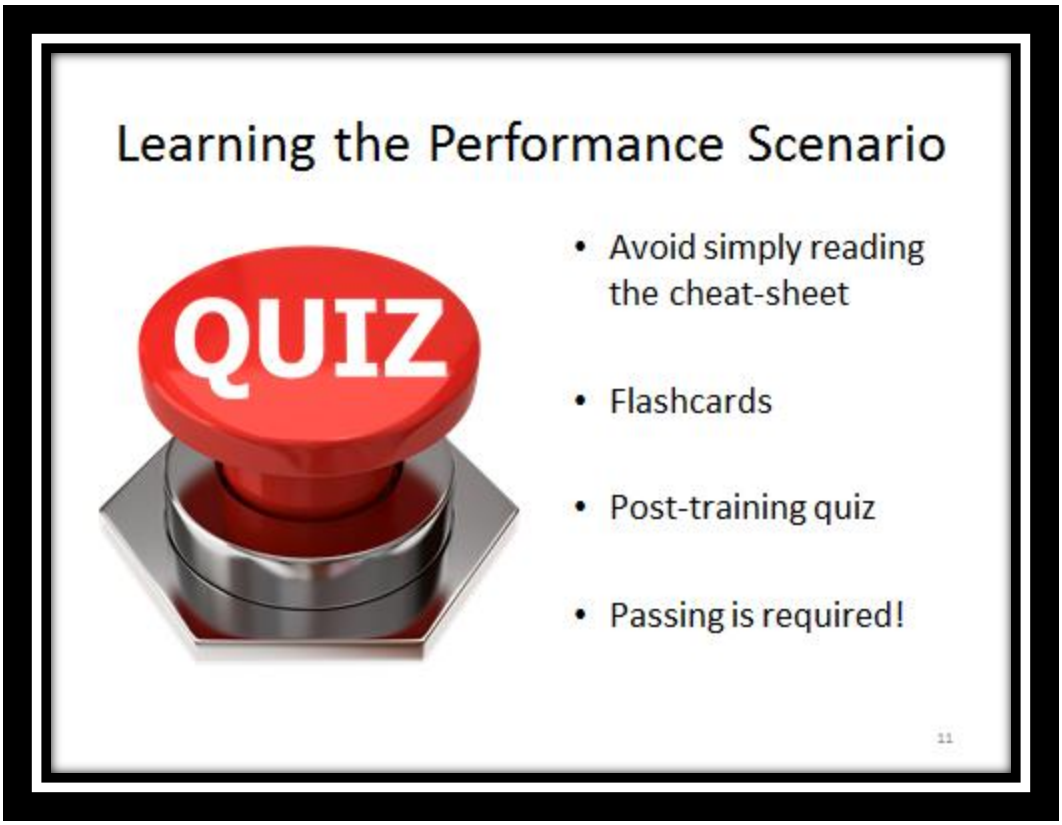


Performance Scenario – Part V – Pertinent Information continued

"Filling out the paperwork is required in order to complete a sale, so sales staff are adequately prompted to fill out the paperwork. However, there is no requirement on the accuracy or completeness of the paperwork to complete the sale. The sales personnel also have weekly sales goals, but these do not include any requirements regarding the paperwork. The sales supervisor doesn't check over the paperwork right away. He does so roughly once every other week, which is generally too late to correct the errors. The supervisor provides very delayed feedback on the errors, and provides no positive consequences for correctly completed paperwork."

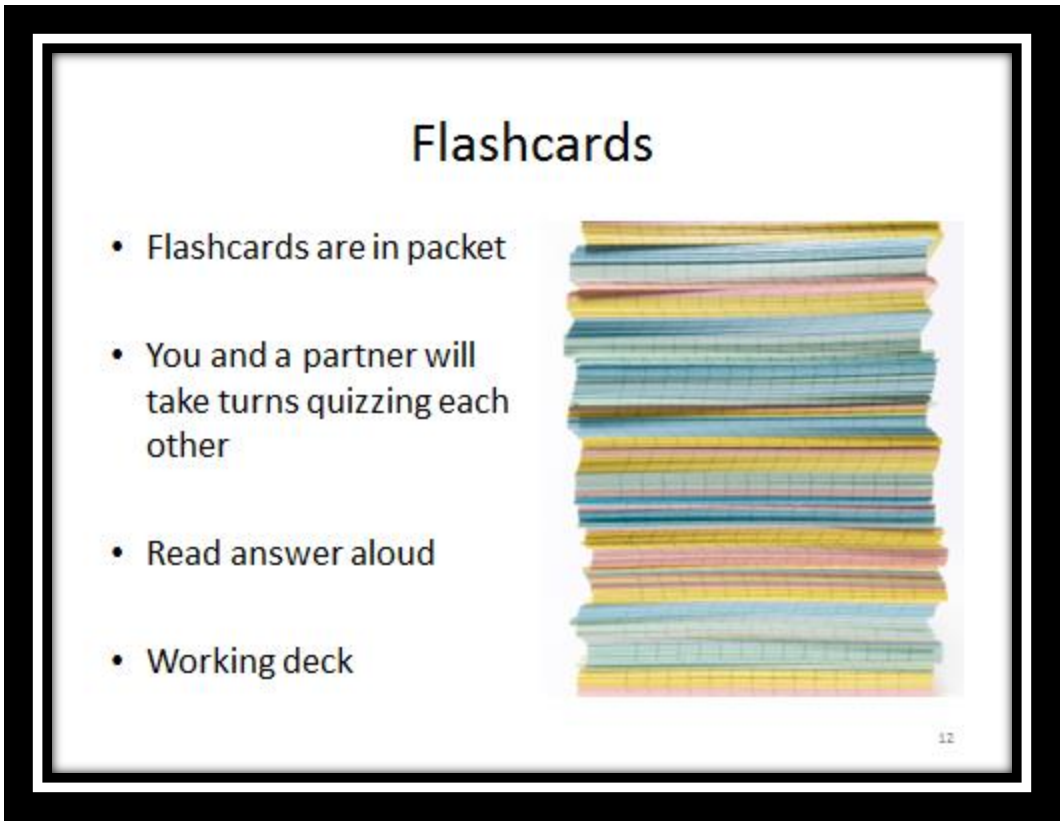
Performance Scenario – Part VI – Pertinent Information continued

"If errors are made on the paperwork, the supervisor occasionally yells at the sales personnel, but no other disciplinary action is ever taken. Even if paperwork is incorrectly completed, the sale still counts towards the weekly sales goal. Sales staff will often rush through the paperwork in order to make a new sale, regardless of whether or not the paperwork has been completed to standards. You do not believe that people should be rewarded (beyond their paychecks) for doing work that is clearly a part of their job expectations. So, that is all the pertinent information you'll need for the interview process. It is possible that the consultants will ask you questions not covered by this material, but please don't invent answers. However, you are welcome to get into character. If you've ever had a manager or supervisor, you have some idea how to act. Have fun with it, but don't veer away from the pertinent information provided in the scenario."



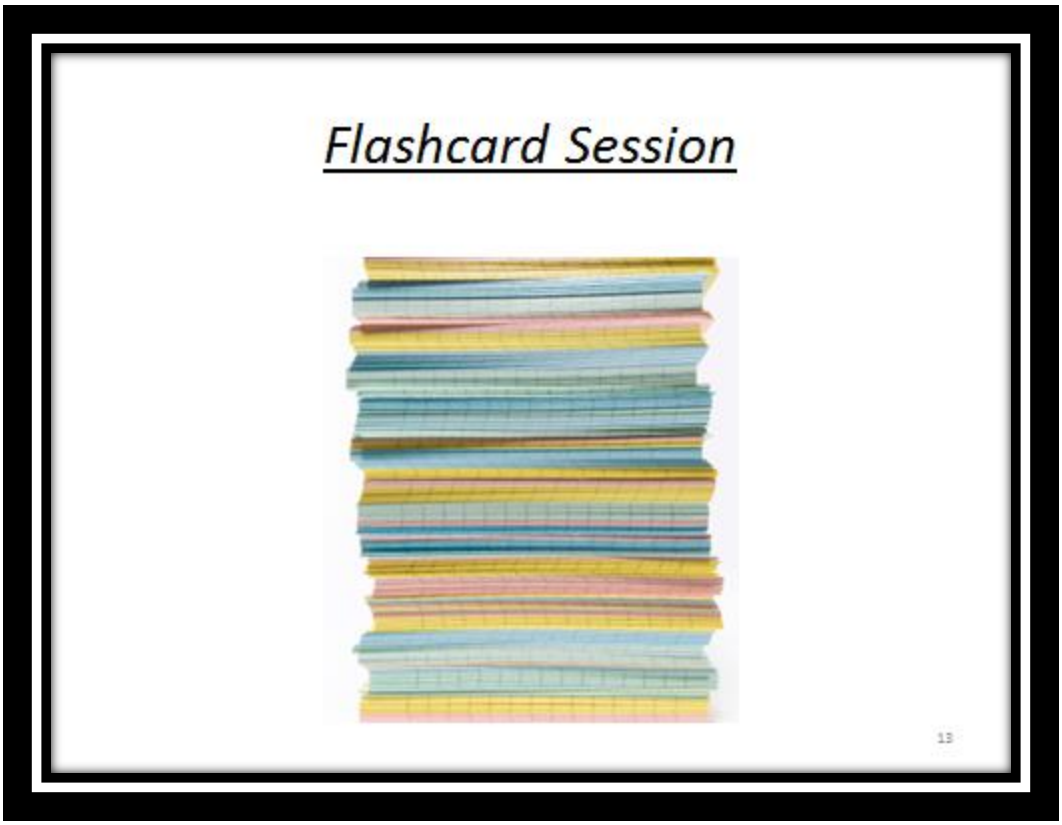
Learning the Scenario

"During the interview process, you'll have a cheat-sheet available in case you forget any of the information. However, we would like to avoid having the managers simply reading answers off of a sheet. For the rest of today's training session, we'll be reviewing the information in flashcard format. This should help you to commit the information to memory. Afterwards, everyone will be given a brief quiz to test your knowledge of the performance scenario. Passing the quiz is required to move on to the interview phase and complete the study. If you don't pass the quiz the first time, don't worry! You'll be able to retake the quiz up to a total of three attempts."



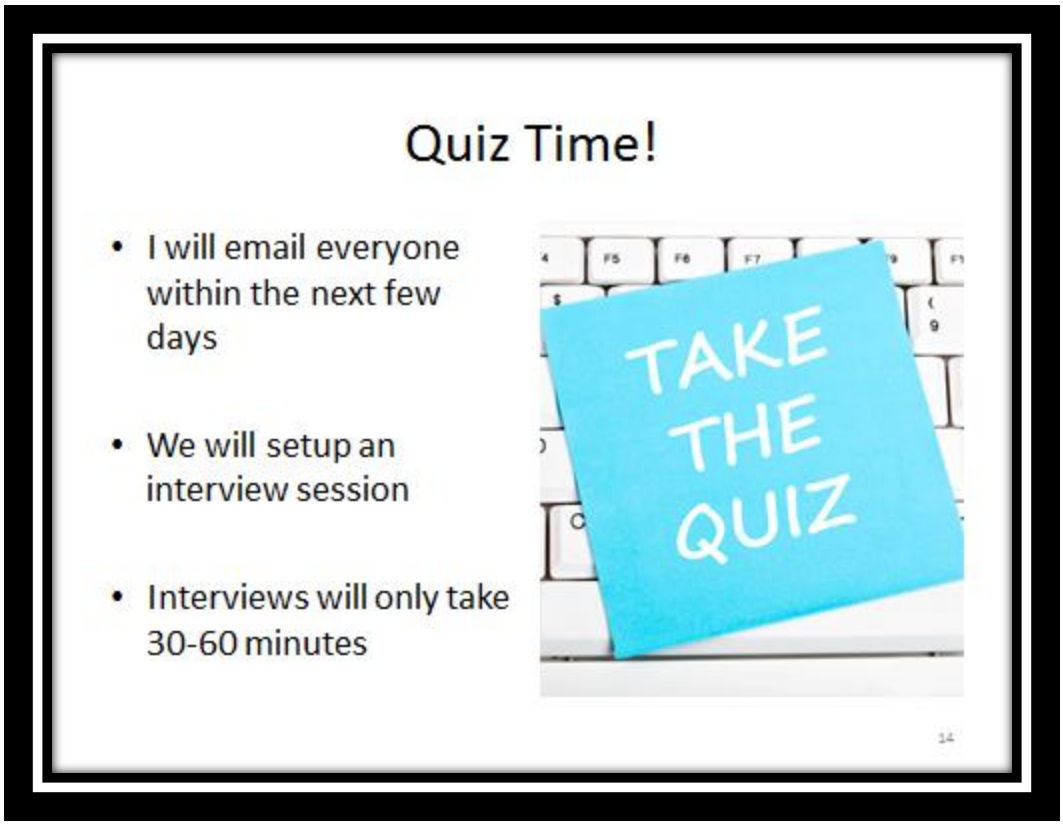
The Flashcards

"In your packet, you'll find a set of flashcards. These contain all the pertinent information from the performance scenario. In order to practice the flashcards you'll have to pair up with another student. If there is an odd number of participants somebody will partner with my RA. The flashcard session is pretty straight forward. You and your partner will take turns quizzing each other over the cards. You'll switch off every ten minutes. First you'll show your partner the question. If they don't know the answer, they'll say 'I don't know.' If they don't know, flip the card over so they can see the answer. Have them recite the answer while they can see it, then flip the card back over. Have them recite the answer again while looking at the question. Once they can recite it without seeing the answer, put the card down and choose a new one. Continue this process until you have a stack of 3-4 cards. Repeat those 3-4 cards until your partner can answer without hesitation. Once your partner can answer one fluently, shuffle it into the deck and add a new card to your pile of 3-4 'working' cards. I'll let everyone know when it's time to switch. We'll do this for the remainder of the time, and leave about 15 minutes at the end for quizzes. Are there any questions before we get started?"



