

Impact of Feedback on Student's Learning - A Perspective Building Qualitative Research Article

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Abstract:

What does every teacher and educator want as a passionate goal of his profession? It is undoubtedly about putting in every effort to impact the student learning. But does every effort, every intervention actually lays an impact on improvising student learning? To understand this a review of John Hattie's study which illustrates the Meta-analysis conducted on different factors impacting teaching learning process was done. In this desk review process it was found that Feedback given by teachers is one of the most important factor impacting the student learning. The purpose is to increase awareness and familiarity of proven methods of sharing feedback for student learning and provide recommendations to utilize the shared knowledge to improve student learning. The intent of utilizing Prof. John Hattie's work and putting the focus on Impact of Feedback is all the more linked to the Modern theory of Assessment. The purpose here is to promote Assessment for learning and Learning to move on the Developmental Continua.

"Improper guidance and feedback are the single largest contributors to incompetence in the world of work, and a principal culprit at school". -- (Gilbert, 1978, p. 91)

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What is Feedback?

In its most basic form, feedback is information. A feedback system is a means of communication whereby the performer, whether it is an individual or a group, receives information that guides their future actions, in order to achieve a desired outcome. Feedback given by teachers to students on their work can be qualitative or quantitative, positive or negative, descriptive or non-descriptive and given during formative and summative assessments. The term feedback is often used to describe all kinds of comments made after the fact, including advice, praise, and evaluation. But none of these are feedback.

What was Prof. John Hattie's Meta-Analysis?

The Meta-analysis¹ over a period of 15 years done by Prof John Hattie is one of the most unique and massive research ever done in the field of education. His work is more over considered to be scientific as he has utilized the methodology to calibrate and put 180,000 studies of others and 50,000 individual studies which encompasses the experiences of over 230 million students on one scale to see the impact of more than 100 factors that affect educational achievement. His focal point and purpose of doing this research was to find out what is it that makes a difference in classroom.

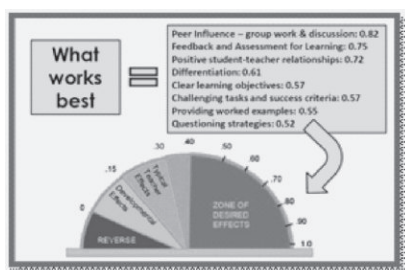


Image copied from what works Best Summary - John Hattie
Visible Learning for teachers: maximizing impact on teaching, J. Hattie (2012).

What is the purpose of giving Feedback?

In this review feedback is considered to be the information provided by the teacher regarding aspects of student's performance or understanding. The aim of feedback is to reduce the discrepancy between the current existing understanding or performance and the desired goal. Feedback can be provided by parents or teachers as corrective information and by peers as an alternative strategy. Feedback can be taken by the student himself as well by referring to the book and evaluating the correctness of response. Positive feedback is encouraging as a consequence of performance. The model of feedback suggested by John Hattie gives support to identify the circumstances under which feedback has the greatest impact. The model begins with a continuum of instruction and feedback. Teachers need to understand² the model of feedback.

Students want to know answers to three basic questions:

1) Where am I going: My Goal?

Goals direct a person towards a specific direction. Goals are specific understandings or attainments to different qualities of experience. Every student has a specific and measurable goal which could be as simple as giving a test, singing a song, noting the correct records during experiment etc. It is very important for a student to receive the instructions from a teacher and correctly be able to locate where the goal is. If the estimation is over or under it is not achieving the goal. Feedback allows a person to adjust the strategy as well as direction and amount of effort. Commitment to attain a goal is the fuel behind success. Even once the goal is achieved feedback further guides the teacher and student about allocating the next challenging and achievable goal. If feedback is not given properly or goal is not defined properly then it leads to problems of over stating - under stating. It also

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gives opportunity to the student to reduce efforts or over state about efforts.

2) How am I going?

This question needs to be addressed by a teacher. It means telling a student or giving feedback in relation to some expected standard, prior performance or success failure in a particular task. The main point to remember at this stage is that, a teacher must be able to clearly state whether the student is performing well or not, i.e. thumbs up or thumbs down.

