

## EMOTIONAL INTELLIGENCE: THE ART OF NON-JUDGEMENTAL FEEDBACK.

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**Abstract** — *This paper will explore the theoretical framework underpinning the art of non-judgmental feedback, and explain the principles behind a number of techniques and advise participants on how to use them effectively. They can be used in formal meetings and informal conversations and with students. Examples will be given of their use with a group of engineering students on group problem based modules. These techniques are a key component of the emerging field of 'Emotional Intelligence'. The theoretical framework will draw on Transactional Analysis, Neuro-Linguistic Programming as well as insights from Gestalt and Rogerian Counselling. The practical experience we draw on will be facilitator training and group working skills training offered to both staff and students at the University of Bradford and problem based learning facilitator training offered at the University of Glasgow. The key issue in work is 'non-judgmental'. Traditional teachers are very good at making judgments about students as part of the process of both formative and summative assessment. However the evidence of students responding positively to such feedback is patchy. Acceptance of such feedback is dependent on the receiver 'accepting' the feedback. The perceptions of the power difference between the giver and receiver of the feedback are crucial components of the process. The ability to give judgmental feedback (e.g. for the purposes of assessment) is a key skill for engineers. However, we believe that Engineers also need to be equally skilled at non-judgmental feedback. This paper will explain the principles and give examples from engineering education of how it can be put into practice.*

*Index Terms* 3/4 Feedback, Transactional Analysis, Assertiveness, Gestalt; Emotional Intelligence; Formative assessment.

### SCENE SETTING

In recent times many authors have questioned the education of engineers and particularly the traditional basis of engineering education, [1] – [4].

The knowledge base comprising an understanding of basic engineering principles underpinning a particular engineering discipline and the ability to use complex calculations to manipulate and use them remains, but we live in an age where technical innovation increases the need to update knowledge at regular intervals. There is a need for

Continuing Professional Development (CPD) and the need to develop the skills for lifelong learning. The days when engineers could rely on their initial professional training no longer exist, if they ever existed.

In an effort to address these issues many engineering educators are using new and sometimes innovative teaching methods in the initial education of engineers and the authors have some 15 years experience of using problem-based approaches in the education of civil and environmental engineers, [5] – [8]. This experience has required a shift in the relationship between lecturer and student.

In working in a collaborative way with learners staff need to develop a whole range of new skills, [9]. To us the most of important of these is giving learners appropriate feedback on what they have been doing. Research on learning and teaching in higher education has shown that learners obtain feedback from a wide variety of sources, [10]. The art of giving good quality feedback is a key communication skill and is essential in a quality learning environment and this has been noted by educational researchers, [11]. Indeed, Black & Wiliam [12] state

*'the quality of the feedback provided is a key feature in any procedure for formative assessment'*

There is similar stress on the importance of being able to give good quality feedback in the field of management development. Taylor and Wright [13] call it a high level skill. Learning from feedback (from self and others) is a key component in the development of interpersonal skills.

There is a connection between feedback as a interpersonal skill and the way the term feedback is used feedback as a technical term in engineering. Feedback is used to describe an arrangement in electrical and electronic circuits whereby information about the level of an 'output' signal (specifically the gap between the actual level of the output signal and some defined 'reference' level) was fed back into one of system's inputs. Where the effect of this was to reduce the gap, it was called negative feedback, and where the effect of the feedback was to increase the gap, it was called 'positive feedback'.

If we apply this model to the behavioural sciences, we can identify four elements making up the feedback system:

- Data on the actual level of some measurable attribute
- Data on the reference level of that attribute
- A mechanism for comparing the two levels, and generating information about the gap between the two levels

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- A mechanism by which the information can alter the gap.

Kluger & DeNisi [14] argue that only the first of these is necessary for a feedback system to exist. They define 'feedback interventions' as

*'actions taken by an external agent to provide information regarding some aspects of one's performance'* although it worth noting that their requirement for an external agent excludes the idea of self-regulation.

In contrast Ramaprasad [15] defines feedback as:

*'feedback is information about the gap between the actual level and the reference level of a system parameter which is used to alter the gap in some way'.*

Taylor & Wright [13] see feedback as adding quality to the analysis of problems, and instrumental in helping learners develop the skills for analysing their own performance.