Performance Scenario – Part 4 – Flashcard Session

During the flashcard session, the student investigator and RAs will roam the room and make sure everyone is actively engaging in the flashcard studying. Once the session ends, the quiz session will begin.



Quiz

"Okay, hopefully everyone made the most of the study time. We'll have the quiz in a few minutes. First, let's discuss the next steps after this training session. I will email you each individually to set up an interview session with a consultant. Your interview session will take place sometime within the next week. This will hopefully ensure that you are still familiar with the performance scenario you just learned about. I recommend that you take your flashcards with you and study a little before the interview session. It will make the whole process run a lot more smoothly. Now, we'll pass out the quizzes. Complete the quiz and bring it up to the front when you're done. We will grade it immediately and if you passed, you will be free to go. Make sure to keep an eye out for an email within the next day or two. If you did not pass, we will show you which questions you got wrong, and give you a new quiz. The new quiz will be slightly modified, but it will cover the same material. Again, when you finish, bring it up to the front for grading. Are there any questions over the quiz before we get started?"

Appendix O

Mock-manager flashcards

Questions	Answers
How are sales staff trained?	All sales personnel are trained on paperwork completion when they begin working at the organization
If asked, can the employees describe the paperwork process?	Yes, the sales staff can describe how to complete the paperwork properly and they can demonstrate the performance
Is the paperwork easily accessible?	Yes. The forms are readily available to all sales staff

Is the paperwork accounted for in the job description?	**Yes. A full explanation of the paperwork is provided in the job description**
Describe the paperwork	**The paperwork is extensive and confusing, but could be improved with a little work**
Are there job-aids available?	**There are no job-aids available for paperwork completion**

Is anything in place to prompt the staff to complete paperwork?	**Filling out the paperwork is required to complete the sale, so sales personnel are adequately prompted**
What types of problems do paperwork errors cause?	**Paperwork errors cause problems with manufacturing. Manufacturing ends up getting yelled at for the errors instead of sales staff**
Do sales personnel understand the issues that bad paperwork causes?	**Sales personnel are not aware of how their errors affect manufacturing or the bottom line**

Describe any goals placed on the sales staff	The sales personnel have weekly sales goals, but these do not include any requirements regarding paperwork completion
Is the paperwork checked by a supervisor or manager?	The sales supervisor does not check over the paperwork until it is too late to correct the errors, and only provides very delayed feedback as a result
Describe any positive consequences associated with paperwork	There are no positive consequences for correctly filling out paperwork

Describe any negative consequences associated with paperwork	**Managers occasionally yell at staff for incomplete / incorrect paperwork, but no other disciplinary action is taken**
Does paperwork affect sales goals?	**Sales still count towards the weekly sales goal even if the paperwork is incorrect**
How do sales staff compensate for cumbersome paperwork?	**Sales personnel will often rush to make a new sale immediately after completing the current sale, regardless of whether or not the paperwork has been completed properly**

As the manager, what is your opinion on performance rewards?

You do not believe that people should be rewarded for doing work that is clearly a part of their job expectations

Who generally gets blamed for incomplete or incorrect paperwork?

Manufacturing is often blamed, since inaccurate specs gathered by the sales personnel often create manufacturing issues

As the manager, what do you think would solve the issue?

Retraining the staff on correct paperwork completion

Appendix P

Informed consent form – Mock-consultants: Email recruitment

Western Michigan University
Psychology Department

Principal Investigator:	Dr. Heather McGee, Ph.D.
Student Investigator:	Nathan T Bechtel, M.A.
Title of Study:	A Systematic Comparison of Functional Assessment Outcomes in OBM

You have been invited to participate in a research project titled "*A Systematic Comparison of Functional Assessment Outcomes in OBM*." This project will serve as Nathan Bechtel's dissertation for the requirements of the Applied Behavior Analysis Doctoral degree, under the supervision of Dr. Heather McGee, Ph.D.

This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

What are we trying to find out in this study?
The purpose of this study is to examine the outcomes resulting from the use of functional assessment methods in an organizational interview.

Who can participate in this study?
Three exclusionary criteria will be used in determining appropriate participants. First, you must be available to attend a 2-3 hour training session, as well as a 30-60 minute interview session with a mock-manager. Second, you must not have taken the psychology department's Personnel Training and Development course (PSY 6440), as it includes information pertinent to the results of this study. Lastly, you must complete the consultant training session and pass a brief, post-training quiz.

Where will this study take place?
The study will be conducted in two separate Wood Hall locations: A small lecture room (40 person capacity), and suite 1504, room 1532.

What is the time commitment for participating in this study?
You must be available for a 2-3 hour training session, as well as a 30-60 minute interview session during the current academic semester, for a total of approximately 3-4 hours.

What will you be asked to do if you choose to participate in this study?
First, you will be trained on the relevant interviewing tool, which you will use when you interview the manager. The tool provides questions to ask managers which allow you to get at the root of organizational and performance issues. Second, you will be required to interview a manager. This interview will provide you with an opportunity to ask questions from the tool and determine appropriate solutions for the performance issues being experienced by the manager. During the interview, you will have the relevant tool available, and will not be required to memorize any of the questions. Lastly, you will

write up a brief intervention / recommendation summary. This will summarize your findings and intervention recommendations for the manager. Also, you will be asked not to talk to anyone about the features of this study, or your performance scenario, outside of the experimental sessions.

What information is being measured during the study?
The interview sessions will be recorded to ensure quality of consultant questions and manager answers. All recommendations provided by the consultants will be analyzed by the student investigator.

What are the risks of participating in this study and how will these risks be minimized?
The nature of this task is one that requires little physical effort, and should not require any exertion greater than what you experience in your everyday activities. During sessions, you may experience some stress related to your interaction with the manager.

What are the benefits of participating in this study?
Data collected during this study may benefit the general scientific community by providing information on the use of functional assessments to solve organizational issues. This research will add to our understanding of pre-intervention assessments in organizational behavior management. The findings from this study may be applied to real-world consultant work.

Are there any costs associated with participating in this study?
Aside from the time commitment of approximately 3-4 hours, there are no costs associated with participation in this study.

Is there any compensation for participating in this study?
You may receive extra credit at the discretion of your professors for participation in this study.

Who will have access to the information collected during this study?
The principal investigator, the student investigator, and the research assistants will have access to the information collected during this study. At the beginning of the study you will be assigned a participant identification number so that your performance data can be tracked throughout the study, while your personal information remains confidential. Your identity will remain completely confidential.

What if you want to stop participating in this study?
You can choose to stop participating in this study at any time, for any reason, without penalty. You will not suffer any prejudice or penalty by your decision to stop your participation. You will receive no academic or personal consequences should you choose to withdraw from the study. The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Dr. Heather McGee, Ph.D. at heather.mcgee@wmich.edu, or the student investigator at nathan.t.bechtel@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

_____

Please Print Your Name

_____ _____

Participant's signature Date

Appendix Q

Informed consent form – Mock-consultants: In-class recruitment

Western Michigan University

Psychology Department

Principal Investigator:	Dr. Heather McGee, Ph.D.
Student Investigator:	Nathan T Bechtel, M.A.
Title of Study:	A Systematic Comparison of Functional Assessment Outcomes in OBM

You have been invited to participate in a research project titled "*A Systematic Comparison of Functional Assessment Outcomes in OBM*." This project will serve as Nathan Bechtel's dissertation for the requirements of the Applied Behavior Analysis Doctoral degree, under the supervision of Dr. Heather McGee, Ph.D.

This consent document will explain the purpose of this research project and will go over all of the time commitments, the procedures used in the study, and the risks and benefits of participating in this research project. Please read this consent form carefully and completely and please ask any questions if you need more clarification.

What are we trying to find out in this study?
The purpose of this study is to examine the outcomes resulting from the use of functional assessment methods in an organizational interview.

Who can participate in this study?
Two exclusionary criteria will be used in determining appropriate participants. First, you must be currently enrolled in PSY 6440 or PSY 6510, and attend training on the appropriate functional assessment tool as part of the standard educational practices of either course. Second, you must pass a brief, post-training quiz related to the assessment tool.

What will you be asked to do if you choose to participate in this study?
First, you will be trained on the relevant interviewing tool, which you will use during an interview with a manager. The tool provides questions to ask managers which allow you to get at the root of organizational and performance issues. Second, you will be required to interview a manager. This interview will provide you with an opportunity to ask questions from the tool and determine appropriate solutions for the performance issues being experienced by the manager. During the interview, you will have the relevant tool available, and will not be required to memorize any of the questions. Lastly, you will write up a brief intervention / recommendation summary. This will summarize your findings and intervention recommendations for the manager. These tasks are part of the standard educational practices in PSY 6440 and PSY 6510. You may choose to not have your data used for research purposes.

What information is being measured during the study?
All recommendations provided by the consultants will be analyzed by the student investigator.

What are the risks of participating in this study and how will these risks be minimized?
The nature of this task is one that requires little physical effort, and should not require any exertion greater than what you experience in your everyday activities. During sessions, you may experience some stress related to your interaction with the manager.

What are the benefits of participating in this study?
Data collected during this study may benefit the general scientific community by providing information on the use of functional assessments to solve organizational issues. This research will add to our understanding of pre-intervention assessments in organizational behavior management. The findings from this study may be applied to real-world consultant work.

Who will have access to the information collected during this study?
The principal investigator, the student investigator, and the research assistants will have access to the information collected during this study. At the beginning of the study you will be assigned a participant identification number so that your performance data can be tracked throughout the study, while your personal information remains confidential. Your identity will remain completely confidential.

What if you want to stop participating in this study?
You can refuse to allow your data to be used for research purposes in this study for any reason, without penalty. You will not suffer any prejudice or penalty by your decision to refuse the use of your data. You will receive no academic or personal consequences should you choose to withhold your data. The investigator can also decide not to use your data for the study.

You can choose to stop participating in this study at any time, for any reason, without penalty. You will not suffer any prejudice or penalty by your decision to stop your participation. You will receive no academic or personal consequences should you choose to withdraw from the study. The investigator can also decide to stop your participation in the study without your consent.

Should you have any questions prior to or during the study, you can contact the primary investigator, Dr. Heather McGee, Ph.D. at heather.mcgee@wmich.edu, or the student investigator at nathan.t.bechtel@wmich.edu. You may also contact the Chair, Human Subjects Institutional Review Board at 269-387-8293 or the Vice President for Research at 269-387-8298 if questions arise during the course of the study.

This consent document has been approved for use for one year by the Human Subjects Institutional Review Board (HSIRB) as indicated by the stamped date and signature of the board chair in the upper right corner. Do not participate in this study if the stamped date is older than one year.

I have read this informed consent document. The risks and benefits have been explained to me. I agree to take part in this study.

Please Print Your Name

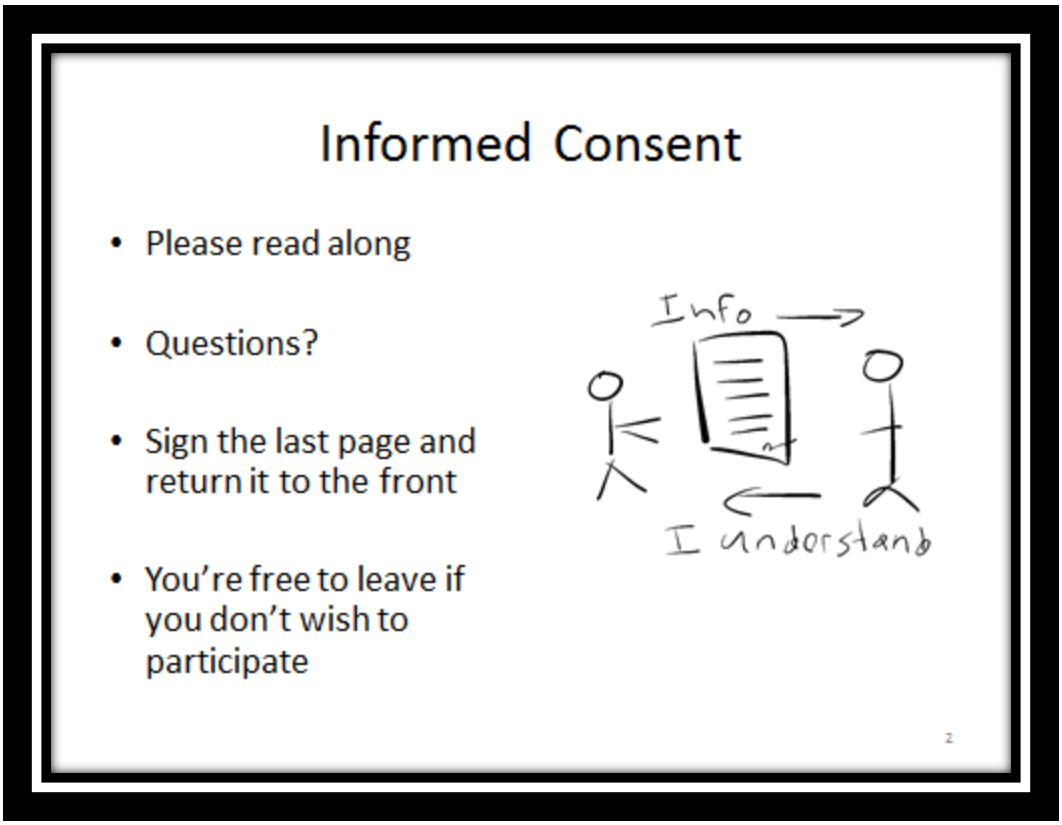
Participant's signature Date

Appendix R

Mock-consultant training PowerPoint and script: PDC

Welcome / Introduction

"Hello everyone, and welcome to our study. The majority of you are probably at least somewhat familiar with the research process, but we'll start with some basics. My name is Nate Bechtel, and this study will be serving as my doctoral dissertation. If you have any questions please hold them until after we've gone over the informed consent forms. We'll start by going over the informed consent as a group. You each have a copy of the form in front of you, so I'd like you to follow along with me as I read it aloud. The Human Subjects Institutional Review Board requires that I read the document aloud to you."