3) Where to next?

A student would always like to know where he should go to next. He needs a specific direction and goal. If the student has been able to achieve the previous goal then too he needs to know where to next and if he has not been able to attain the goal then he needs to know where he is and how can he move forward to be able to reach the goal. It is the power of feedback which can specifically address this question. The guidance and direction hence provided leads to further possibilities of learning. These may include enhanced challenges, further moved goals, more self-regulation, fluency, deeper understanding, modified strategies and process to be able to understand what is not understood. This is feeding forward and such questions can have the most powerful impact on learning.

How do the three kinds of feedback : Feed up, Feed back and Feed forward work together in an integrated manner?

There are four levels of Feedback and the level at which the feedback is given determines its effectiveness. These are termed as Task level, Process level, Self regulation level and self level Feedback respectively.

Feedback at task level: The focus is Whether the work done is correct or incorrect. It is considered to be effective only when strategy level modification is required. This is corrective Feedback. It should be simple and not complex. It builds surface knowledge. Information of self level must not be added to this. Information about faulty interpretations is more important. It should lead to process level Feedback. Students must reject incorrect hypothesis and focus on strategies and process for correction. An example³

Feedback at Process Level: The focus is on process followed to complete the task. It is considered to be More effective. This is more extensive form of Feedback, it is specific to the process and task. It gives a deeper understanding and not just surface knowledge. It includes the person's perception as well as the relation to environment. It helps to detect the error and take a new strategy to improvise. It acts as a cueing mechanism. It must be more impacting than Task level and leading to Self Regulation level. An example⁴

Feedback at Self Regulation level: The focus is to develop greater skills in self evaluation and increase confidence. It is Considered to be even more effective. This involves an interplay between commitment, control and confidence. Student's feelings, thoughts and actions are planned and made goal directed. There are six factors that govern the effectiveness of Feedback at Self Regulation level. These are

: student's capability to create internal feedback mechanism, willingness to invest effort, degree of certainty and confidence up on correctness of the answer, attributions of success and failure, level of proficiency while seeking help. There are two important aspects of FR : Self appraisal and Self management. An example⁵

Feedback at Self Level: The focus is often unrelated to performance and more directed to self. It is considered to be least effective. This is Feedback about the student and not feedback about the performance or the task. This is not a very effective level of feedback but it is the most commonly used feedback. Praise or scolding that takes a student away from learning and task is not effective, but if the praise or scolding is connected to the effort, engagement, performance etc then it is still beneficial. Students might add reputation as a factor to achieve praise. An example⁶

How many types Of Feedback does a teacher give?

After any Assessment the given feedback can be qualitative or quantitative, positive or negative, descriptive or non-descriptive.

Quantitative and Non Descriptive Feedback - This kind of feedback basically intends to associate with numbers, marks, grades and does not tell much to the student that why did he or she receive that mark. The problem here is that we are only assessing what has been learnt by the student. Our motive is only to inform that as a student you stand here in terms of learning.

Qualitative and Descriptive Feedback - This kind of feedback associates with the feedback based on the results or marks achieved by the students. The description given to a student stating where does he stand, why does he stand there, why others are ahead of him and how can he move ahead and proceed on the line of developmental continua. It gives directions to the student in a more transparent way about the dynamics of marking that can move him ahead and lead to achievement of better marks. This has a bigger motive and a wider vision to move the student positively on the line of developmental continua. How does a teacher provide reliable and objective description to a student about where he is, why he is there and how can he move ahead will be further clarified in this example⁷.

Positive and Negative Feedback - Every word that is said by the teacher as a feedback to the student counts a lot. It has a deep impact on the psychology of the student. The timing of giving that comment and the surrounding situations also have a great impact. If a teacher constantly gives positive reinforcement to one student in front of the whole class and does not describe that why he is getting those words of praise it leads to distortion of the teacher's image as well as creates a biased opinion about that student. It gives a more prejudiced and jaundiced eye view. The students consider constant praise as a stereotype behavior of the teacher for the student. Jealousy and negativity creeps in the minds of immature students due to lack of information about the objectivity of marking. If a teacher constantly gives negative remarks about a student's poor performance in front of the whole class and does not describe that why he is getting those words of anger it leads to a situation where the student might feel disoriented,

amidst ambiguity, threatened, prey of prejudice etc. This might lower his self-esteem and he might never understand the key to success and progress in learning. The ideal situation is not over loading students with over praise or over negative comments. The teacher must always describe why someone has achieved even a single mark and what the worth of achieving it is. There must be more of objectivity and motivation to move along the line of developmental continua on the positive side. Too much of reprimands and negative feedback do not lead a student anywhere till he is told objectively where he stands, why does he stand there and what does he need to do to move ahead.

