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IQUEST

Beyond Dashboards:

Harnessing Organizational Psychology for Effective Feedback

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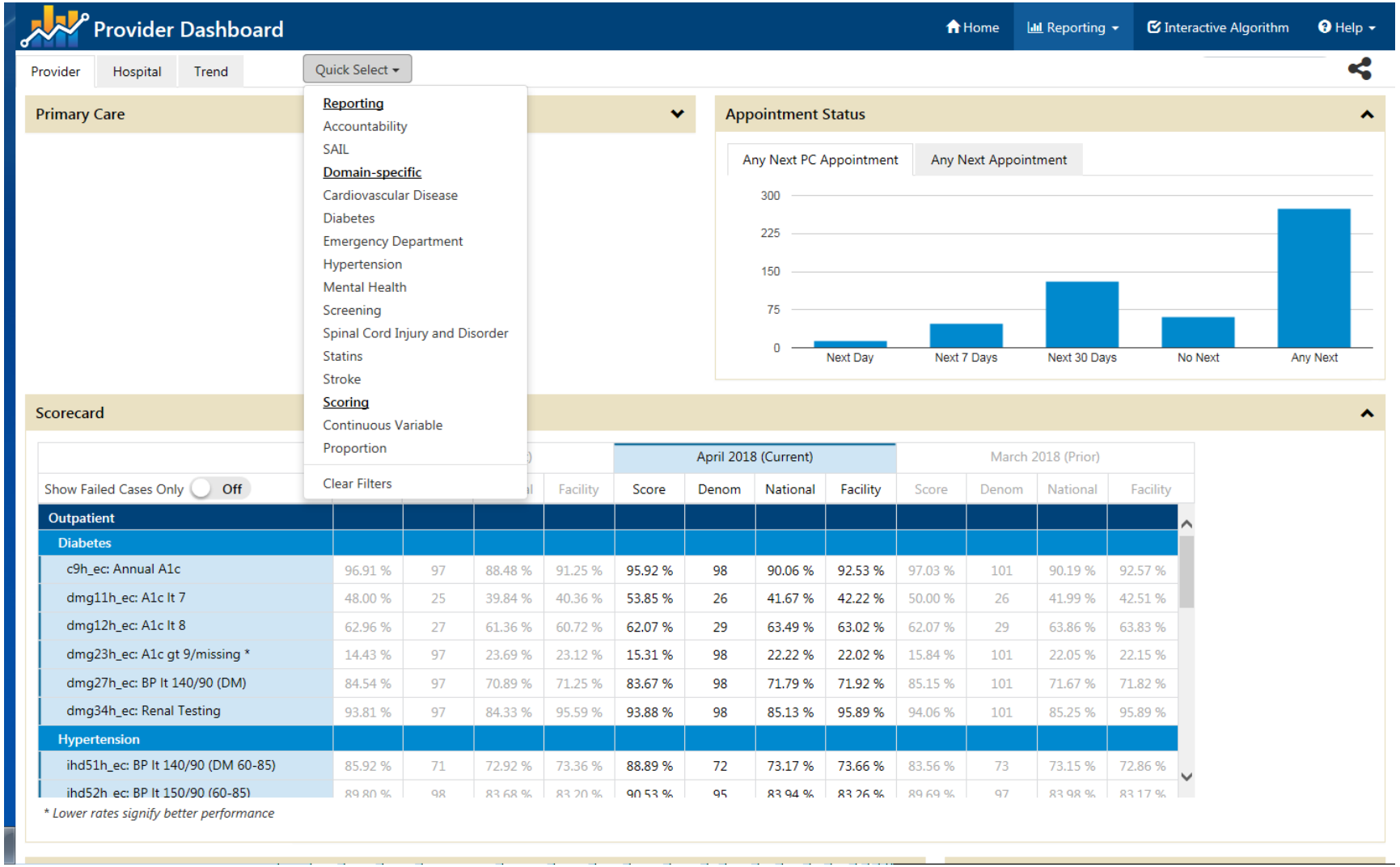
A typical example of a dashboard



How Organizational Psychology Can Help

Organizational Theories Related to Feedback

- Feedback Intervention Theory
- Goal-Setting Theory

Healthcare Models Derived from Organizational Theories

- Model of Actionable Feedback
- Model Depicting Impact of Feedback on Physician Patient-Management Behavior