Informed Consent

<Read informed consent document>

"Okay, are there any questions regarding the document I just read?"

<hold for questions>

"Alright. If you agree participate in the study after having gone over this information, I will need you to sign the last page of the informed consent form and pass them up to the front. If you do not wish to participate having listened to this information, you are free to leave now."

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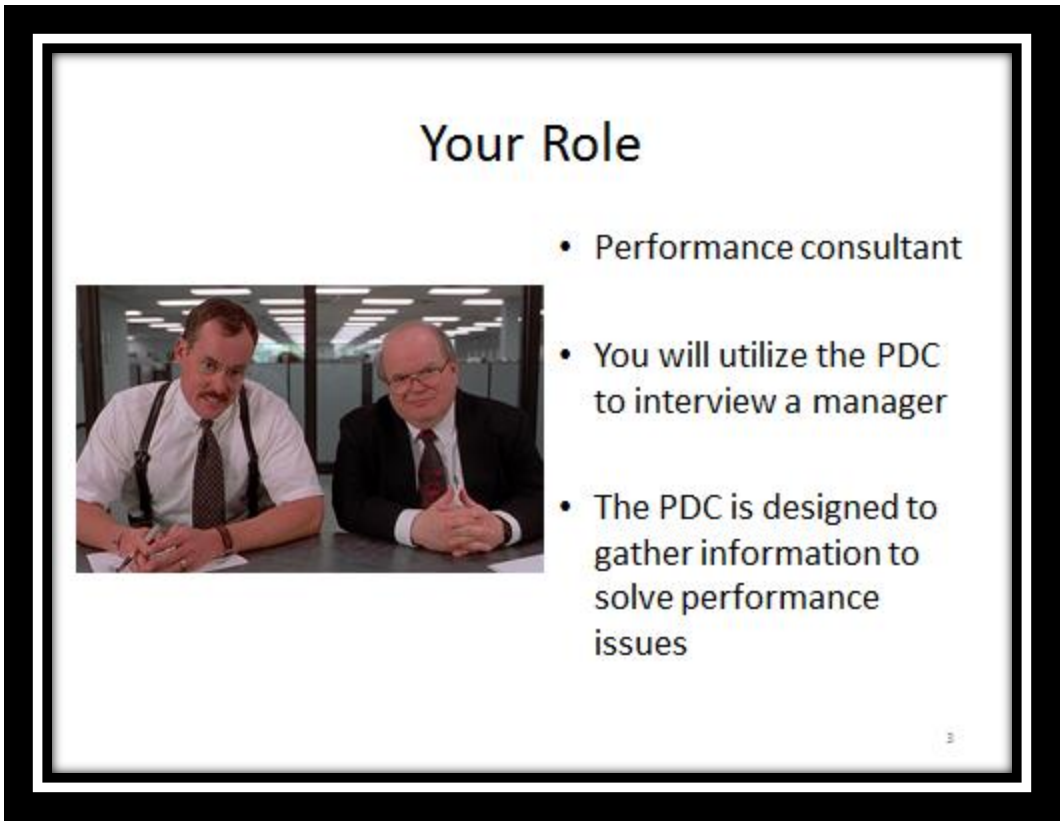
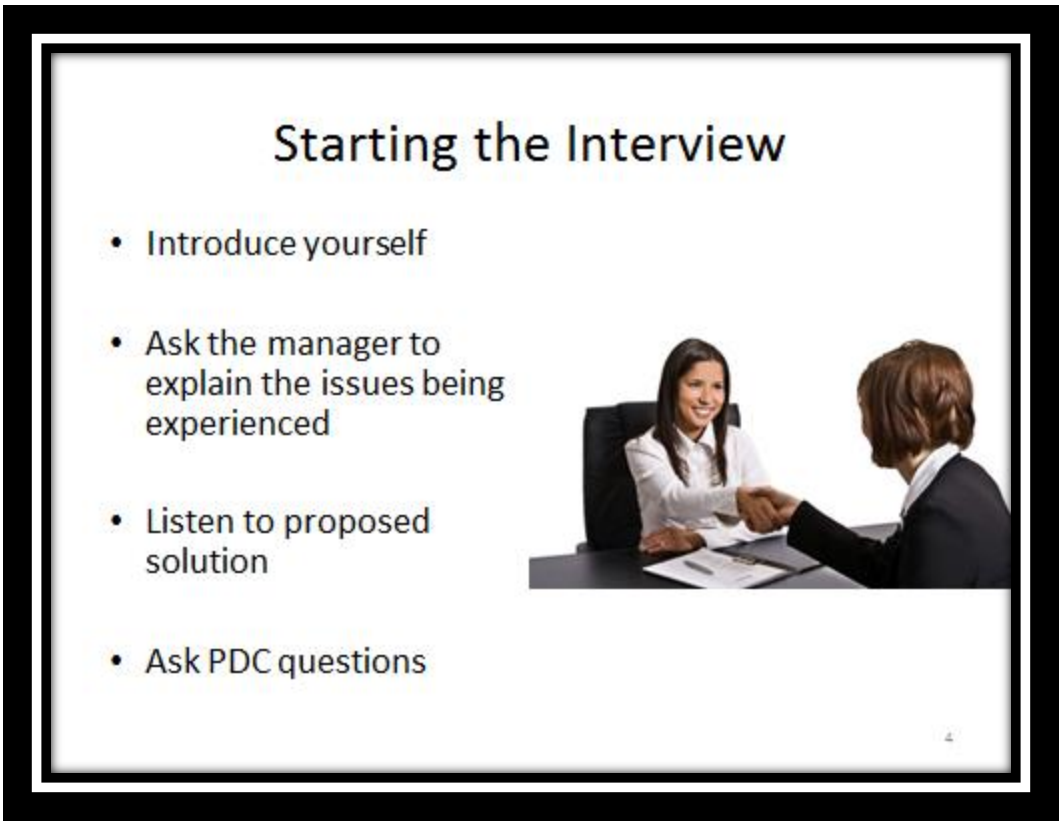


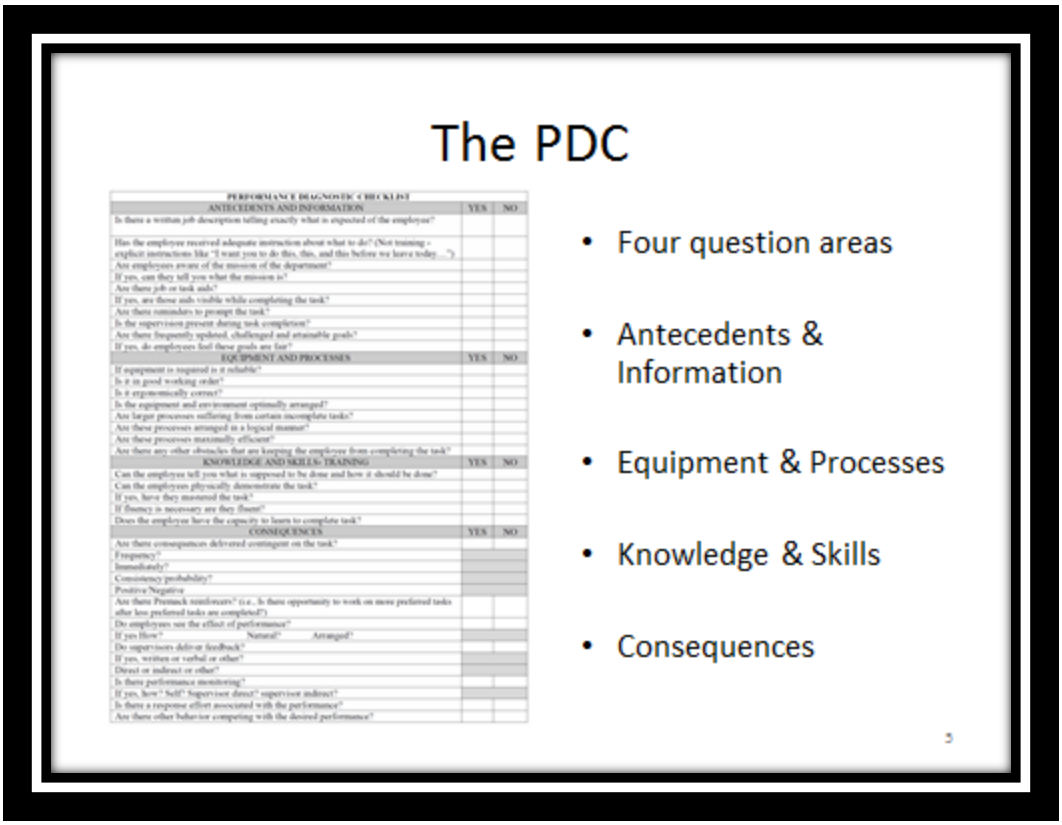
Explanation of mock-consultant's job

"For this study you will be playing the role of a performance consultant coming into a business to help solve a performance issue. You will be interviewing a manager who is experiencing some performance issues with his/her employees. For the interview, you will be utilizing the Performance Diagnostic Checklist, or PDC, to gather information. The PDC is a questionnaire tool designed to gather information about performance issues experienced by the organization. Today's training is designed to familiarize you with the tool and give you some practice conducting interviews with the tool. Let's start by discussing the interview process."



Starting the Interview

"You'll begin the interview by introducing yourself as the performance consultant. After the introductions, you'll ask the manager to explain the issues he or she is experiencing with the employees. The manager will give you a quick run-down of the primary issue, as well as his or her proposed solution to the problem. Listen to the solution, but don't expect it to be the correct solution. The proposed solution may very well be an inappropriate solution based on the issues. Your job is to figure out potentially better solutions, or find out if their solution is the correct one. This is when you ask them for some information about the issues that they are experiencing; specifically, you'll ask questions from the PDC."



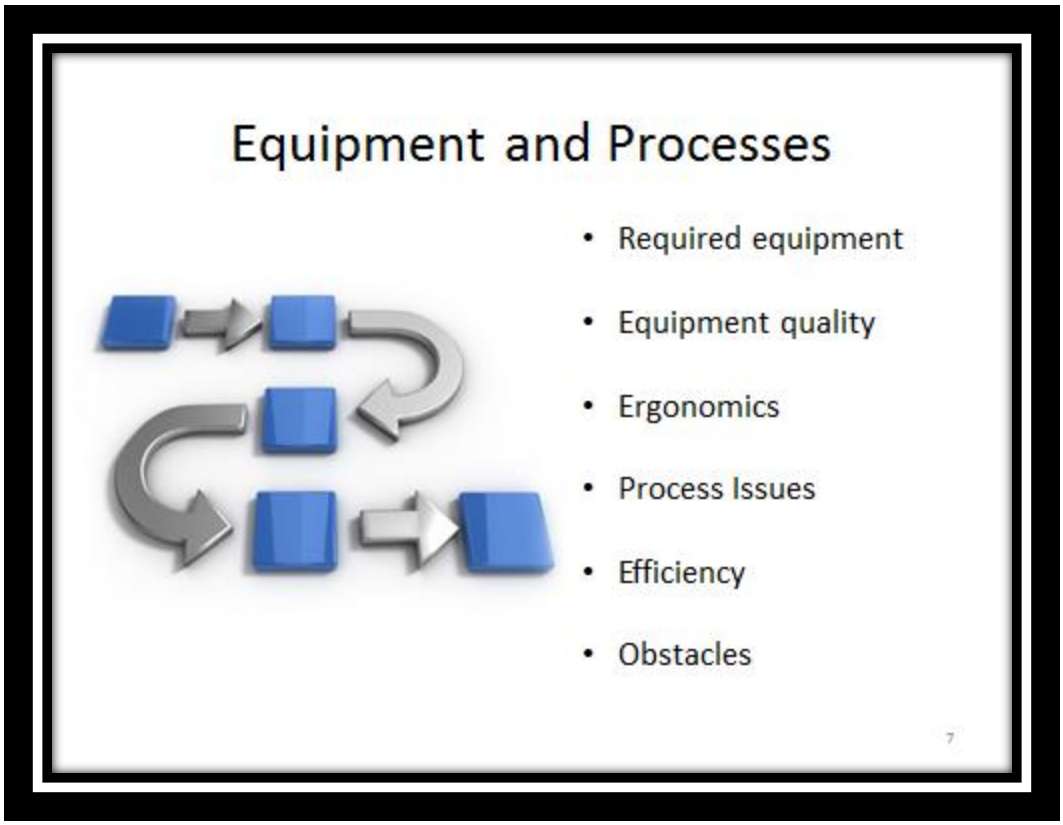
The PDC

"The PDC is split up into four categories, each with their own specific set of questions. These areas are antecedents and information, equipment and processes, knowledge and skills, and consequences. In your packet, you'll find a copy of the PDC where you can see all of the questions. We'll go through each section in detail, starting with the antecedents and information section."

