

# Human Error Analysis Tool

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## Notes:

- This checklist was built based on the works of David Wile, Thomas Gilbert, Harold Stolovitch and Erica Keeps, and George Piskurich. (Why Doers Do, Human Competence: Engineering Worthy Performance, Training Ain't Performance, and HPI Essentials respectively.) While David Wile clearly lays out the performance factors and includes great detailed questions, the other sources provide the foundations of performance and the checklist's function/placement within a Human Performance Improvement (HPI) framework. These are "must-haves" for your performance library.
- The reference to Materials, Machine, Milieu, Management, and Method comes from the "6M" root cause analysis (RCA) model. "6M" stands for Manpower (Man), Machinery, Materials, Method, Mother-nature (Milieu), and Measurement. This seems to be a very common RCA used in Quality Assurance departments.
- A "yes" or "no" in the factor or non-factor determines if the response to the specific question is a factor that could have impacted the employee's performance and may warrant further investigation. If is a factor, the impact level will be determined by the importance of the factor on the task in question.
- Feel free to modify the questions, rearrange the topic areas, and fine tune the checklist to fit your organizational/industry needs.
- Remember, the first question is always "Did the employee perform the task correctly prior to the incident?" If the answer is "Yes", then training alone is not the answer. (Tell the investigator not to point their finger at the training department!) ;-)

Enjoy,

Dr. D

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Is human error (Man) the remaining "source/factor" of the problem?	a. Have all other potential sources been eliminated? (Materials, Machine, Milieu, Management, Method, etc.) <b>Note:</b> If the employee performed the task successfully prior to the error, training alone is <b>NOT</b> the answer.	No	Yes
	If NO, return to previous RCA.	If YES, continue with this Tool	
What is the performance gap? <i>(Problem Statement)</i>	a. What is the desired performance?		
	b. What was the actual performance?		
Is this performance gap an event or a trend? <i>(If it was a trend, review and list past corrective and/or preventative actions.)</i>			

## Checklist

A. Task Information and Support	Non-Factor	Factor	Impact		
			High	Low	N/A
1. Did the employee have continuous/easy access to applicable procedures?	Yes	No			
2. Was the event covered in the procedure?	Yes	No			
3. Does the procedure reflect current practices?	Yes	No			
4. Are the procedures clearly written?	Yes	No			
5. Did the employee refer to the procedure to confirm steps required?	Yes	No			
6. Did the employee understand procedure?	Yes	No			
7. Are job aids available? If yes, are they allowed to be used on the job?	Yes	No			
8. If there are job aids, are they well designed, easily located, and current?	Yes	No			
9. If there are job aids, are they aligned with documented procedures?	Yes	No			
10. Is the task complicated?	No	Yes			
11. Does the task change frequently?	No	Yes			
12. Is the task unpredictable or have multiple potential responses?	No	Yes			
13. Is the task rarely performed?	No	Yes			
14. Was another employee consulted?	No	Yes			

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B. Tools and Materials	Non-Factor	Factor	Impact		
			High	Low	N/A
1. Did the employee have access to the right tools?	Yes	No			
2. Were the tools properly calibrated and working properly?	Yes	No			
3. Are the tools current enough for the employee to keep pace with the task?	Yes	No			
4. Are tools and materials ergonomically designed?	Yes	No			
5. Did the employee have access to the proper materials required for the task?	Yes	No			
6. Where the materials used for the task meet required quality standards?	Yes	No			

C. Environment	Non-Factor	Factor	Impact		
			High	Low	N/A
1. Does the work environment (lighting, visual presence, noise, smell, and temperature) have a negative impact on performance?	No	Yes			
2. Does the employee feel safe while performing the task?	Yes	No			
3. Is the work area laid out to support proper performance? (Colors, work flow, ergonomics, proximity of resources etc.)	Yes	No			
4. Is the task stressful, or with high consequences of failure?	No	Yes			
5. Is the work environment hostile?	No	Yes			

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D. Organization	Non-Factor	Factor	Impact		
			High	Low	N/A
1. Are work priorities clear and understood by the employee?	Yes	No			
2. Does the employee have a workload that is too large or too small?	No	Yes			
3. Does the employee perform this task frequently?	Yes	No			
4. Has the employee performed this job recently? If no, when was the last time they performed this task?	Yes	No			
5. Does the employee know who they are accountable to for their performance?	Yes	No			
6. Does the employee's leadership support the appropriate work behavior?	Yes	No			
7. Is there a high employee turnover rate for this position? If yes, why?	No	Yes			
8. Does the employee have a clear expectation for their performance?	Yes	No			
9. Are work expectations kept current?	Yes	No			
10. Does the employee receive formal performance feedback on a routine basis?	Yes	No			
11. Does the employee receive real-time performance feedback?	Yes	No			
12. Are the proper incentives in place and aligned to support the appropriate behaviors?	Yes	No			

F. Inherent Ability	Non-Factor	Factor	Impact		
			High	Low	N/A
1. Is the procedure part of the employee's job description?	Yes	No			
2. Is the employee's knowledge and skills appropriate for their current position?	Yes	No			
3. Was the employee tired, fatigued, or otherwise not alert?	No	Yes			
4. Does the employee understand the reasons for the process steps?	Yes	No			
5. Was the employee in a hurry?	No	Yes			
6. Did the employee feel pressure to do what they did?	No	Yes			
7. Were several tasks performed simultaneously?	No	Yes			
8. Does the job require extraordinary memory to perform?	No	Yes			

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E. Skills/Knowledge	Non-Factor	Factor	Impact		
			High	Low	N/A
1. Did the employee qualify on the task the first time?	Yes	No			
2. Are the procedures clear and understood by the employee?	Yes	No			
3. Does the employee understand the reasons behind the process?	Yes	No			
4. Is the task new to the employee?	No	Yes			
5. Was the employee trained in their primary language?	Yes	No			
6. Were all steps in the procedure followed during training?	Yes	No			
7. Were the training materials developed follow proper instructional design processes?	Yes	No			
8. Was training delivered by the appropriate mode and frequency?	Yes	No			
9. Was the employee distracted while performing the task?	No	Yes			
10. Did the employee simply miss the step?	No	Yes			