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Assessment and Evaluation in Digital Education: The Importance of Feedback in Online Learning

Introduction

- The role of feedback in student learning
- Promoting a growth mindset through feedback
- Bridging the gap between performance and learning outcomes

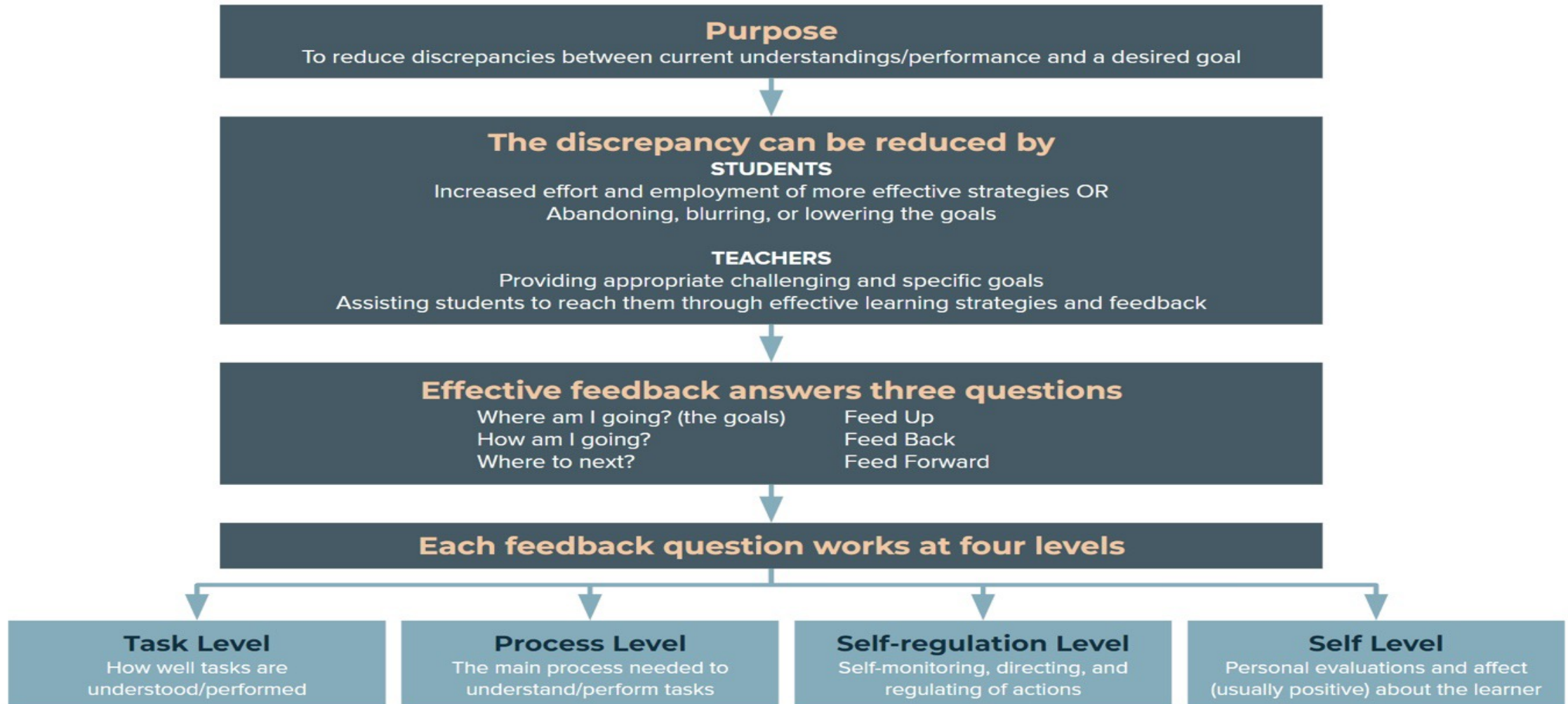


Purpose of the Feedback

- Feedback is a powerful construct in the design of quality online learning, and quantified dimensions of learners' feedback experiences can be leveraged to improve effectiveness, increase efficiency, and maintain appeal in online courses.
- Feedback should stimulate reflection, thought, learning, and improvement.
- Feedback and assessment go hand in hand. Learner-centered feedback is an essential component of quality assessment, which is part of the learning process.

A Model of Feedback to Enhance Learning

Hattie &
Timperley,
2007



A Model of Feedback to Enhance Learning

Where am I
going?

How am I
going?

Where to
next?

- A model presents a framework in which feedback can be considered;
- The model identifies three major feedback questions:

Hattie, J., & Timperley, H. (2007). The Power of Feedback. *Review of Educational Research*, 77(1), 81-112.

Dimensions of Feedback

- Timeliness of feedback
- Frequency of feedback
- Distribution of feedback interactions
- Source credibility of feedback
- Individualization of feedback
- Content usefulness of feedback



Dimensions of Feedback (I)

Timeliness: How quickly is feedback provided to the learner? The length of time between a learner's attempt and the response of either a peer or instructor;

Frequency: How often is feedback received? The number of feedback instances experienced by the learner in a given unit;

Distribution: To what extent are interactions disbursed throughout the experience? The interval of time between feedback instances;

Dimensions of Feedback (2)

Source: To what extent does the learner trust the source of the feedback? The provider of the feedback is trusted by the learner;

Individualization: To what extent is the feedback connected to the learner's unique strengths, needs or interests? The learner perceives that feedback is specific to his/her goals, strengths, needs, or questions;

Content: To what extent is the content of the feedback useful for the learner? The content of the feedback provides the learner with next steps to correct misunderstandings or prompts the learner to extend their learning in some new and novel way.