It seems to us that whatever the definition of 'feedback' in an educational setting you prefer, the importance of feedback as a key element in an effective learning environment cannot be underestimated.

## EMOTIONAL INTELLIGENCE

Emotional intelligence is a term used by Goleman [16],[17] and others to describe how successful people use an awareness and understanding of their emotions to enable them to function effectively as whole persons. To deal successfully with people requires interpersonal skills, and interpersonal skills involves an awareness and ability to work with emotions. For successful educators this means working sensitively and effectively with learners' emotions. To understand others' emotions, it is necessary to have a good understanding of one's own.

Many learners, especially in their first year at University, lack confidence, which affects their ability to learn well in groups. They need positive feedback to remind them of what they can do. Counsellors and therapists stress the importance of positive feedback that values individuals and their contribution. Heron [18] describes the *'learning, motivation and uplift'* to be gained from good news. He contrasts with feedback that is contaminated [18].

*'Feedback of any sort is contaminated and offensive when it contains words such as "ought", "should" and "must".'*

Oughts, shoulds and musts may have their place when teaching the rules of safety procedures or technical calculations, but are not helpful when giving feedback.

When dealing with emotions the term "safety" acquires another meaning. People learn more from feedback when they feel (emotionally) safe. Hence one of the objectives of the lecturer is to make the learning environment feel safe. One way of achieving this is by introducing the right amount

of positive feedback into the learning environment to enable any negative feedback to be welcomed undefensively.

## FEEDBACK IN PRACTICE

In the professional experience of one of us (a chartered Engineer) the most challenging parts of their professional life involve communication skills, rather than technical skills. Many engineers become consultants working with a variety of other professionals. It is obvious to us that engineers need people skills and learning skills to survive as professionals. Most CPD schemes introduced by professional bodies recognise this.

***The challenge for higher education engineering educators is to introduce their students to these skills as part of their initial professional training, and to ensure that engineering education models the process.***

We have written extensively describing the educational models we have used for both undergraduate engineering education and professional development of academic staff, [8], [19] & [20]. What we wish to discuss in this paper is the approach to feedback that we have used in these situations. The model derives from facilitation skills and influencing skills. Engineers cannot rely on their professional expertise alone to persuade others to co-operate in their work. They need to facilitate meetings with other professionals and to influence rather than instruct or cajole others to reach decisions and gain commitment of others to implement actions. The same is true within engineering education. Students no longer have the same deferential respect for their lecturers. They need to be motivated to learn. They need lecturers to facilitate their learning, rather than tell them what to learn. The short-term surface learning of traditional techniques is no longer recognised as either effective or useful. Life long learning requires an initial programme of learning to learn - implicit in this is the notion that students take responsibility for their own learning.

The ability to learn is seen as a skill, and skills are learnt through a process that requires good quality feedback. Learning from feedback is part of the process. The feedback can take a variety of forms - quantitative and qualitative, from things going well, and things going wrong. Feedback can also be both internal (performed by the learners themselves) or external (generated by a person other than the learner). Wherever the feedback originates our thesis is that it must be incorporated into student learning by the student themselves and related specifically to their individual learning goals and objectives. Obviously, if the learner does not possess or has not developed goals or objectives with respect to a desired learning outcome then feedback can do little to assist them in the learning process - the route to achieving objectives. In the majority of situations feedback comes in the form of opinions that require reflection and analysis before they can be acted on by the learner. This means that the skills needed by the lecturer to facilitate student learning also need to be developed by the students so

that they can effectively use the feedback. Students can also learn from feedback given by other students. Lecturers develop their courses on the basis of student feedback. One of the other areas in which we have helped students learn the skill of giving feedback is in training for student course reps [21]. This is training for students who represent their year group on departmental staff-student liaison committees.

It is our objective to present a model of giving and receiving feedback that can be used by both lecturers and their students whilst at University and can also be used outside, for learning and for enhancing communication. A secondary objective is that the model be simple, memorable and powerful.