Essentials of Good Feedback for teachers:

Whether feedback is just there to be grasped or is provided by another person, helpful feedback is goal-referenced; tangible and transparent; actionable; user-friendly (specific and personalized); timely; ongoing; and consistent. It is complete if a person comes to know where he is, where he needs to reach and how.

- 1) Goal Directed - Effective feedback requires that a person has a goal, takes action to achieve the goal, and receives goal-related information about his or her actions. For example I wrote a story to engage the reader with vivid language and believable dialogue that captures the characters' feelings. A reader comments on my short story, "The first few paragraphs kept my full attention. The scene painted was vivid and interesting. But then the dialogue became hard to follow; as a reader, I was confused about who was talking, and the sequence of actions was puzzling, so I became less engaged." Information becomes feedback if, and only if, I am trying to cause something and the information tells me whether I am on track or need to change course.
- 2) Tangible and transparent - Any useful feedback system involves not only a clear goal, but also tangible results related to the goal. A teacher might be able to rate whether students are highly attentive, somewhat attentive, or inattentive to her teaching. The best feedback is so tangible that anyone who has a goal can learn from it. Too much instructional feedback is opaque. For example if a teacher constantly keeps writing "vague" as a feedback in a student's answer book then the student might never understand what does she mean by vague. Sometimes the information is tangible and transparent, the performers don't obtain it either because they don't look for it or because they are too busy performing to focus on the effects.
- 3) Actionable - Effective feedback is concrete, specific, and useful; it provides actionable information. Thus, "Good job!" and "You did that wrong" and B+ are not feedback at all. We can easily imagine the learners asking themselves in response to these comments, what specifically should I do more or less of next time, based on this information? No idea. They don't know what was "good" or "wrong" about what they did. An example - if a student attempts storytelling, there can be certain criterion or categories against which the student will be assessed. These elaborate more about why has the student got x scores. What did he do to achieve that and what he did not do to achieve better. How he can improvise and what more he can do to get better scores. This kind of descriptive feedback to improvise learning becomes readily available and easy to provide when the rubrics for any assessable point is made strong.
- 4) User Friendly - Even if feedback is specific and accurate in the eyes of experts it is not of much value if the user cannot understand it or is overwhelmed by it. Highly technical feedback will seem odd and confusing to a novice. Too much feedback is also counterproductive; better to help the performer concentrate on only one or two key elements of performance than to create a buzz of information coming in from all sides.
- 5) Timely - In most cases, the sooner a student gets feedback, the better. But the students also don't want the teacher pouring out feedback as they perform. That's why it is more precise to say that good feedback is "timely" rather than "immediate." A great problem in education, however, is untimely feedback. Vital feedback on key performances often comes days, weeks, or even months after the performance. Students should get more timely feedback and opportunities to use it while the attempt and effects are still fresh in their minds.
- 6) Use of some strategies to give timely feedback - Feedback does not need to come only from the teacher, or even from people at all. Technology is one powerful tool part of the power of computer-assisted learning is unlimited, timely feedback and opportunities to use it. Peer review is another strategy for managing the load to ensure lots of timely feedback; it's essential, however, to train students to do small-group peer review to high standards, without immature criticisms or unhelpful praise.
- 7) Feedback as an ongoing process - Adjusting students' performance depends on not only receiving feedback but also having opportunities to use it. What makes any assessment in education formative is not merely that it precedes summative assessments, but that the performer has opportunities, if results are less than optimal, to reshape the performance to better achieve the goal. In summative assessment, the feedback comes too late; the performance is over. Thus, the more feedback I can receive in real time, the better my ultimate performance will be. That performers are often judged on their ability to adjust in light of feedback. The ability to quickly adapt one's performance is a mark of all great achievers and problem solvers in a wide array of fields. The problem is not making errors; and that's part of learning. The problem is when students don't learn from the errors.
- 8) Feedback as a consistent process - Performers can only adjust their performance successfully if the information fed back to them is useful, consistent, stable, accurate, and trustworthy. In education, that means teachers have to be on the same page about what high-quality work is. Teachers need to look at student work together, becoming more consistent over time and formalizing their judgments in highly descriptive rubrics for performances.
- 9) Feedback with a motive - The ability to improve one's result depends on the ability to adjust one's pace in light of ongoing feedback that measures performance against a