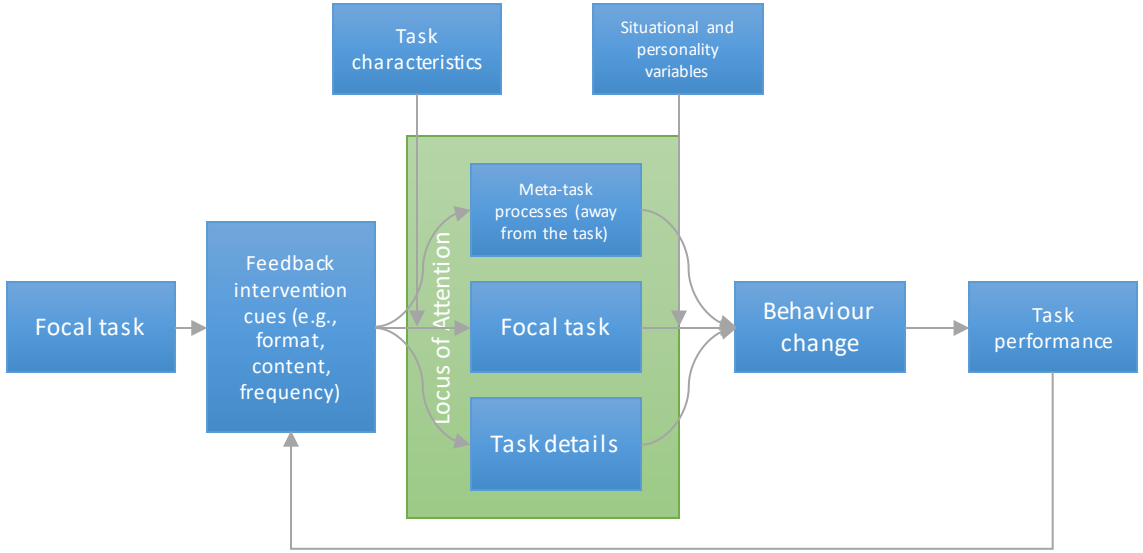
Theory-Informed Empirical Research

- Research on Feedback Characteristics
- Feedback Recipient Characteristics
- Feedback Climate
- Feedback in Teams

Theory

- Theory can help inform the design of your feedback intervention

- **Feedback Intervention Theory**
  (Kluger and DeNisi, 1996)