Antecedents & Information

"The first portion of the PDC is antecedents and information. This section focuses on what happens, and what should happen, prior to the performance of concern. This includes information about job descriptions, instructions, job-aids, prompts, and goals. Let's go through the questions one at a time and see if you have any questions about them."

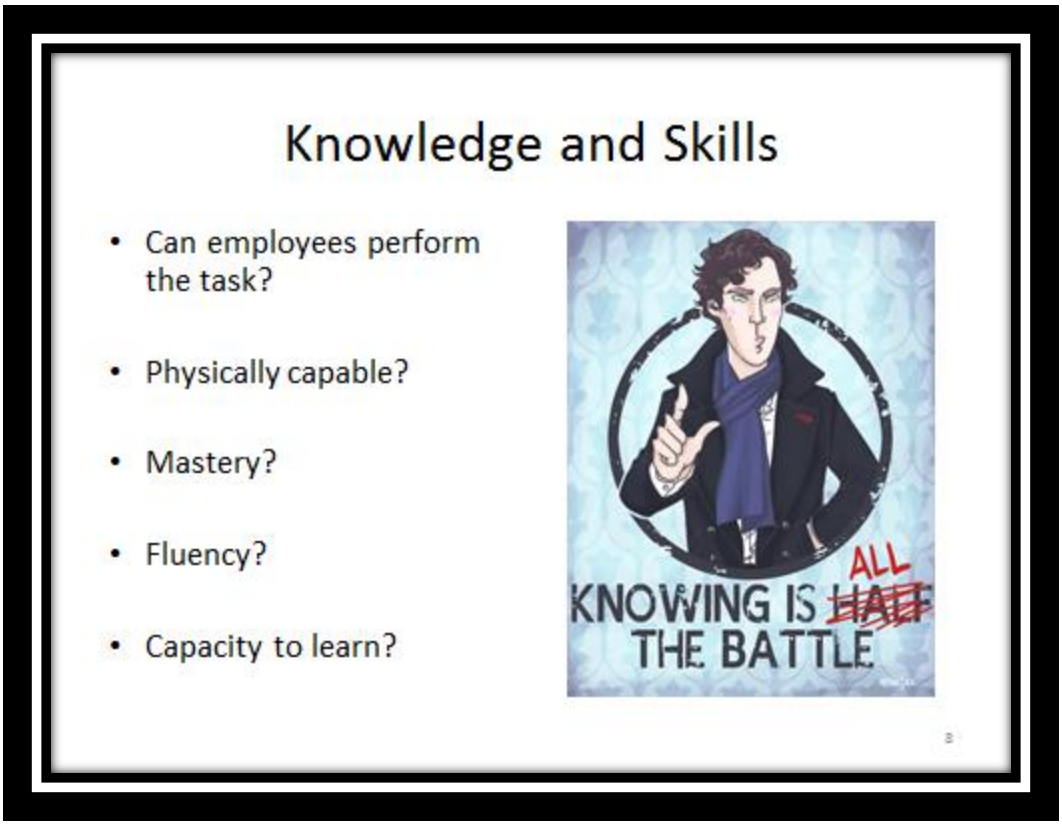
<Go through each question in the Antecedents and Information section. Make sure participants understand what they're looking for from each question.>



Equipment and Processes

"The second section of the PDC contains questions about the equipment required to complete the performance, and the processes in place for completing the performance. This includes information about required equipment, quality of equipment, ergonomics, overall process issues, efficiency, and other obstacles. Let's go through each of the questions from this section and see if there are any questions about them."

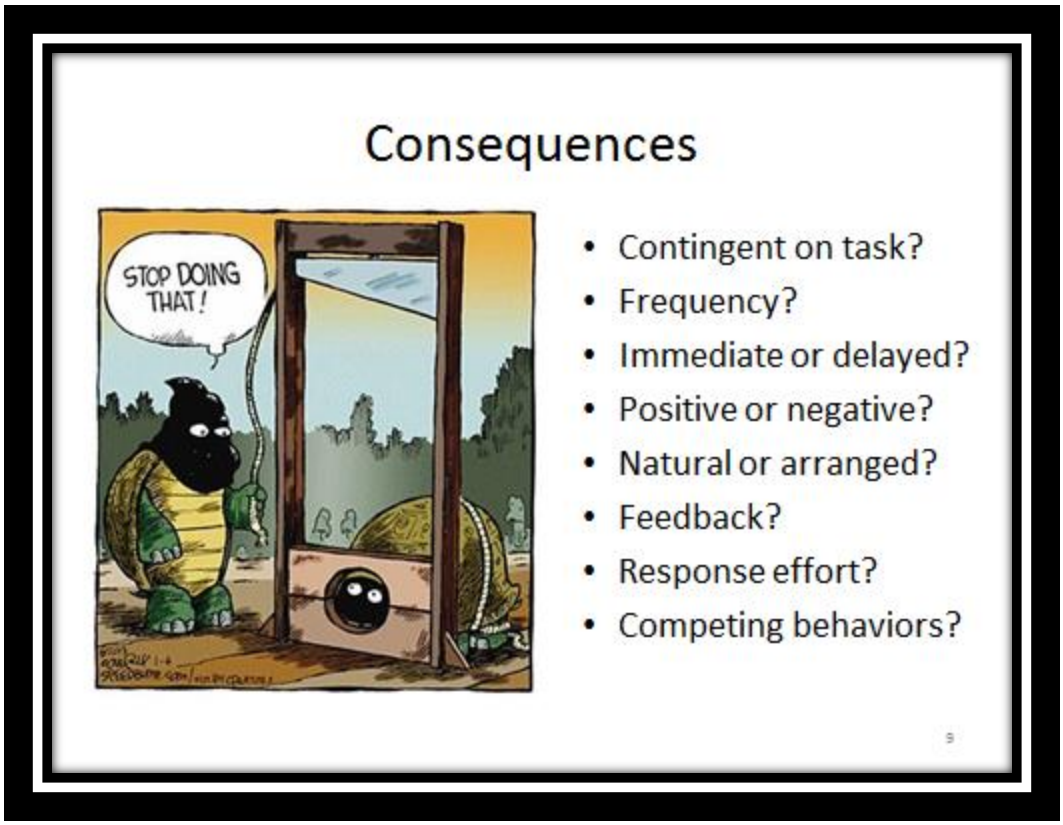
<Go through each question from the Equipment and Processes section. Make sure participants understand what they're looking for from each question.>



Knowledge and Skills

"The third section of the PDC contains questions about the knowledge and skills required to perform the job, as well as the training provided (or not provided) to employees performing these jobs. This includes information about whether employees are able to perform the task, whether they are physically capable of performing the task, whether or not the task is mastered and employees are fluent in performing the task, and whether they have the capacity to learn. Let's go through each of the questions from this section and see if there are any questions about them."

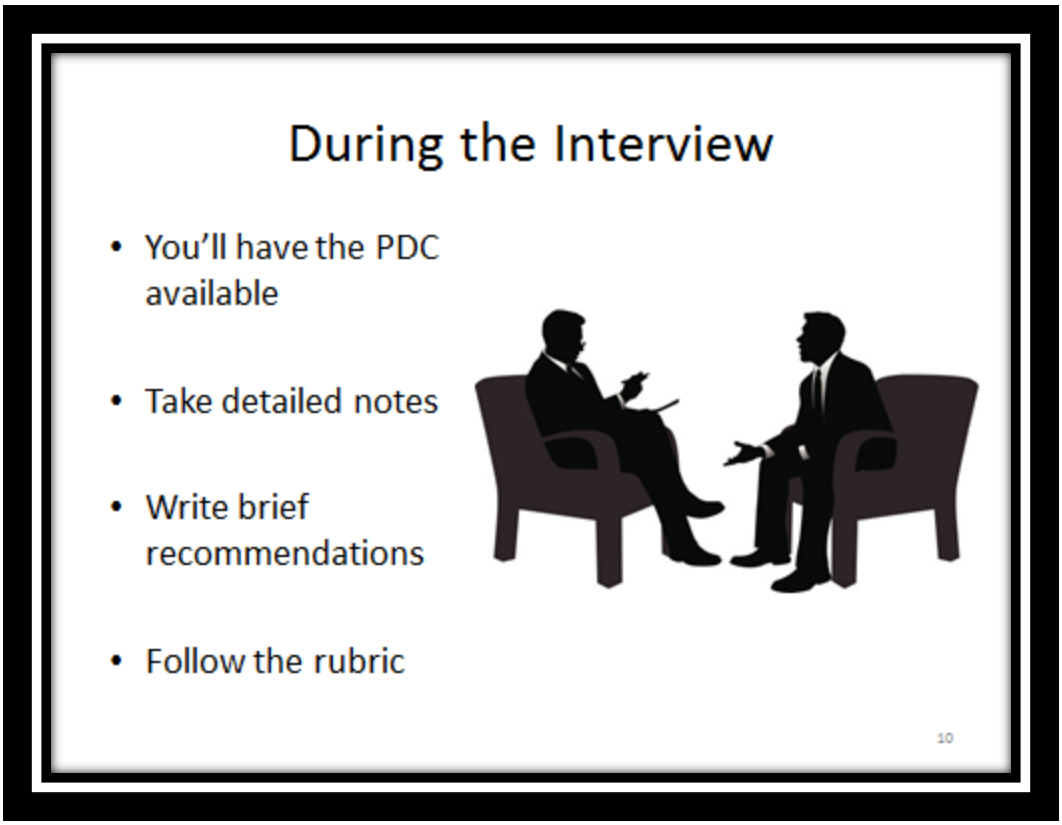
<Go through each question from the Knowledge and Skills section. Make sure participants understand what they're looking for from each question.>



Consequences

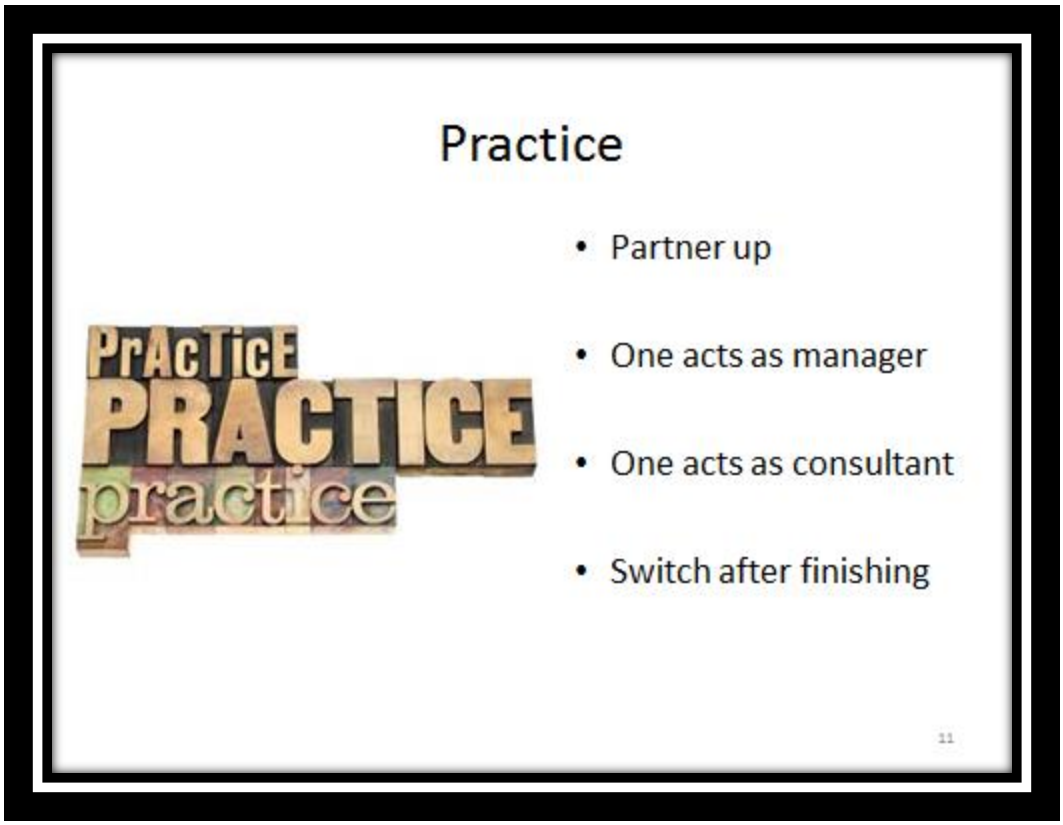
"The final section of the PDC contains questions about the consequences involved with performing the job. The term consequences is used here in the behavior analytic sense. As such, the consequences may be positive or negative, aversive or reinforcing, natural or arranged, and immediate or delayed. Since the manager you will be interviewing is not necessarily familiar with the terms, or may have preconceived notions about some of them, you may need to dig a little for the information. Let's go through each of the questions from this section and see if there are any questions about them."