### THE MODEL

The starting assumptions in developing the model are that firstly that people develop skills through:

- learning relevant concepts
- getting good quality feedback on performance
- reflecting constructively on feedback
- deciding to do something different in future to improve performance

Secondly, that the process of learning from feedback will be inhibited if people receiving feedback feel unsafe, feel the need to defend themselves, or are unable to see how to apply the feedback to improve performance.

Finally, in order to get the maximum benefit from feedback people need to give and receive feedback - to and from people higher in the hierarchy, to and from people at the same level in the hierarchy and to and from people lower in the hierarchy.

Feedback is not just something given by powerful people (such as lecturers) to less powerful people (such as students). It is a two way multi-directional process. In management development circles the term is 360 degree feedback.

Good quality feedback is specific, descriptive, respectful and appropriate, or a more prosaic phrase is "non-judgmental feedback". To be non-judgmental in a literal sense is impossible. All feedback is based on some form of opinion, choice or judgment. However, it is possible to minimize the judgmental and to accentuate the descriptive. This is our aim in choosing the terminology.

In education a distinction is drawn between "formative" & "summative" assessment. Formative assessment is designed to provide feedback to students on their progress, that they can learn from and improve on. Summative assessment is the final mark, the degree awarded, and although it can provide some feedback to learn from, generally speaking this is not the intention.

Summative assessment is by definition judgmental. Non-judgmental feedback traditionally is more likely to be found in the accompanying information that is given to students orally or in writing accompanying the mark or

grade. This is more likely to accompany formative assessment than summative.

But, before giving feedback, the first stage is *Eliciting feedback*. People are more likely to listen to you, if you can demonstrate that you are listening to them. This is also known as '*Modelling the process*', [20].

*The easiest way to give feedback is to build it seamlessly into the process of gathering feedback.*

There are three types of feedback for University lecturers to consider:

- Students giving feedback to each other about how things have gone, or appear to have gone.
- The lecturer giving feedback to the group and individuals within the student group.
- The lecturer inviting feedback about the design and facilitation of the course / module / lecture (etc).

For each of these the recommended starting point is the three stage model for giving or taking feedback.

- **What's gone well?** If you start with something positive you gain their interest – they are less likely to be defensive
- **What could be improved?** Look forward not back. Concentrate on what there is to learn from the situation, how to avoid unwanted situations arising again. "Should have's" induce feelings of guilt and sap energy, and inhibit learning from feedback.
- **What specifically could we do differently in future?** Produce an action plan, identify next steps. Agree in detail who will do what differently in future.

Our experience is this format is easy to memorise. It is less easy to learn, and it works well in any direction.

### Underpinning Skills

In using the model both staff and students need to develop and use a number of communication skills.

The first of these is Listening skills. The objective of good listening skills is to demonstrate that you are listening, to create empathy and to give a summary of what you have heard [22]. Passive listening (with no outward sign of listening taking place) may be sufficient in situations which are not sensitive or complex, and where the potential for misunderstanding is minimal. Other situations require active listening skills.

The most useful techniques to learn are:

- **the 'reflective'** (the American term is "backtracking"), the reflective is the process of saying back to people what they have said to you, including the most important parts word for word
- **asking questions for clarification** - to check understanding
- **making and maintaining eye contact** (in Western culture)

- **pacing**:- using matching language, including body language, voice quality, etc.

The term "pacing" comes from NLP [22]. Another theoretical framework for understanding interpersonal communication is Transactional Analysis (TA) [23]. TA and NLP offer several useful viewpoints for minimalising judgmentalism when giving feedback:

- ***I'm OK - you're OK***  
as opposed to:  
I'm OK - You're not OK, or I'm not OK - You're OK, or I'm not OK - You're not OK
- ***a weakness is merely an overdone strength!***  
If you can identify the strength, you can give positive feedback about that, then point out the negative effect of using that quality too much or too often
- ***underlying every behaviour is a positive intent!***  
A useful technique is to separate (good) intentions from (negative) effects, to give positive feedback for good intentions, and to limit negative feedback to unwanted or unhelpful negative effects.
- ***everyone acts on the basis on their understanding of the situation, but the map is not the territory***  
The trick is to discover what map (e.g. mindset) the other person is using and, hence, what their map looks like.
- ***the meaning of your communication is the response you get!***  
Be interested in the effects of your communication – especially if surprising or unexpected
- ***there is no failure only more interesting feedback!***  
Look on any feedback as a learning opportunity.

