Improving Organizational Performance

Presented by:
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About the Presenter
Elizabeth Bailey, PhD, an STC Fellow and member of ISPI and ATD, has led training and documentation departments. She teaches at the University of Maryland University College and Boise State University. Elizabeth holds a BS in Management, MS in Instructional and Performance Technology from Boise State University, and a Ph.D. in Training and Performance Improvement from University of North Texas.

Session Overview
This session is designed to provide you with an overview of Thomas Gilbert’s Behavioral Engineering Model and modifications made to his model by Roger Chevalier, Paul Hershey, and Carl Binder and a review of at least one example of a challenges to assist you in identifying elements that support and impact behavior within your organization. Participants’ review of these challenges, using the information provided during the mini-workshop, can potentially assist participants in applying the model within their organization and improving organization and individual performance.

Audience
Individuals responsible for identifying and solving performance challenges.

Objectives
- Distinguish the difference between gap analysis and causal analysis.
- Compare different performance models.
- Review different example questions exploring a person’s repertory of behavior and environment that you can use within your organization to analyze cause of performance.
- Identify specific questions to analyze a challenge, and discuss consequences of potential solutions.
What is the Behavioral Engineering Model?

In 1978, Thomas F. Gilbert developed the Behavior Engineering Model in his book, *Human Competence: Engineering Worthy Performance*. Gilbert is known as the father of performance technology, as an engineer who applied his understanding of the process of technological improvement to human beings. Gilbert believed that it was absence of performance support, not a person’s lack of knowledge or skill that was the greatest barrier to exemplary, or worthy, performance. You want to analyze the cause of poor performance. He believed it was most necessary to focus on variables in the work environment before addressing an individual's variables. Using the table below, start with Data and move clockwise.

<table>
<thead>
<tr>
<th>Information</th>
<th>Instrumentation</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Supports</td>
<td>Data (feedback)</td>
<td>Resources (tools and materials)</td>
</tr>
<tr>
<td>Person’s Repertory of Behavior</td>
<td>Knowledge</td>
<td>Capacity</td>
</tr>
</tbody>
</table>

In 2003, Roger Chevalier updated Gilbert’s model and he noted that environmental factors are the starting point for analysis because they pose the greatest barriers to exemplary performance. Chevalier added that in addition to tools and materials, you should ensure that there is also enough time for the action or decision to be made. He encourages us to ensure that the work conditions are safe, clean, organized, and conducive to the job at hand.

Within incentives, Chevalier recommends we also ensure the work environment is positive, where employees believe they have an opportunity to succeed and career development opportunities are present.

Within knowledge, he recommends that we ensure that the employees with the necessary knowledge, experience and skills are in the proper place to use and share what they know – and have an environment that is conducive to support this sharing.

Chevalier enhances the capacity area to include proper recruitment techniques being present to support hiring the right people and the motive area to ensure that the employee was recruited and selected to match the realities of the work situation.

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<tbody>
<tr>
<td>Environmental Supports</td>
<td>Data</td>
<td>Resources (safe and clean)</td>
</tr>
<tr>
<td>Person’s Repertory of Behavior</td>
<td>Knowledge (properly placed)</td>
<td>Capacity (proper recruitment)</td>
</tr>
</tbody>
</table>
Creating Incompetence
The best example of the effectiveness of the model is to look at it from a different perspective. Let’s look at its ability to identify how each can negatively impact performance.

Data
- Don’t tell people how well they are doing
- Provide misleading info on how they are doing
- Hide what is expected
- Don’t guide performance

Instrumentation
- Design tools without consulting the users
- Keep developers or engineers away from users

Incentives
- Pay poor performers the same as good performers
- Punish good performers in some way
- Don’t use non-monetary incentives

Knowledge
- Leave training to chance
- Let unskilled supervisors train
- Make training irrelevant to the job
- Make training difficult to get

Capacity
- Schedule work times for when people are not at their sharpest
- Select the wrong people for the job
- Don’t provide job aids

Motives
- Design futureless jobs
- Arrange unpleasant work conditions
- Give pep talks instead of incentives

Gilbert said that improper guidance and feedback make up the single largest contributors to incompetence in the workplace.
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**Alternative Models**

Are there alternatives to Gilbert and Chevalier’s work? Sure, there are variations. Gilbert’s work, based on B. F. Skinners’ discriminative stimuli, responses, and consequences, is considered to be one of the best cause analysis tool available. What else is out there?

**Mager and Pipe’s Model – Analyzing Performance Problems**

Robert Mager and Peter Pipe’s analysis tool is a series of questions. The steps make it easier to look at the problem objectively. There is a flow diagram, and following the questions allows you to think through the flow as well. Consider the second column from step 2 as *if yes, continue to the next question.* What if the answer is no?