<Go through each question from the Consequences section. Make sure participants understand what they're looking for from each question.>



During the Interview

"During the interview, you'll ask the questions we just discussed from the PDC. You'll have the PDC on-hand throughout the interview, so you don't need to worry about memorizing anything. The PDC includes notes sections for each question, and you're encouraged to take very detailed notes. It is likely that the manager won't know the answers to every single question you ask. If an answer is not given, simply put NA (not applicable) or unknown in the box on the form. Once you've asked all the questions, you'll let the manager know that you have all the information you need. Make sure to ask them if there are any details they want to provide which you did not ask them about. Once they've given you any additional information, they will leave the room. Once they leave, you will write up your recommendations based on the information gathered. At the end of the PDC, you'll see a few pages available to write out your recommendations. The rubric includes the problem you are trying to solve, a brief description of your recommendation, and a description of the antecedents and/or consequences you are planning to alter with you intervention. The interventions don't need to be incredibly detailed, but be sure you cover all of the areas on the rubric."



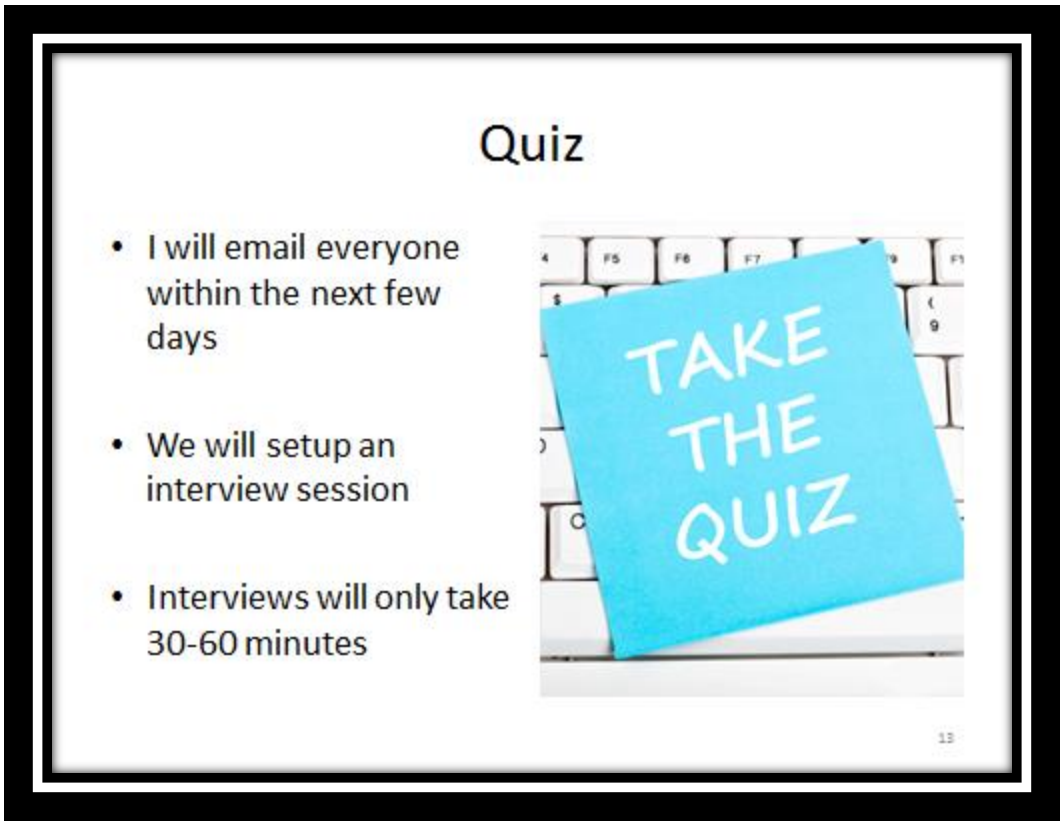
Practice

"For the rest of today's training, we'll be practicing using the PDC. You'll each need to find a partner for the practice session. In your packet you'll find a mock-performance scenario. One of you will act as the consultant, asking questions from the PDC, while the other acts as the manager and answers questions. Once you've completed the questions, you'll switch roles. As the manager, try to get into the role. Don't give any information that they don't ask for, and do your best to act like a manager. As the consultant, this is your opportunity to get used to using the tool, so make sure you ask all of the questions and take detailed notes. My RA(s) and I will be wandering around the room, providing feedback. Once everyone is finished, we'll have a brief discussion of how the process went, and then take a short quiz."

Practice Time

"Are there any questions before we begin?"

<Hold for questions. Afterward, make sure everyone has a partner and walk around the room, providing feedback.>



Quiz

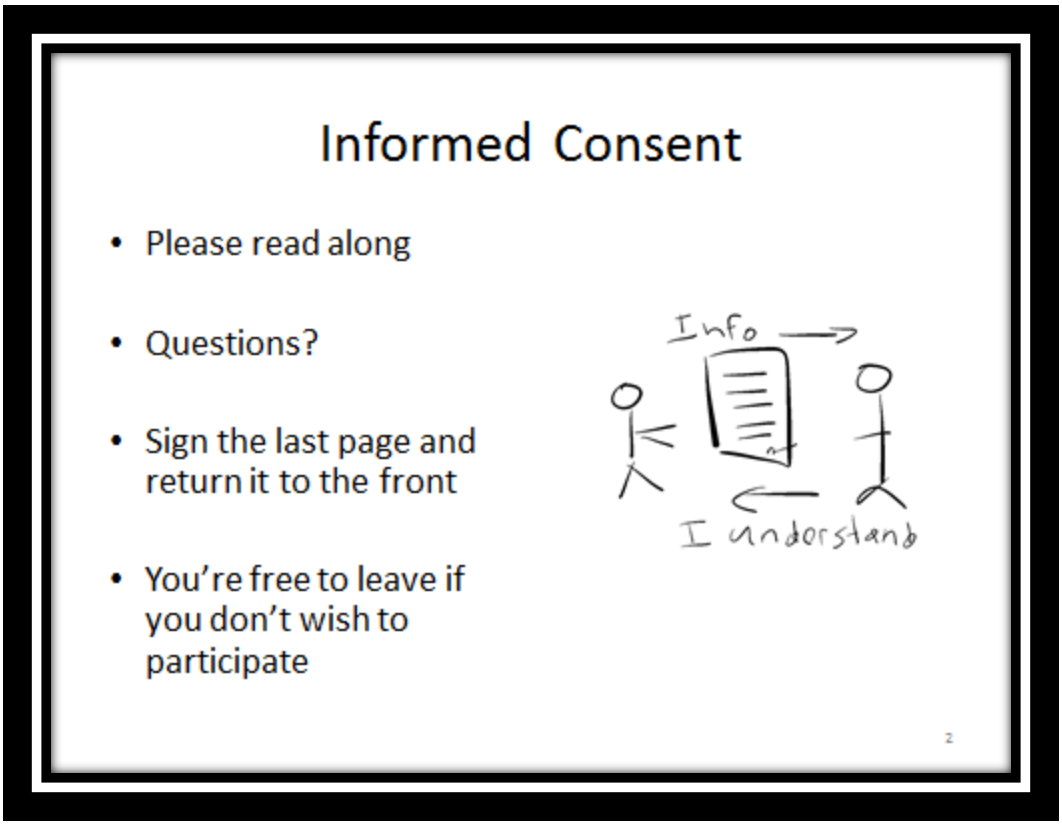
"Alright, hopefully everyone got a lot out of the practice session. I know it seems easy just reading questions off of the tool, but practicing will make it much easier in the interview session. First, let's discuss the next steps after this training session. I will email you each individually to set up an interview session with a consultant. Your interview session will take place sometime within the next week. This will hopefully ensure that you are still familiar with the performance scenario you just learned about. I recommend that you take your flashcards with you and study a little before the interview session. It will make the whole process run a lot more smoothly. Now, we'll pass out the quizzes. Complete the quiz and bring it up to the front when you're done. We will grade it immediately and if you passed, you will be free to go. Make sure to keep an eye out for an email within the next day or two. If you did not pass, we will show you which questions you got wrong, and give you a new quiz. The new quiz will be slightly modified, but it will cover the same material. Again, when you finish, bring it up to the front for grading. Are there any questions over the quiz before we get started?"

Appendix S

Mock-consultant training PowerPoint and script: Performance Flowchart

Welcome / Introduction

"Hello everyone, and welcome to our study. The majority of you are probably at least somewhat familiar with the research process, but we'll start with some basics. My name is Nate Bechtel, and this study will be serving as my doctoral dissertation. If you have any questions please hold them until after we've gone over the informed consent forms. We'll start by going over the informed consent as a group. You each have a copy of the form in front of you, so I'd like you to follow along with me as I read it aloud. The Human Subjects Institutional Review Board requires that I read the document aloud to you."



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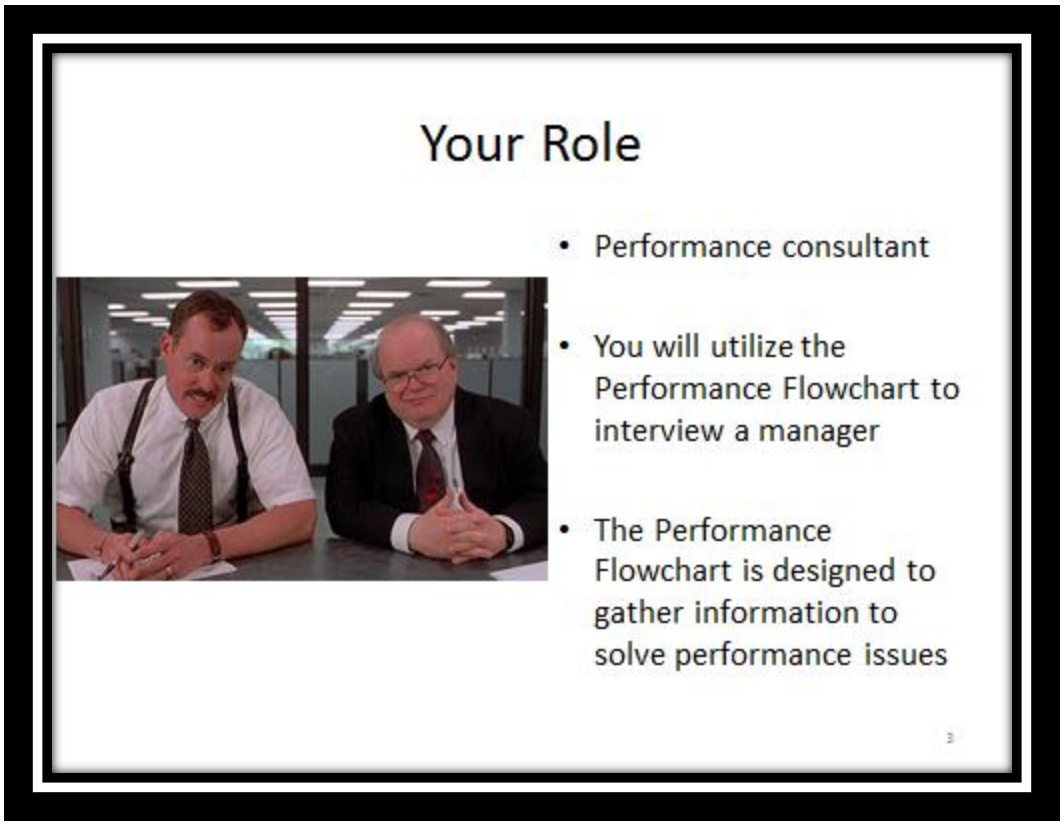
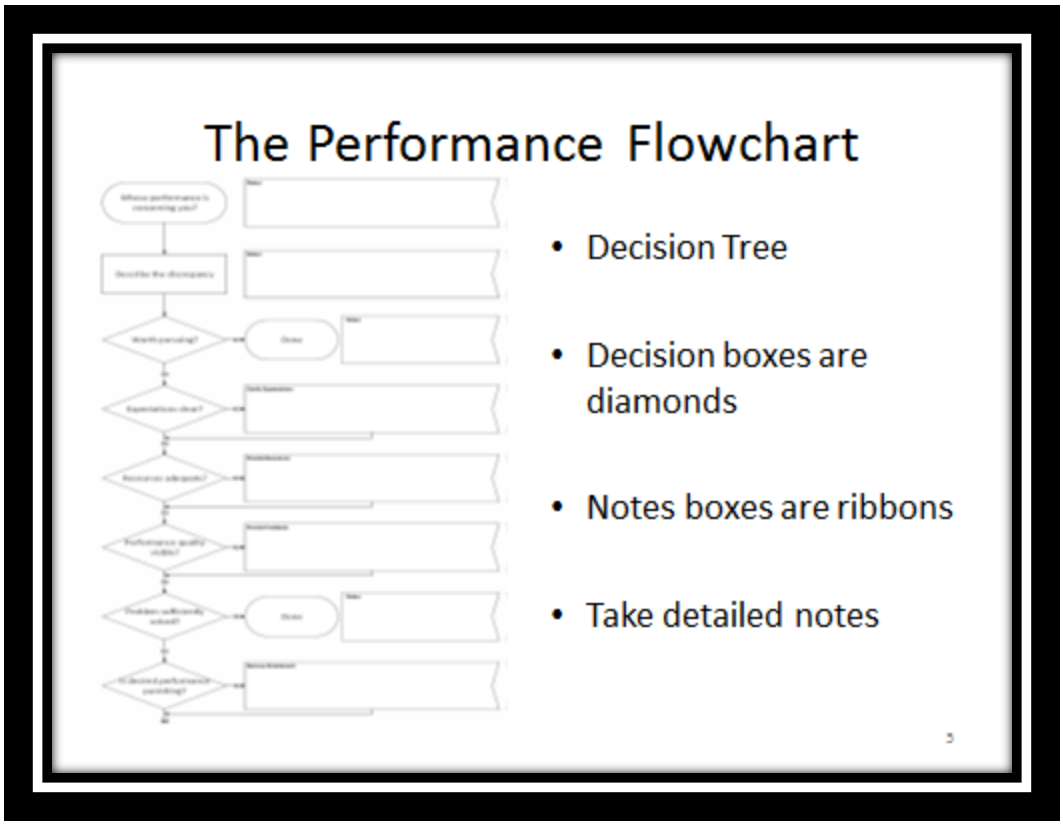