concrete, long-term goal. But this isn't what most grades on formative tests tell. They yield a grade against recent objectives taught, not useful feedback against the final performance standards. Instead of informing teachers and students at an interim date (whether they are on track to achieve a desired level of student performance by the end of the school year), the guide and the test grade just provide a schedule for the teacher to follow in delivering content and a grade on that content. Although the universal teacher lament that there's no time for such feedback is understandable, but "no time to give and use feedback" actually means "no time to cause learning." Whereas research shows that less teaching plus more feedback is the key to achieving greater learning. And there are numerous ways through technology, peers, and other teachers that students can get the feedback they need.

- 10) Enriching Feedback - Making feedback something more than an advice based on evaluation and grades will enrich its quality. Ideally feedback must illustrate what someone has done, how he has performed, how was his performance in comparison to those who performed better, how can he improve to move ahead of his errors and achieve the desired goal.

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1. *There are several things as School, student, teachers and parents impact a student but what is it that impacts his learning in a positive direction. In order to study this impact He created a scale / Barometer for measuring effect size. Every intervention can be compared on this barometer. A positive effect size shows a positive impact on student's learning. An effect size of 1.0 is typically associated with Advancing learners' achievement by one year and improving the rate of learning by 50%. Hattie studied six areas that contribute to learning: the student, the home, the school, the curricula, the teacher, and teaching and learning approaches. His research suggests that some things definitely have a very negative and decreased impact on student's learning as watching TV, summer holidays, ability streaming and moving schools etc. He also suggests that the most important factors for student achievement are not related to curriculum choices, the physical school environment, or even most students' circumstances at home or socio-economic status. Instead he stresses more on student, teacher and teaching, innovative practices in Teaching, student teacher relationship, motivation etc. Here is an overview of the Hattie effect size list that contains 138 influences and effect sizes across all areas related to student achievement. Any effect that goes above .40 in educational research is considered to be average, positive and impacting student's learning. Any effect that goes above .70 is considered to be important in bringing a significant impact on learning. Feedback has been found to be one of the most important factor in determining the progress and impact on student learning.*
2. *The instruction begins with information about the process and the feedback is more corrective information added to the instruction. However if there is too much of corrective information then it again becomes a new instruction. Feedback needs to provide information specifically related to the task or process of learning that fills the gap between what is understood and what is aimed to be understood. Utilize affective process as increased effort, motivation or engagement or through cognitive process as restructuring understanding, confirming to students whether they are correct or incorrect, indicating what more information is available or needed, pointing to directions that students could pursue, alternative strategies to understand particular information. Feedback has no effect in vacuum it must be related to some learning context to be effective. Research suggests that some kinds of feedback are more powerful as compared to other kinds. Cues, reinforcement, Video or audio feedback, computer assisted instructional feedback, goal related feedback, student evaluation feedback and corrective feedback are found to be more powerful as compared to Delayed feedback, reward – punishment, praise and programmed instructions etc.*
3. *You have written the essay correctly but you need to put some merits and demerits in order to make this essay appear more unbiased.*
4. *You have drawn the diagram correctly but if you would have put identification numbers and described the parts in index using a black pen then it would have appeared more neat and clean.*
5. *You already know the formula to solve this equation, check whether you have put the values correctly in place of the formula.*
6. *That is an intelligent response, Oh! You are such a bright student, well done and keep it up!!*