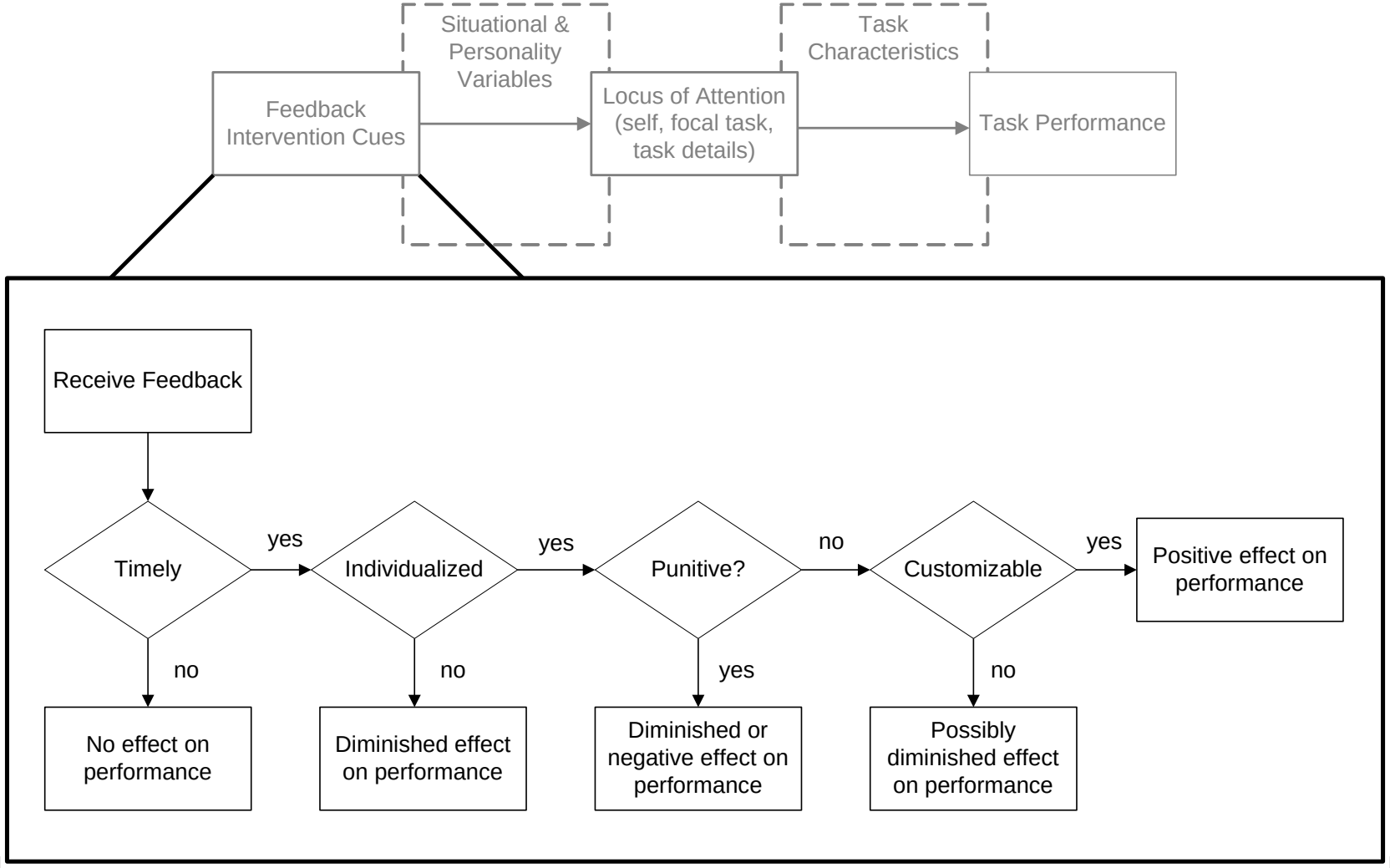


- **Goal Setting Theory**
  (Locke and Latham, 2002)
  - Goals direct attention and effort (like feedback does): they direct attention and effort toward goal relevant activities, and away from goal-irrelevant activities
  - Difficult, specific, but realistic goals produce highest levels of *effort, persistence, and performance*
  - Goal commitment, goal importance, and self-efficacy moderate goal setting's effect on performance

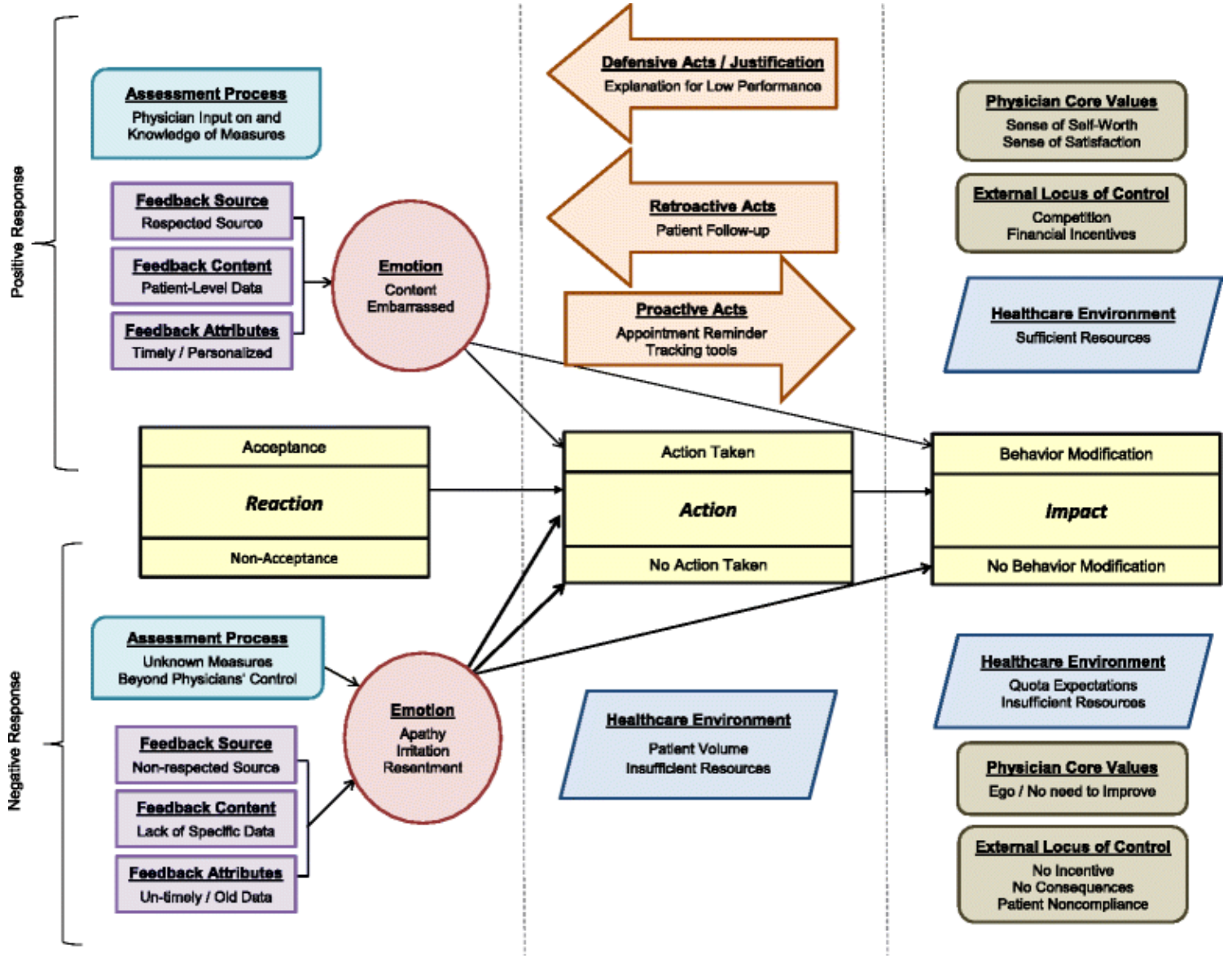
- Feedback and goal setting work best together