Explanation of Mock-Consultant's Job

"For this study you will be playing the role of a performance consultant coming into a business to help solve a performance issue. You will be interviewing a manager who is experiencing some performance issues with his/her employees. For the interview, you will be utilizing the Performance Flowchart, to gather information. The Performance is a questionnaire tool designed to gather information about performance issues experienced by the organization. It is specifically designed to determine if there are any solutions which can solve the problem prior to training being implemented. Today's training is designed to familiarize you with the tool and give you some practice conducting interviews with the tool. Let's start by discussing the interview process."

Starting the Interview

"You'll begin the interview by introducing yourself as the performance consultant. After the introductions, you'll ask the manager to explain the issues he or she is experiencing with the employees. The manager will give you a quick run-down of the primary issue, as well as his or her proposed solution to the problem. Listen to the solution, but don't expect it to be the correct solution. The proposed solution may very well be an inappropriate solution based on the issues. Your job is to figure out potentially better solutions, or find out if their solution is the correct one. This is when you ask them for some information about the issues that they are experiencing; specifically, you'll ask questions from the Performance Flowchart."

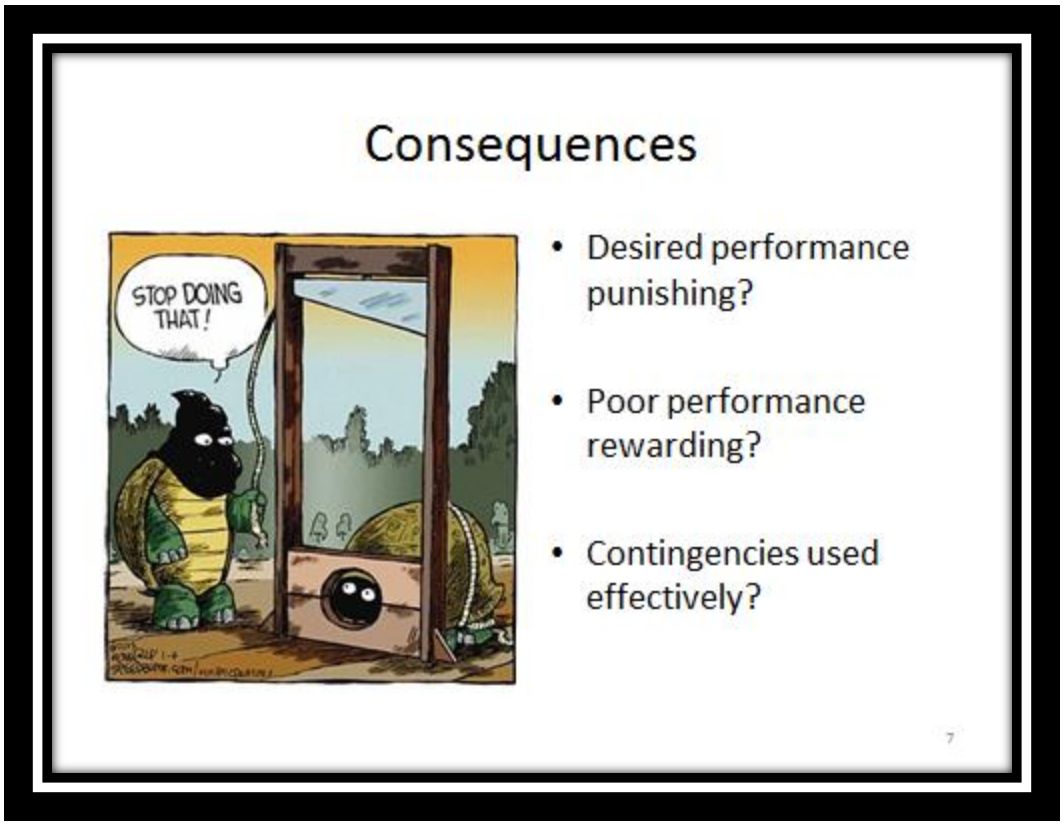


The Performance Flowchart

"The performance flowchart is set up as a long decision tree. Each box has a specific question or requirement, which leads you to the next branch of the tree. The diamond boxes are 'decisions.' The decisions are yes or no questions, and depending on how you answer them they will take you to a new box on the flowchart. For instance, the third box on the Flowchart asks if the performance issue is worth pursuing. If the answer is no, then you're done, because an issue not worth pursuing shouldn't be analyzed using this tool. This, of course, won't happen during your interview, but it is an important feature nonetheless. If the answer is yes, you continue on down the flowchart. Each decision box has two arrows coming off of it: one labeled 'yes' and one labeled 'no'. Generally speaking, if the answer to a question is 'no,' you'll need to gather some information about the discrepancy. After gathering the information, you will continue down the decision tree in the same fashion. If the answer is yes, you move on to the next area. Regardless of what the answer is, it is recommended that you take some notes on what the manager says. Something that doesn't seem important initially may turn out to be useful information later."

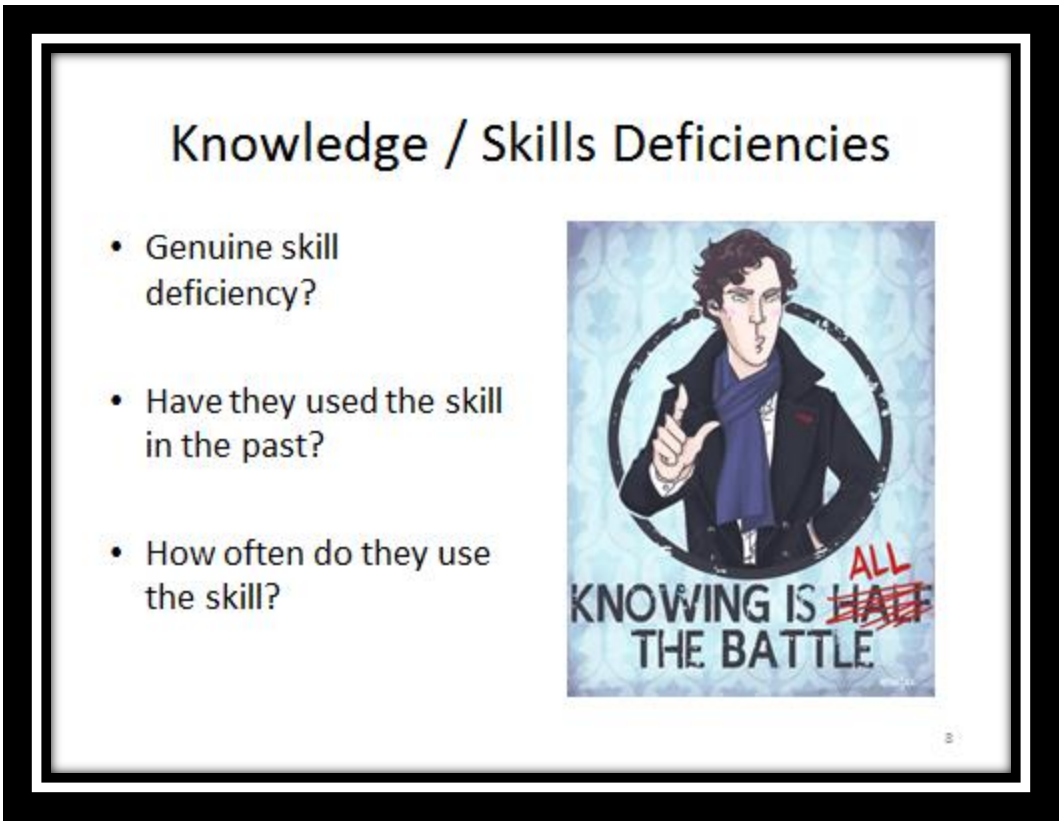
First Steps

"The first step in the tool is to describe both the performance of issue, and the discrepancy causing issues. The manager will begin the interview by describing these points, so make sure to take notes. You'll then decide if the issue is worth pursuing. Once this basic information is collected, you'll begin asking questions regarding antecedents to good performance. Are the employee expectations clear? That is, do the employees know that they're supposed to be performing in a certain way. If not, you should take notes on how expectations could be clarified. Next, are there adequate resources? That is, do the employees have the tools and resources available to do their job correctly? If not, describe potential recommendations for how to provide the required resources to the employees. Lastly for this section, is quality performance visible? Can the employees tell if they are performing correctly? If not, you should describe how feedback could be provided to the employees. This should be done in such a manner that it allows the employees to determine when they are performing correctly. Once these questions are answered, you must determine if the problem is solved. This may require you to simply ask the manager, 'if those problems were corrected, do you think the issue would be resolved?' If the manager doesn't know, or isn't sure, continue with the tool."



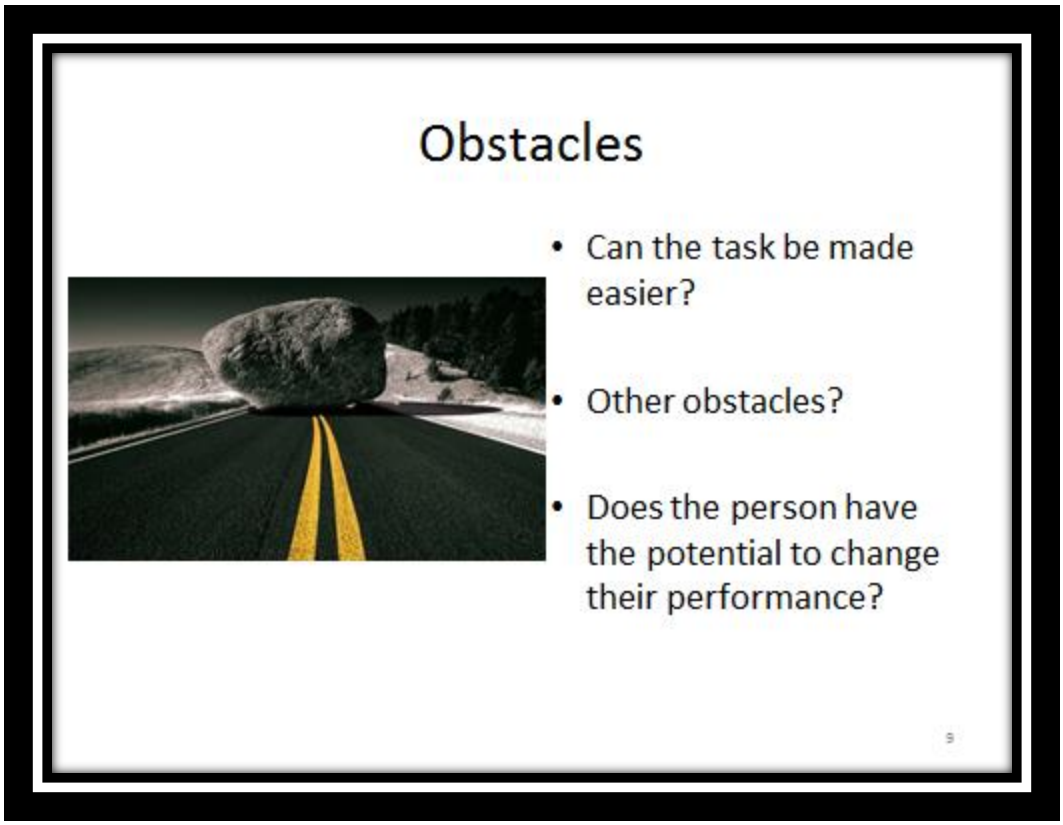
Consequences

"Next are the questions regarding performance consequences. While the questions don't specifically ask what the consequences are, you will want to gather this information anyway. The first question is 'Is the desired performance punishing?' If it is, the decision tree leads you to a box that indicates the punishment should be removed. Make sure to take notes on exactly how the performance is punished, and how these punishers could potentially be removed. The next question is 'Is poor performance rewarding?' Again, the decision tree leads you to remove those rewards, if in fact they exist. Make sure to take detailed notes on exactly how poor performance is rewarded, and how this can be altered. The last of the consequence questions asks if performance contingencies are utilized effectively. This question is very broad, and may require a lot of notes to be taken. It may also require you to 'go off book,' in a manner of speaking, to get the answers. Managers won't necessarily have the same repertoire regarding contingencies that you have, so you may have to work around that. Once these questions are answered, you must determine again whether or not the problem is solved. This may require you to simply ask the manager, 'if those problems were corrected, do you think the issue would be resolved?' If the manager doesn't know, or isn't sure, continue with the tool."