Interventions are essentially "chaotic" in that whilst we have a picture of what is going on, how an intervention will perturb the picture is impossible to predict; indeed often feedback takes the learner forward in a way that is completely unexpected by the person giving the feedback. The outcome of the learner internalising the feedback is something we have no control over.

In giving non-judgmental feedback it is vital to use "I" language. When I explicitly state that something is my view, or my impression (or similar), or when I let people know how I feel as a result of what they are saying or doing, the feedback is more likely to be effective. The recipient is less likely to argue with "I" language.

In the same way it is important that either as giver or recipient of feedback that you don't get "hooked"! - another term from Transactional Analysis, [23]

In TA terms this means that if someone acts from a "parental" perspective, the chances are that it will hook your "child", and you will respond from a "child" perspective. If someone acts from a "child" perspective, the chances are that it will hook your "parent".

The "parent" is typically critical (and judgmental) and responds defensively to feedback either by getting into long explanations or by pulling rank. The "child" avoids giving feedback and when on the receiving end typically blames others or runs away (avoiding letting the feedback in, and hence failing to learn from it).

The aim is to maintain "adult" to "adult" interaction - to give feedback non-judgmentally, and to receive feedback with gratitude and thoughtfulness. Unsolicited feedback is best considered as a free gift - the recipient is grateful but retains the choice of how to use it, or even whether to use it or not.

The ability to give and receive feedback is an essential part of problem-solving. Transactional analysis offers useful insights into how and why people use or avoid adult to adult problem solving. This can apply equally whether the situation requires interpersonal problem-solving - developing into negotiation skills, or when the situation calls for technical problem-solving .

The final basic communication skill required to both give and take feedback is assertiveness, [24]. Once again this is a three stage technique:

- **I appreciate that...** (I understand what you want me to do is... / I can see that... is important to you & ... You still find it difficult to understand what I'm trying to explain...)
- **However,** I think / feel ...
- **So, I suggest** / recommend ... (What I think we should do ...)

Summarising, show you're listening, let them know what you think or feel and finally offer a solution, or way out.

Another of key assertiveness skill is the ability to express clearly what you want (either as the lecturer or as the learner). In order to express clearly what you want, in an assertive way there are five factors to have in mind:

- **Be positive** – talk about what you do want – not what you don't like, or what's wrong, look forward not backwards. In NLP [22] this is usually stated as 'if all you know is what you don't want, the chances are you'll get more of what you don't want', or 'if you always do what you have always done, you'll always get what you have always got', [25].
- **Use 'I' language** – talk about what you can do to achieve what you want. 'Own' your wants, don't make them dependent on other people doing things first or other people getting it right for you. This is particularly important for learners to come to grips with in order to be effective self directed learners.
- **Know how you'll recognise the result** – Identify what it will look like, sound like, and/or feel like, when you achieve what you want. People often say what they want in rather vague terms e.g. 'I want help to understand critical state soil mechanics' without any clear idea how

they will recognise effect help or what it is exactly about critical state soil mechanics that they are having difficulty in mastering.

- **Be able to state the bottom line** – you need to be clear about what is really important to you. What is the point beyond which you are not prepared to go? But don't make threats. Most people respond better to encouragement, and don't make threats you are not prepared to carry out.
- **State your intentions clearly** – if things don't turn out the way you expected, and/or people appear upset at what you want, tell them what you intended, [22]. Do not get defensive and do not dispute what people tell you about the effects of your behaviour, just learn from the feedback.

It may seem that we have been labouring a number of ideas which seem distant from the world of engineering as many of us think we know it. Our experience of running problem-based learning with both undergraduate engineers [26] and [27] and members of academic staff undergoing PBL facilitation training [21] has led us to believe that these are key skills for both staff and students to possess if they are to be successful as independent learners or in the new jargon terminology successful life long learners.