Perspectives of Feedback

- Microscope Lens: Detailed characteristics of feedback
- Camera Lens: Feedback as a snapshot of the learning process
- Telescope Lens: Long-term impact of feedback



Characteristics of Good Feedback

- Focus on specific learning objectives
- Providing actionable suggestions
- Encouraging student reflection
- Timely and respectful delivery
- Offering praise and recognition



Forms of Feedback

- Written feedback
- Verbal feedback
- Peer feedback
- Self-assessment
- Automatic feedback generation in online learning environments

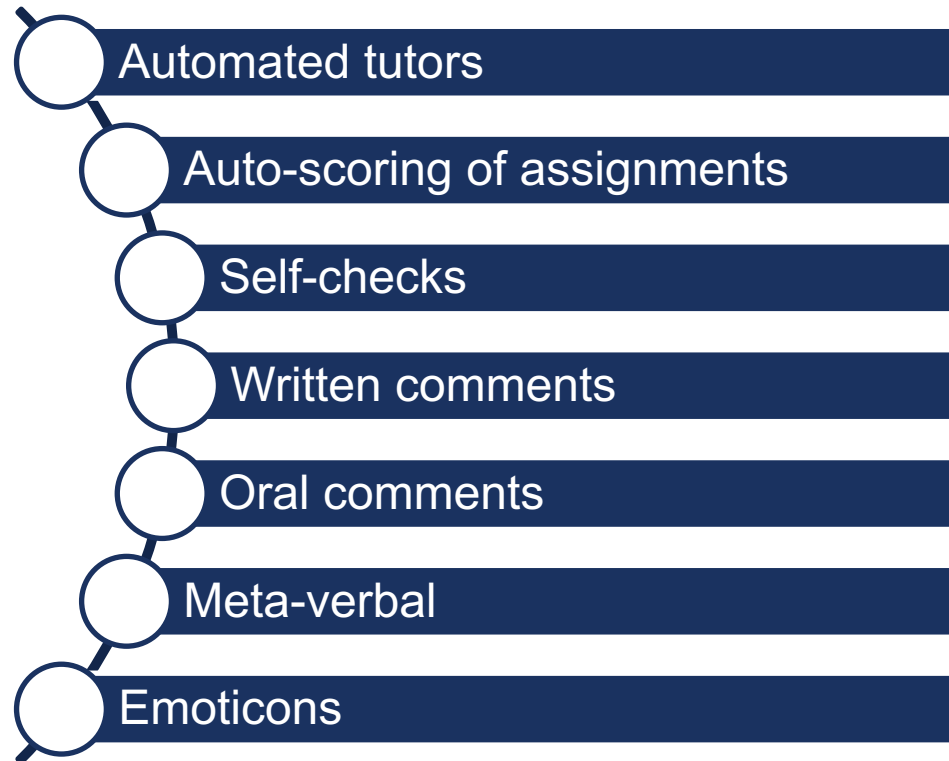


Designing Feedback Strategies

- Elements of an effective feedback strategy
- Clear learning objectives and ongoing assessment
- Timely feedback and self-reflection
- Goal setting and action planning



Methods Suitable For E-feedback



Feedback is the comments, questions, and information on how students are achieving predetermined goal.

Feedback methods are not discipline-specific, they are context- dependent.

Methods Suitable for E-feedback

Automated tutors

computer-generated comments based on background programming;
model answers or programmed feedback given in response to answers submitted to learners on computer-based assessments.

Auto-scoring

auto-scoring of assignments is used in educational games, or computer marked tests;
differs from the automated tutor in that a score is provided;
requires background programming.

Methods Suitable for E-feedback

Oral comments

spoken words, such as those used in group discussions; may be synchronous or asynchronous comments.

Written comments

texted-based comments placed on learner's work that tells the learner what is good about their work as well as how the work may be improved.

Methods Suitable for E-feedback

Self-checks

involve the learner reviewing the objectives to ensure they know what they are expected to know; self-checks are often found at the end of a chapter, or on the textbook's associated website.

Meta-verbal

meta-verbal feedback is provided using body language, tone, etc., that provide more information than words alone.

Methods Suitable for E-feedback

Emoticons

emoticons are word stamps, thumbs up, smiley faces or frowns that are quick and let the learner know what the teacher feels about a component of the work.

Peer feedback

involves learners critically thinking about their work and the work of others in order to make suggestions on ways to improve.

Key Points to Consider when Providing Feedback

Clear - Will a learner be able to read, listen, or view? Understand?

Concise - Is there too much information to be absorbed?

Specific - Does the feedback focus on the outcomes and/ or rubrics?

Tone - Does the tone you chose to use encourage the learner?

Outcomes - Is the assignment based on course outcomes? Does your feedback focus on these?

Expectations - Are your expectations congruent with the outcomes? Does your feedback focus on these expectations?

Automatic Feedback Generation in Online Learning Environments

Main goals for using automatic feedback generation:

Use feedback to help students on a specific content/ course;

Use feedback to support self-regulation;

Use feedback to help instructors;

Use feedback to reduce plagiarism behavior.

Cavalcanti, A. P. et al. (2021). Automatic feedback in online learning environments: A systematic literature review. *Computers and Education: Artificial Intelligence*, 2, 100027.

RISE Model for Clear and Effective Feedback

Reflect: your overall evaluation of the work

Inquire: additional information you are missing

Suggest: ideas for improving the current iteration of the work

Elevate: ideas for future work or for raising the current work

<https://www.risemodel.com/>

Conclusion

Feedback is one of the most powerful influences on learning and achievement;
Feedback has no effect in a vacuum; to be powerful in its effect, there must be a learning context to which feedback is addressed.

Feedback is among the most critical influences on student learning.

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Thank you for attention