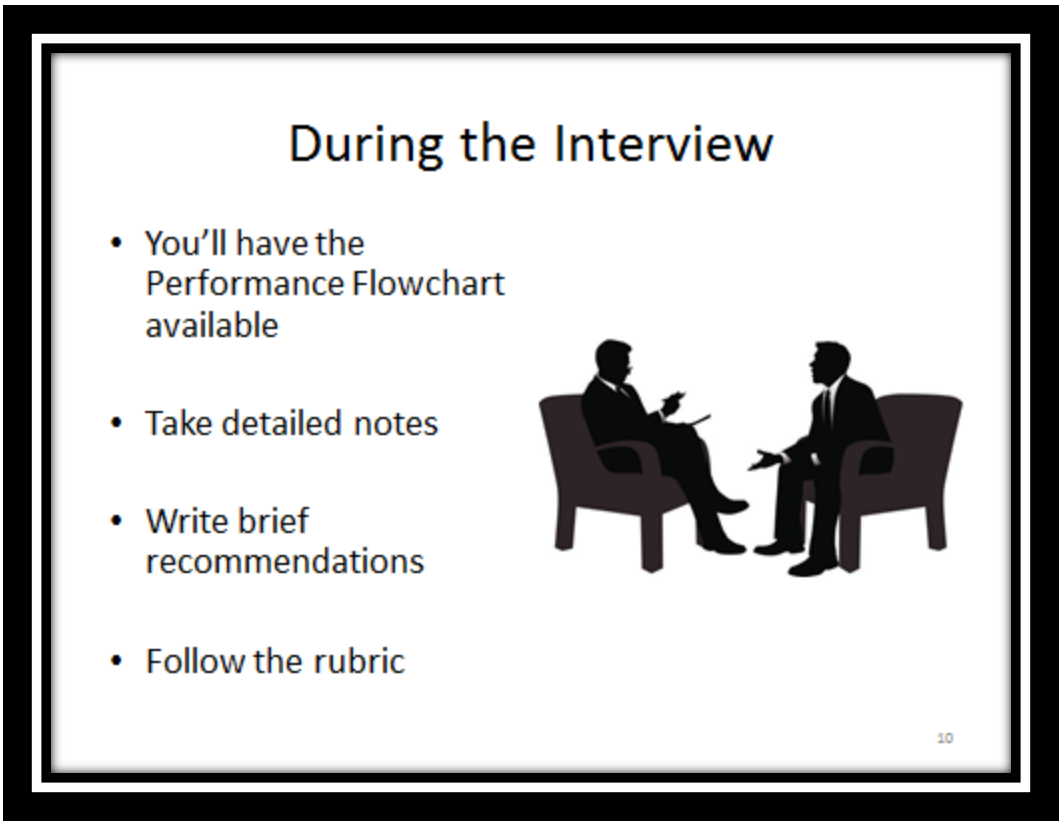
Knowledge / Skills Deficiencies

"The next section jumps into knowledge and skills deficiencies. The first question is 'Is there a genuine skill deficiency?' That is, do the employees have the skills to do what is being asked of them? This question splits off in two directions. If the answer is yes or not sure, the tool leads to questions to help determine if the problem is a 'can't do' or a 'won't do' problem. To begin this line of questioning, you must ask if they have done the skill in the past. If they have, the question becomes 'How often do they use the skill?' If they have performed the skill in the past, and done it regularly, it is probably not a training issue. If they have done it in the past, but they don't perform the skill often, they probably require practice, rather than training. Describe how this practice will be provided. If it is not a genuine skill deficiency, you move on to the next line of questions. As with the other sections, be sure to take detailed notes about the answers."



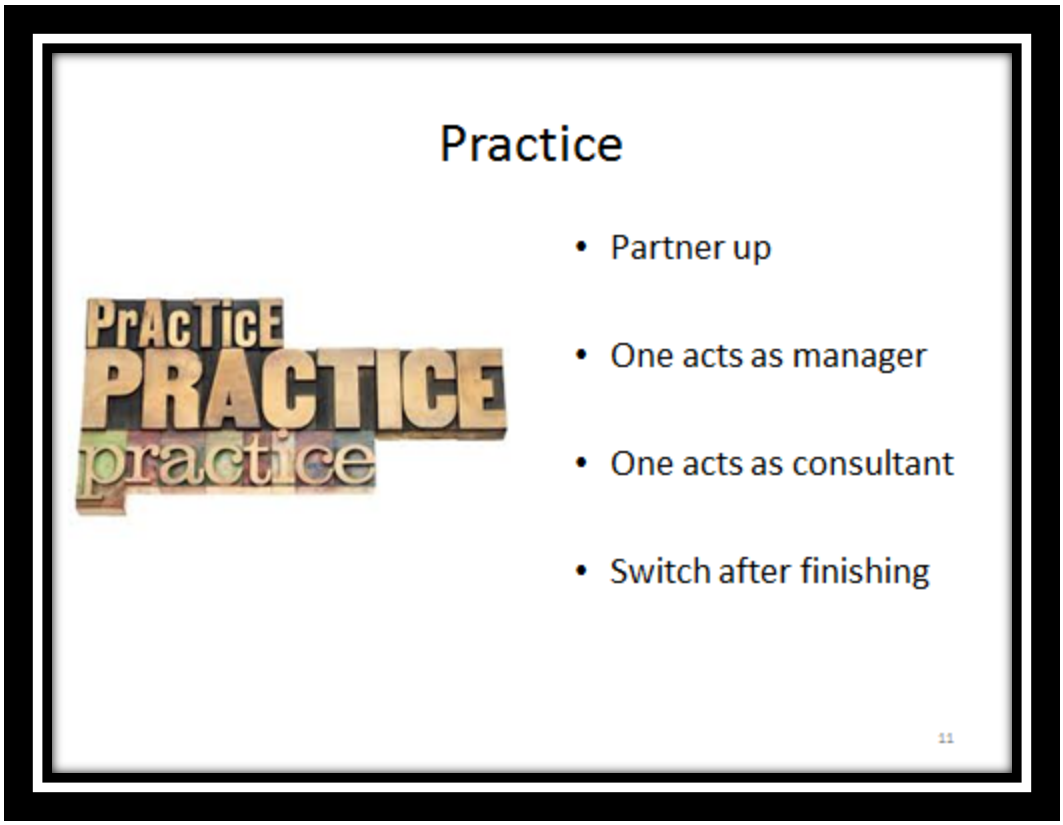
Obstacles

"The final section inquires about obstacles which may hinder performance. The first question is 'Can the task be made easier?' Make sure to gather details about how the task can be made easier. Sometimes it is simply not cost effective to make a task easier. Next, you'll inquire about any other obstacles which may hinder performance. These are generally issues which are not covered by the rest of the flowchart. If the manager can't think of any, you are welcome to ask specific questions if you can come up with any. Lastly, you'll ask if the person has the potential to change. If it is a genuine skill deficiency and there is no potential to change, then the employee must be replaced. If it is a skill deficiency and they are capable of change, then the best solution is training. As mentioned earlier, this tool is designed to find solutions for problems with training as a last resort. If all of the questions in this tool are answered accurately and you find yourself recommending training, then it is highly likely that training is required."



During the Interview

"During the interview, you'll ask the questions we just discussed from the Performance Flowchart. You'll have the Flowchart on-hand throughout the interview, so you don't need to worry about memorizing anything. The Flowchart includes notes sections for each question, and you're encouraged to take very detailed notes. It is likely that the manager won't know the answers to every single question you ask. If an answer is not given, simply put NA (not applicable) or unknown in the box on the form. Once you've asked all the questions, you'll let the manager know that you have all the information you need. Make sure to ask them if there are any details they want to provide which you did not ask them about. Once they've given you any additional information, they will leave the room. Once they leave, you will write up your recommendations based on the information gathered. At the end of the Performance Flowchart, you'll see a few pages available to write out your recommendations. The rubric includes the problem you are trying to solve, a brief description of your recommendation, and a description of the antecedents and/or consequences you are planning to alter with you intervention. The interventions don't need to be incredibly detailed, but be sure you cover all of the areas on the rubric."



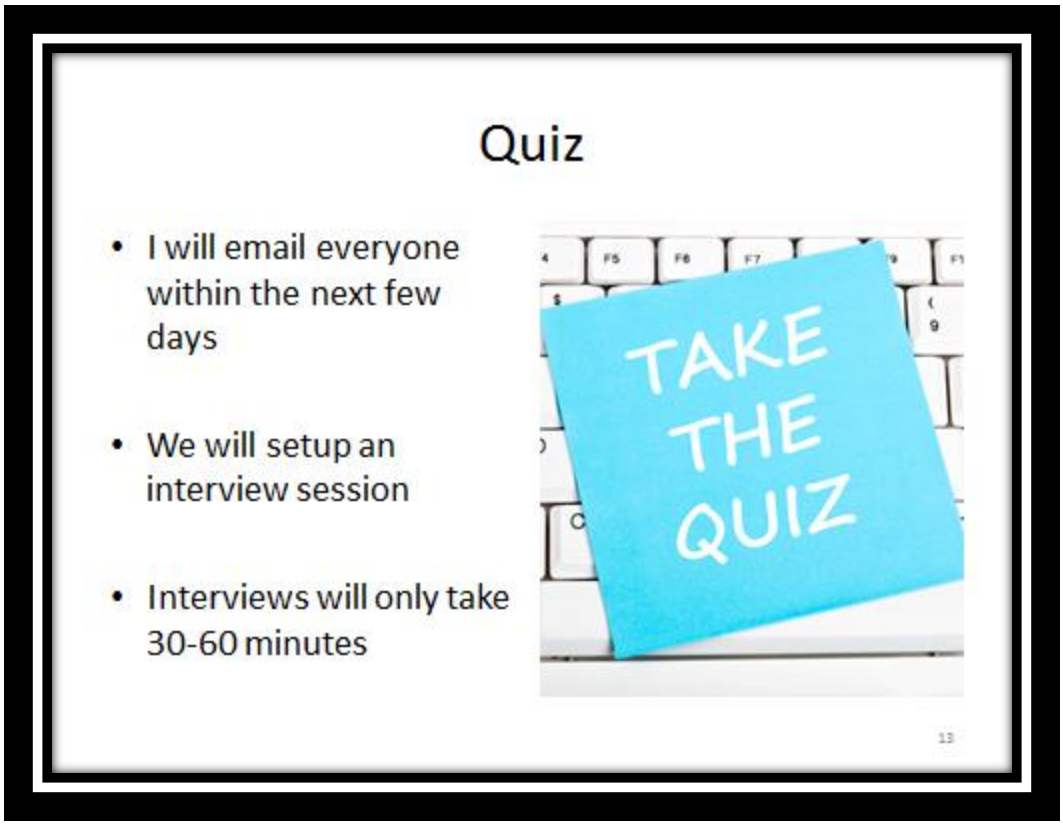
Practice

"For the rest of today's training, we'll be practicing using the Performance Flowchart. You'll each need to find a partner for the practice session. In your packet you'll find a mock-performance scenario. One of you will act as the consultant, asking questions from the Flowchart, while the other acts as the manager and answers questions. Once you've completed the questions, you'll switch roles. As the manager, try to get into the role. Don't give any information that they don't ask for, and do your best to act like a manager. As the consultant, this is your opportunity to get used to using the tool, so make sure you ask all of the questions and take detailed notes. My RA(s) and I will be wandering around the room, providing feedback. Once everyone is finished, we'll have a brief discussion of how the process went, and then take a short quiz."

Practice Time

"Are there any questions before we begin?"

<Hold for questions. Afterward, make sure everyone has a partner and walk around the room, providing feedback.>



Quiz

"Alright, hopefully everyone got a lot out of the practice session. I know it seems easy just reading questions off of the tool, but practicing will make it much easier in the interview session. First, let's discuss the next steps after this training session. I will email you each individually to set up an interview session with a consultant. Your interview session will take place sometime within the next week. This will hopefully ensure that you are still familiar with the performance scenario you just learned about. I recommend that you take your flashcards with you and study a little before the interview session. It will make the whole process run a lot more smoothly. Now, we'll pass out the quizzes. Complete the quiz and bring it up to the front when you're done. We will grade it immediately and if you passed, you will be free to go. Make sure to keep an eye out for an email within the next day or two. If you did not pass, we will show you which questions you got wrong, and give you a new quiz. The new quiz will be slightly modified, but it will cover the same material. Again, when you finish, bring it up to the front for grading. Are there any questions over the quiz before we get started?"