Healthcare Derivations of Theory

A Model of Actionable Feedback (Hysong et al., 2006)



Model Depicting Impact of Performance Feedback on Physician Patient-Management Behavior (Payne and Hysong, 2016)



How theory can help inform design choices

NARRATIVE REVIEW

Theory-based and evidence-based design of audit and feedback programmes: examples from two clinical intervention studies

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ABSTRACT

Background Audit and feedback (A&F) is a

both cases interventions were received positively by feedback recipients.

Source: Hysong et al., 2016

How theory can help inform design choices

Table 2 Operationalisation of feedback design characteristics Case 1

Feedback characteristic	Operationalisation in Case 1
Feedback characteristics—content	
Sign of feedback intervention (FI)	Variable
Correct–incorrect	Highlighted decision tree in PowerPoint presentation, showing physicians' choices at each decision point, and interactive hyperlinks revealing whether each choice was or was not guidelines compliant
Correct solution	1. *Indirect information*: Everyone received copy of guideline algorithm reflecting evidence-based decision-making rules for differentiating between CAUTI and ASB 2. *Direct Information*: Highlighted decision path in PowerPoint presentation, with interactive hyperlinks providing rationale at each decision point
Velocity	Not applicable—feedback was given for each individual case, so attainment scores could not be computed
Attainment level	Not directly applicable—feedback was given for each individual case, so attainment scores could not be computed
Normative information	Not used—focus was on the individual's decision-making process
Norms	Not used—focus was on the individual's decision-making process
Discouraging FI	Not used—per FIT recommendations
Praise	Not used—per FIT recommendations
Feedback characteristics—format	
Verbal FI	Verbal walkthrough of PowerPoint presentation by trained research assistant, using a written script
Written FI	Script used by research assistant was given to participants to keep
Both verbal and written	See verbal FI and written FI for components
Graphical FI	Highlighted decision tree in PowerPoint presentation, showing physicians' choices at each decision point
Computer FI	Interactive PowerPoint presentation
Public FI	Not used—per FIT recommendations
Group FI	Not used—per FIT recommendations
Individual FI	Each PowerPoint presentation tailored to each participant was about a specific clinical case they treated
Group + individual FI	Not applicable—groups were not subjects of interest

Source: Hysong et al., 2016

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Using Feedback More Effectively: Theory-Informed Empirical Research

What does the evidence say about feedback design?