<table>
<thead>
<tr>
<th>Step</th>
<th>Question</th>
<th>Yes/No Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>What is the performance problem? Describe performance deficiency:</td>
<td>What should be happening?</td>
</tr>
<tr>
<td></td>
<td>What should be happening?</td>
<td>What is actually happening?</td>
</tr>
<tr>
<td>Step 2</td>
<td>Is it worth fixing?</td>
<td>What would happen if we did nothing?</td>
</tr>
<tr>
<td>Step 3</td>
<td>Can we apply fast fix?</td>
<td>Do the employees know what is expected?</td>
</tr>
<tr>
<td></td>
<td>Do the employees have adequate tools/equipment /resources needed?</td>
<td>Do employees get feedback on their performance?</td>
</tr>
<tr>
<td>Step 4</td>
<td>Are the consequences appropriate?</td>
<td>Is desired performance punishing?</td>
</tr>
<tr>
<td></td>
<td>Is poor performance rewarding?</td>
<td>Are performance consequences used effectively?</td>
</tr>
<tr>
<td>Step 5</td>
<td>Is there a skill deficiency?</td>
<td>Is it a skill deficiency?</td>
</tr>
<tr>
<td></td>
<td>Could employees do it in the past?</td>
<td>Is the skill used often?</td>
</tr>
<tr>
<td>Step 6</td>
<td>Are there other causes?</td>
<td>Can the task be made easier?</td>
</tr>
<tr>
<td></td>
<td>Are there any other obstacles?</td>
<td>Are the employees have the potential to change?</td>
</tr>
<tr>
<td>Step 7</td>
<td>Which solutions are best?</td>
<td>Are the solutions feasible?</td>
</tr>
<tr>
<td></td>
<td>What are the costs of possible solutions?</td>
<td>What are the costs of possible solutions?</td>
</tr>
<tr>
<td></td>
<td>What is the time commitment of the possible solutions?</td>
<td>Draft and implement the action plan.</td>
</tr>
</tbody>
</table>

Draft and implement the action plan.
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Analyzing Performance Problems

1. Describe Performance problem
2. Ignore
   - No
   - Important?
     - Yes
     - Skill deficiency?
       - Yes
       - Used to do it?
         - Yes
         - Used often?
           - Yes
           - Used to know it?
             - Yes
             - Performance punishing?
               - Yes
               - Remove punishment
             - No
             - Performance matters?
               - Yes
               - Arrange consequence
             - No
             - Nonperformance rewarding?
               - Yes
               - Arrange positive consequence
             - No
             - Obstacles?
               - Yes
               - Remove obstacles
         - No
         - Provide information
           - Yes
           - Used often?
             - Yes
             - Select best solution(s)
               - Implement solution(s)
             - No
             - Provide feedback
               - Yes
               - Review
                 - Yes
                 - Select best solution(s)
                   - Implement solution(s)
               - No
               - No
               - No
               - No
       - No
       - Knowledge deficiency?
         - Yes
         - Used to know it?
           - Yes
           - Performance punishing?
             - Yes
             - Remove punishment
           - No
           - Performance matters?
             - Yes
             - Arrange consequence
           - No
           - Nonperformance rewarding?
             - Yes
             - Arrange positive consequence
           - No
           - Obstacles?
             - Yes
             - Remove obstacles
         - No
         - Arrange practice
           - Yes
           - Used often?
             - Yes
             - Select best solution(s)
               - Implement solution(s)
             - No
             - Provide feedback
               - Yes
               - Review
                 - Yes
                 - Select best solution(s)
                   - Implement solution(s)
               - No
               - No
               - No
               - No
       - No
       - Arrange feedback
         - Yes
         - Used often?
           - Yes
           - Select best solution(s)
             - Implement solution(s)
           - No
           - Provide feedback
             - Yes
             - Review
               - Yes
               - Select best solution(s)
                 - Implement solution(s)
             - No
             - No
             - No
             - No
       - No
       - Used to do it?
         - Yes
         - Used often?
           - Yes
           - Select best solution(s)
             - Implement solution(s)
           - No
           - Provide feedback
             - Yes
             - Review
               - Yes
               - Select best solution(s)
                 - Implement solution(s)
             - No
             - No
             - No
             - No
       - No
   - Yes
   - Important?
     - Yes
     - Performance punishing?
       - Yes
       - Remove punishment
     - No
     - Nonperformance rewarding?
       - Yes
       - Arrange positive consequence
     - No
     - Performance matters?
       - Yes
       - Arrange consequence
     - No
     - Obstacles?
       - Yes
       - Remove obstacles
   - No
   - Select best solution(s)
     - Implement solution(s)
Six Boxes™

Carl Binder discusses his Six Boxes model as an adaptation of Gilbert’s work, but using different terminology to focus client’s attention to performance instead of behavior. He retains the six cells, as did Gilbert, and he labels them differently: Expectations and Feedback, Tools and Resources, Consequences and Incentives, Skills and Knowledge, Capacity (Selection and Assignment), and Motives and Preferences.