Appendix T

Intervention rubric

Intervention Rubric

Directions: In the interview, the manager described a performance issue and provided you with information to allow you to make recommendation(s) for solving the issue. Use the following rubric to describe your recommendations for the issue described by the manager. Begin by briefly describing the issue. Next, you'll be able to describe each of the potential interventions, and the antecedents and consequences being altered by those interventions. There is space for 10 potential recommendations, however you may create more or fewer than this.

Briefly describe the issue being addressed:

Briefly describe the first intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the second intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the third intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the fourth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the fifth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the sixth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the seventh intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the eighth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the ninth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Briefly describe the tenth intervention recommendation:

What consequences (if any) are being altered?

What antecedents (if any) are being altered?

Appendix U

Interview scenario for training of mock-consultants

Consultant Practice Performance Scenario

You are a manager in the manufacturing department of a midsized automotive industry organization. Your manufacturing department runs 24 hours/day, 5 days/week. There are three shifts and 8 different workstations. Each station has a team of 4 workers. You've been having issues with the workers not working well together. Specifically, there seems to be a lot of animosity between stations and shifts. You are also having some issues within stations during the same shift, but not to the extent of the between station/shift issues. It seems like employees are constantly coming to you and complaining about other workers. You contact a business consultant to request DISC training (how to deal with different personalities) for all of your frontline workers.

DISC

- Commonly used in business and industry
- Stands for dominance, influencing, steadiness, and conscientiousness
- Designed to "help individuals understand themselves and others better"
- Personality profile is part of the training – each person has a primary personality type and a secondary personality type
- Learners are taught how to "deal" with each personality type by learning how each personality type responds to certain situations

Your Job as Manager

- Tell the consultant that you want DISC training developed for your frontline workers
- Briefly describe the scenario presented above
- Let the consultant ask you questions and answer those questions based on the information below
- Don't give more information than they ask for; remember, you are a busy manager and you don't have time for all of this. For example, if the consultant is only focusing on asking about your training process, do not provide information about the weekly goals or quotas
- If you are asked a question that is not covered by the information provided, do not make up answers. Simply say that you do not know
- You may make up interpersonal disputes between the workers, but do not fabricate any other type of information

Pertinent Information

- While there are some individuals who receive multiple complaints against them, the complaints are, more often than not, aimed at an entire shift. For example, "3rd shift never cleans up their mess before leaving!"
- The employee job description includes information about end-of-shift clean-up and other procedures necessary to keep the shift-changes running smoothly

- The only job-aids provided to employees are on equipment usage. There are no job-aids describing any other aspect of the job
- The shift supervisors spend most of their time in the office, rather than on the floor
- Feedback to workers consists of publicly posted graphs of productivity by workstation and shift
- All of the required equipment works reliably. Any issues are corrected by maintenance as soon as they're discovered
- For each shift, the most productive workstation for the month gets a bonus
- For the plant, the most productive shift for the month gets a catered lunch
- New workers typically start on 3rd shift and "graduate" to 1st or 2nd shift when they get good enough
- If a particular worker is not performing well, he/she is typically transferred to an easier workstation or position within the workstation, and the person who previously held that position is moved elsewhere
- All workers have at least a GED or high school diploma, and some have one or two years of college
- You think many of the workers are just set in their ways and won't cooperate with others to do what is best for the organization as a whole
- Each shift supervisor's performance appraisal is based on his/her shift's overall productivity
- There are no programmed consequences for any performance measures other than quality and quantity of product produced

Appendix V

Mock-manager's performance scenario cheat-sheet

Performance Scenario Cheat-Sheet

Pertinent Information

- Sales staff are trained
- You believe they should be retrained
- Paperwork explained in job description
- Paperwork is confusing and interferes with continued sales
- Poor paperwork causes issues in manufacturing
- Manufacturing often blamed for the issues
- Sales staff unaware of issues caused by poor paperwork
- No positive consequences for completion
- No job aids
- No goals for paperwork
- Delayed reprimands occasionally for poor paperwork
- You do not believe in providing rewards for work that is in the job description

Appendix W

Debrief script

Debrief Session Instructions

The following script is to be read aloud by the student investigator or research assistant to all participants during the final debriefing session:

"*Thank you for participating in our study. The purpose of this last meeting is to give us the opportunity to explain the purpose of the study you have just participated in. You will be given the opportunity to ask any questions you may have after the explanation.*

The purpose of this study was to evaluate the intervention recommendations which result from the use of two separate functional assessment tools: the PDC and the Performance Flowchart. Consultants were trained to use one of the two tools in an interview scenario. The managers were all trained on the same performance scenario, no matter which type of consultant was interviewing them. The managerial performance scenario was created for the explicit purpose of replicating realistic performance issues experienced by managers. The information provided to the managers was sufficient to answer all of the questions put forth by both of the potential tools.

This study examined only the interventions recommended by consultants utilizing each tool, not the results of actually implementing those interventions. The goal was to determine if the two tools differed greatly in the number of antecedent- and consequence-based recommendations.

Do you have any questions that I can answer for you?

After the participant has asked any questions that he or she has, the research assistant or student investigator will provide the proof of participation.

"Do you require proof of participation for extra credit in any of your courses?"

If they answer yes, they will be provided with proof of participation with the appropriate number of hours.

Thank you very much for your participation in this study. Please do not discuss this study with anyone else because we are still in the process of debriefing other participants. You are now free to leave.

Appendix X

Recommendation analysis criteria

In order to be categorized as either antecedent- or consequence-based, the recommendations must contain at least one of the following components. If they contain multiple components, falling in both categories, the recommendation should be categorized based on the primary aspect of the recommendation. That is, based on the problem they are trying to solve (this should be described if they followed the rubric), which aspect of the intervention is likely to have the greatest impact.

Antecedent-based:

A) The recommendations involve the manipulation or alteration of the employee's job description or documented performance expectations,
B) The recommendations involve instituting training of any sort,
C) The recommendations involve the implementation of a job or task analysis,
D) The recommendations involve the implementation of a job aid,
E) The recommendations involve the implementation of job or task goals,
F) The recommendations involve the alteration or introduction of any equipment, obstacles, or processes required to do the job
G) The recommendations involve the introduction of any information or instruction required to do the job correctly not otherwise specified by these requirements.

Consequence-based:

A) Recommendations will fall into this category if they involve the manipulation or alteration of any consequences provided after the job has been completed. These consequences will consist:
    a. Praise
    b. Feedback
    c. Monetary or other incentives
    d. Premack consequences (i.e., the ability to perform other tasks as a result of completing the task in question)
    e. Punitive consequences.

Appendix Y

Secondary observer training for IOA

The student investigator will provide the following information to the secondary observer(s). This is to be read as a script:

Since you are in the psychology department here at Western, I assume you are at least somewhat familiar with the concepts of antecedents and consequences, correct? (If not, the observer may not qualify to act as our secondary observer). *The recommendations which you'll be analyzing will fall into one of two categories. The first category is antecedent-based recommendations. Recommendations will fall into this category if they meet any of the following requirements: (a) the recommendations involve the manipulation or alteration of the employee's job description or documented performance expectations, (b) the recommendations involve instituting training of any sort, (c) the recommendations involve the implementation of a job or task analysis, (d) the recommendations involve the implementation of a job aid or checklist, (e) the recommendations involve the implementation of job or task goals, (f) the recommendations involve the alteration, introduction, or removal of any equipment, obstacles, or processes required to do the job, or (g) the recommendations involve the introduction of any information or instruction required to do the job correctly not otherwise specified by these requirements.*

The second category is consequence-based recommendations. Recommendations will fall into this category if they involve the manipulation or alteration of any consequences provided after the job has been completed. These consequences will consist of praise, feedback, monetary or other incentives, Premack consequences (i.e., the ability to perform other tasks as a result of completing the task in question), or punitive consequences. You will have these two lists available to you when you are analyzing the recommendations, so please don't hesitate to use them.

It is likely that the mock-consultants will recommend both antecedent and consequence interventions; you will be tasked with determining under which category each recommendation falls. The rubric requires that the mock-consultant provide information about each of their recommendations, which should help you to determine whether each specific recommendation is antecedent- or consequence-based.

In order to streamline the categorization process even further, you will be provided with a list of potential antecedent- and consequence-based interventions, which are common when analyzing organizational performance issues. Odds are, most of the recommendations provided by the mock-consultants will fall into one of the categories listed.

In order for you to get a feel for the categorization process, we'll go through a few examples. These recommendations follow the rubric which will be used by the mock-consultants during the study, so this should give you a good idea of how the process will work.

Appendix Z

Practice recommendations for secondary observer training

Directions: In the interview, the manager described a performance issue and provided you with information to allow you to make recommendation(s) for solving the issue. Use the following rubric to describe your recommendations for the issue described by the manager. Begin by briefly describing the issue. Next, you'll be able to describe each of the potential interventions, and the antecedents and consequences being altered by those interventions. There is space for 10 potential recommendations, however you may create more or fewer than this.

Briefly describe the issue being addressed:

Employees are not taking proper safety precautions when they leave their work station. There are currently no prompts to remind the employees that they need to complete the safety checklist prior to leaving a work station. Employees leave work stations and move to new stations throughout the day, so it is easy to forget about.

Briefly describe the first intervention recommendation:

Implement a job aid at each station which includes a checklist of all safety precautions to be completed before moving to the next station. The employee is required to sign the sheet upon entering and exiting the station, to indicate that they have completed the checklist.

What consequences (if any) are being altered?

- None

What antecedents (if any) are being altered?

- Job-aid
- Sign-in / sign-out sheet

Directions: In the interview, the manager described a performance issue and provided you with information to allow you to make recommendation(s) for solving the issue. Use the following rubric to describe your recommendations for the issue described by the manager. Begin by briefly describing the issue. Next, you'll be able to describe each of the potential interventions, and the antecedents and consequences being altered by those interventions. There is space for 10 potential recommendations, however you may create more or fewer than this.

Briefly describe the issue being addressed:

The organization's customer service representatives are only answering a small percentage of the calls that come through, and there have been a lot of complaints. There are currently no positive consequences in place for answering all calls, nor are there any punitive consequences for not answering calls. Answering calls is specified in the job description, and it is clear when calls are coming in, and when they need to be answered.

Briefly describe the first intervention recommendation:

Implement rewards for meeting a certain percentage of calls answered during the shift. Exceeding this percentage results in a higher amount of rewards. Monetary rewards are preferable, but others would suffice. Also implement punitive consequences for falling below a certain percentage.

What consequences (if any) are being altered?

- Rewards for meeting percentage of calls
- Punitive consequences for falling below certain percentage

What antecedents (if any) are being altered?

- None

Directions: In the interview, the manager described a performance issue and provided you with information to allow you to make recommendation(s) for solving the issue. Use the following rubric to describe your recommendations for the issue described by the manager. Begin by briefly describing the issue. Next, you'll be able to describe each of the potential interventions, and the antecedents and consequences being altered by those interventions. There is space for 10 potential recommendations, however you may create more or fewer than this.

Briefly describe the issue being addressed:

The hospital's doctors and nurses are required to wash their hands upon entering and exiting any patient's room; however, this is not occurring nearly often enough. The major reasons for a lack of handwashing seem to be a lack of time, and simply forgetting. The doctors and nurses have hectic schedules, and it is easy to forget to wash when you are rushing to another patient's room.

Briefly describe the first intervention recommendation:

The recommended course of action is to post signs in all patient rooms, indicating the need for handwashing. In addition, there will be daily goals of 100% compliance with the handwashing requirement. Observers will take data throughout the day to determine if the goal is met, and feedback will be provided on goal completion. A small incentive will also be included for meeting daily goals.

What consequences (if any) are being altered?

- Incentives for goal completion

What antecedents (if any) are being altered?

- Sign postings
- Daily goals
- Feedback

Appendix AA

Categorization rubric

Directions: The following two tables should help you to discern whether each recommendation / intervention is antecedent-based or consequence-based.

Potential Antecedent-Based Interventions

ANTECEDENTS AND INFORMATION	YES	NO
Add or alter job description?		
Add or alter job model?		
Develop, alter, or articulate missions?		
Add or alter job/task aids?		
Add or alter reminders or prompts?		
Arrange for more supervisor presence?		
Add or alter employee resources?		
Add or alter goals?		
EQUIPMENT AND PROCESSES	YES	NO
Add or alter equipment?		
Design, redesign, or eliminate process?		
Alter physical environment?		
Simplify task?		
Remove obstacles? (e.g. give employees authority,		
KNOWLEDGE AND SKILLS- TRAINING	YES	NO
Add or alter training?		
Add or alter fluency training?		
Alter selection procedures?		
Replace employee?		

Potential Consequence-Based Interventions

CONSEQUENCES	YES	NO
Add positive consequences for desired performance?		
Remove negative consequences for desired performance?		
Alter frequency, immediacy, and or certainty of consequences for desired performance?		
Remove or alter competing contingencies?		
Add Premack reinforcers?		
Make effect of performance more visible?		
Add or alter feedback?		
Add or alter performance monitoring?		
Decrease response effort associated with the performance?		
Add negative consequences for undesired performance?		
Remove positive consequences for undesired performance?		
Alter frequency, immediacy, and or certainty of consequences for undesired performance?		