- **Frequency**: Give feedback frequently, but not too frequently (Lam et al., 2011)
- **Timeliness**: Feedback should be timely, but encourage comparison across multiple time periods (Lurie & Swaminathan, 2009)
- **Content**: Providing correct solution information makes feedback more effective (Hysong, 2009)
- **Customizability**: Feedback interventions should be customized (Hysong et al. 2006; Anseel et al. 2011, Chen & Mathieu 2008)
- **Individual Characteristics**: Take into account the characteristics of the feedback recipient (e.g., the lower your competence, the more likely to dismiss negative feedback (Sheldon et al. 2014)

Feedback Recipient Characteristics

- Feedback-seeking behavior (Anseel et al., 2015)
  - We can encourage feedback seeking behavior by making clear the value of feedback
  - Small relationship with performance
- Goal Orientation
  - Mastery orientation – preference for task-referenced feedback
  - Performance-approach orientation – preference for normative feedback
  - Performance-avoidance
- Individual characteristics can change over time

Feedback Climate

A supportive feedback climate positively predicts employee performance and outcomes (Anseel & Lievens 2007; Rosen et al. 2006)

Factors that help foster a supportive feedback environment:

- Source credibility
- Source availability
- Consideration
- Feedback quality
- Frequency of positive feedback
- Frequency of negative feedback
- Feedback-seeking encouragement
- Time for high quality reflection

Feedback to Teams

- Who should receive feedback in a team?
  - Oftentimes only the physician has access to feedback dashboards
  - Existing dashboards and feedback tools often work best when given to non-physician team members (Hysong et al., 2014)

At what level of aggregation should you provide feedback?

- Giving individual goals to members of a team decreases team performance (Mitchell & Silver, 1990)
- "Groupcentric goals" (individual goals focusing on contributions to team performance) combined with (Crowne and Rosse, 1995)
- Team members perform to whichever level (team vs. individual) they receive the most and highest-quality feedback (DeShon et al., 2004)

Takeaways

The most perfectly designed dashboard will be of limited value if:

1. You don't understand how and why feedback works
2. You don't consider the characteristics of your recipients
3. Users do not accept the message the feedback is trying to deliver e.g. find the content credible, are accepting of "bad news")
4. Users have no time or space in their work to process and reflect on the feedback
5. The work environment does not provide a supportive feedback climate
6. If feedback to teams is not designed with teams in mind

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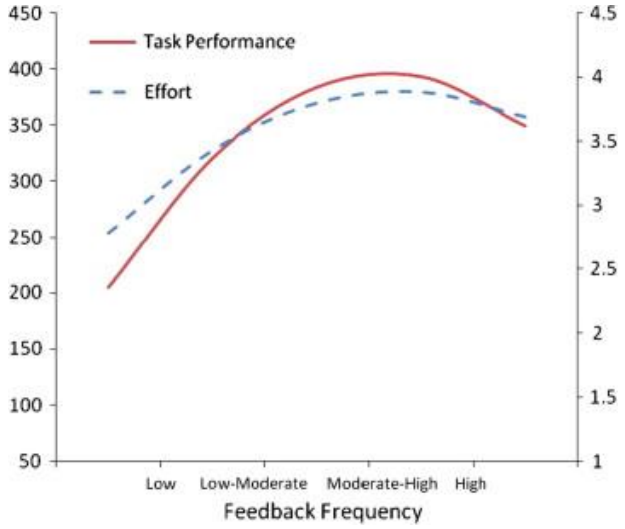
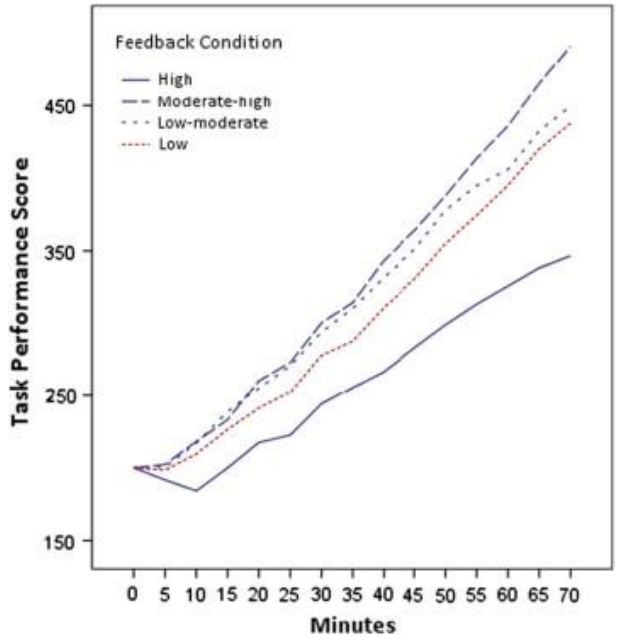
Feedback Frequency

Feedback frequency and performance curvilinearly related



Mediating effect of task effort on the curvilinear relationship between feedback frequency and task performance



Relationship between task performance and feedback frequency over time.

Source: Lam et al. 2011