<table>
<thead>
<tr>
<th>Expectations and feedback</th>
<th>Tools and resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>(reference documentation</td>
<td>(Environmental – heat and light)</td>
</tr>
<tr>
<td>Environmental – heat and light)</td>
<td></td>
</tr>
<tr>
<td>Consequences and incentives</td>
<td>Skills and knowledge</td>
</tr>
<tr>
<td>(informal social consequences – negative and positive)</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>Motives and preferences</td>
</tr>
<tr>
<td>(selection and assignment, social skills)</td>
<td></td>
</tr>
</tbody>
</table>

Within Tools and Resources, Binder adds reference documentation and environmental variables like heat and light. Gilbert focused reference documentation within Data, and recall that Chevalier added environmental factors here.

Within Consequences and Incentives, Binder adds informal social consequences, both negative and positive.

Within Capacity, Binder includes the work assignment, which Chevalier also mentions, and also brings in personal qualities like social skills.

Like Gilbert, Binder believes that investing in Motives and Preferences, without managing the others, generally does not produce the desired performance outcome.
**PROBE Model**

While Gilbert offered a collection of questions to assist us with defining the state of data, instruments, incentives, knowledge, capacity, and motives, Paul Hersey and Chevalier updated these questions to support Chevalier’s Updated BEM model. They added open-ended questions to generate conversation instead of defensive responses, allowing you an even better way to implement this tool within your work environment.

**Information**

- Have clear performance expectations been communicated to employees?
- Do employees understand the various aspects of their roles and the priorities for doing them?
- Are there clear and relevant performance aids to guide the employees?
- Are employees given sufficient, timely behaviorally specific feedback regarding their performance?
- Does the performance management system assist the supervisor in describing expectations for both activities and results for the employee?

**Resources**

- Do employees have the materials needed to do their jobs?
- Do employees have the equipment to do their jobs?
- Do employees have the time they need to do their jobs?
- Are the processes and procedures defined in such a way as to enhance employee performance?
- Is the work environment safe, clean, organized, and conducive to excellent performance?

**Incentives**

- Are there sufficient financial incentives present to encourage excellent performance?
- Are there sufficient non-financial incentives present to encourage excellent performance?
- Do measurement and reporting systems track appropriate activities and results?
- Are jobs enriched to allow for fulfillment of higher-level needs?
- Are there opportunities for career development?
**Motives**
- Are the motives of the employees aligned with the incentives in the environment?
- Do employees desire to do the job to the best of their abilities?
- Are employees recruited and selected to match the realities of the work environment?
- Are there any rewards that reinforce poor performance or negative consequences for good performance?
- Do employees view the work environment as positive?

**Capacity**
- Do the employees have the necessary strength to do the job?
- Do the employees have the necessary dexterity to do the job?
- Do the employees have the ability to learn what is expected for them to be successful on the job?
- Are employees free from any emotional limitations that impede performance?
- Are employees recruited, selected, and matched to the realities of the work situation?

**Knowledge and Skills**
- Do the employees have the necessary knowledge to be successful at their jobs?
- Do the employees have the needed skills to be successful at their jobs?
- Do the employees have the needed experience to be successful at their jobs?
- Do employees have a systematic training program to enhance their knowledge and skills?
- Do employees understand how their roles impact organizational performance?
Adapting the Model to Your Organization

When adapting this model to your environment, one of the first things you need to do is get everyone on the same terminology page. What does data or resources or environment mean to everyone involved?

When aligning your goals, define what this analysis is going to do for you.

Focus your objectives on the fact that the only thing that using one of these models or these questions does for you is collect facts. You must still review the responses and analyze them. Define this to all involved, so they know it is safe to say “I only understand compensation issues.” or “I only know about environmental factors.” or “I know what the training programs look like.” In this way, you know you still need a player to help with the incentives and recognition aspects.

Defining your understanding of success for this activity may be tough. What deliverable will indicate you have successfully collected all the data? Defining specific, measurable, achievable, realistic, timely (sound familiar?) solutions makes it easier to evaluate the success of the selected interventions.

Succinctly defining those as measurable objectives means that you need to drive the analysis of the data to understanding how all of this fits together to influence behavior and what needs to be manipulated to change something else.

Make sure you understand what I just said? I mentioned identifying what needs to be manipulated to change something else. Yes, manipulation is a word with negative connotations. So, what does that tell you? Upon manipulation, something else may change that you had not considered.

When performing your analysis and determining what needs to be changed, also consider the consequences of your changes. Identifying those will also go a long way to assisting you to select the right change to make as a result of your research.

Take away from this discussion that using the model assists you to identify elements that support and impact behavior. It is up to you to identify the plan that supports the desired behaviors, both during the implementation of your plan and after the plan is in place and the workers are on the job months from now.
Your Turn
What is one training request or challenge you have faced?

Which questions would you use for this challenge and why would you choose them?
Using your subject matter expert, what are possible answers based on this challenge?

Data

Resources

Incentives
Improving Performance

Motives


Capacity


Knowledge


Dr. Elizabeth Bailey
What changes or solution might you implement to solve your challenge? Are there any consequences or other elements that might be adversely affected?
References