One final area that we have found to be of particular importance in group work based learning activities is what is referred to as Negative Feelings Assertion. It is our experience that students learning groups often experience a number of difficulties as the group develops in the early stages of such activities. Many of the problems related to us by students in such situations relate to what we would call 'interpersonal difficulties'.

The tendency is for group members to judge the person whose performance is causing frustration. Such judgments are likely to increase the distance between individuals within the group and make it more difficult to achieve reconciliation. As long as any tensions remain unresolved, the group is very unlikely to work effectively.

The lecturer's goal is to maintain or enhance group effectiveness, and to enable individuals whose behaviour is problematic to learn from feedback. The group needs to learn how to resolve interpersonal problems. Negative Feelings Assertion enables people to express their feelings but in such a way that the group learns collectively from the experience of feedback and remains intact. It enables people to describe the specific behaviour they don't like, let others know what effect it has on them, and encourages them to say what they do want.

In such circumstances our learners have the following techniques very powerful. This is a variation on the basic three stage assertiveness technique we have previously described, but this time it is slightly different:

- "When you..." (describing the specific behaviour), alternatively, "I notice that you often ...", or "One of the things that happens a lot when we are together is ..."

- "I feel ...", or "The effect on me is ...", and
- "I'd prefer it if ...", or "what I suggest is ...", or "I think we might work better together if ..."

This is one of the key features of Emotional Intelligence, applied to group learning. It enables students and lecturers to work rationally, in a structured way, with emotional issues, without the provider of feedback allowing their own feelings to get hooked (the TA term) or contaminated (Heron's term) by feelings that then arise during the interaction.

### GESTALT FOR ENGINEERS

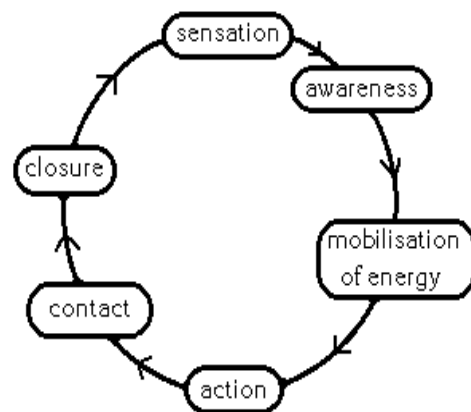


FIGURE 1

THE GESTALT CYCLE [20]

A final idea we have found particularly useful when working with groups is the use of the Gestalt cycle, [20]. The cycle, shown in Figure 1 is used as the basis for many counselling interventions. It is our experience that the use of the cycle together a sense of where a group or an individual might be within the cycle helps in understanding what is going on in the group or for an individual. This is particularly important in understanding problem based learning groups [28], particularly within the realm of what Savin-Baden calls 'personal stance'. This is where the learner discovers things about themselves through working in a problem based format. It is an area that in our experience is at the heart of problem based approaches and requires skillful handling by the group facilitator. Our experience has led to find that the Gestalt approach is particularly useful in helping individuals within groups to continue to move forward, [20].

The Gestalt cycle is a particularly useful for explaining shifts in energy. By this we mean the energy that individuals or groups have for doing things, the energy they need to mobilise in order to undertake the actions required to make the group effective. This is an important aspect of group dynamics. If the energy cannot be mobilised, the group will get stuck. The starting point is to be more aware of energy levels in the group. In order for feedback to be effective there has to be a minimum level of energy

available. Increasing awareness and understanding of one's own emotions, being able to use that understanding as a basis for providing feedback to others is a key interpersonal skill. It can help maintain the mobilisation of energy (in self and others) and lead to effective action, which then leads to a sense of fulfilment - improving the level of contact between group members. Contact in Gestalt is a complex concept, the detail of which we do not need to go into here.

### FINAL THOUGHTS

What we have described in this short paper is a simple, model for the giving and receiving of feedback. We have been using this model in a group organised problem based learning course for undergraduate engineers for over thirteen years as well in CPD events. The current interest in Emotional Intelligence puts this model into a wider context within both Education and Management Development. It has proved its usefulness to us on a number of occasions and we would commend it to you, even though it may seem outside the tradition areas of interest for engineers. After all, you cannot condemn without evidence.

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