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**McDowall, A. & Kurz, R. (2008). Effective Integration of 360 Degree  
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**Abstract**

This practical paper is based on a skills session as delivered at the BPS Special Group in Coaching Psychology Conference held 2007 in London. The first part of our paper provides a review of the extant research evidence on 360 degree feedback at with focus on effects on individual development, making explicit links to the implications for coaching practice throughout. We conclude that 360 degree feedback is primarily effective when conceptualised and utilised as a finely grained means of instigating individual behaviour change and learning on job relevant attributes and facilitated by a skilled feedback giver. This provides a clear rationale for its use in coaching. We outline how an actual profile can be used as part of a coaching session, using the Saville Work Wave ® Performance 360 as an example.

**Keywords**

360 degree feedback, self awareness, individual development, blind spots, proficiency, feedback conditions, potential, aptitude, personality, styles, Saville Consulting Wave ®.

**Introduction to feedback processes**

Essentially, the term 'Feedback' stems from communications theory and refers to a process where a 'sender', relays a 'message' which is some information, to a 'recipient' (McDowall, 2008). This basic process is common to all feedback activities and is outlined in Figure 1.

Note to editor: insert Figure 1 about here

Feedback processes can take various forms in interpersonal processes, as it can be delivered either orally, written or in electronic form. Feedback can also originate from the 'self', as cognitive and affective processes provide us with information about how any task that we are involved in is progressing (for a full

review see Kluger & DeNisi, 1996). In fact, structured 'self-assessment' is at the heart of most multi-rater feedback processes, which we discuss below both in terms of the extant research literature but also the practical implications. In addition, feedback will also originate from any given task itself, which may provide signals of frustration, boredom, enjoyment and so on.

Kluger and DeNisi (1996) integrated these aspects into a Feedback Intervention Theory [FIT] which generated a number of testable propositions that urged researchers to consider a complex array of factors in future research and practice. Feedback is also a crucial element of self regulatory theories of human motivation such as control theory (see Carver & Scheier, 1981) as it allows us to evaluate what we should do or avoid in relation to our internal goals and standards. We cannot assume however that feedback will always have positive effects, as many examples exist to the contrary. A case in point is the dissatisfaction with contemporary appraisal processes in organisations (e.g. Jones, 2007). In a similar vein Thorndike (cited in Kluger and DeNisi, 1996) noted as early as 1913 that giving feedback by the means of grades to students changed their focus from wanting to learn to the mark obtained.

Contemporary research has followed on from this to corroborate that a focus on performance (i.e. 'marks') as opposed to mastery (i.e. learning) can be detrimental to performance. This has clear implications for the use of feedback as formative feedback, focused on improvement and the future, is infinitely more conducive than summative feedback focused on past performance. We will return to this aspect when discussing the implication for practice in the last section. Next, we will outline the rationale and research evidence for multi-source feedback process in detail.

### **360 degree feedback – its rationale and research evidence**

A fairly comprehensive body of evidence on feedback in an organisation al context stems from studies on multi-source-multi-rater (MSMR) or 360 degree feedback (McDowall, 2008). This entails the planned comparison of ratings from various sources, such as the supervisor, subordinates, peers and also occasionally internal and external customers, on agreed work-based performance dimensions and interpersonal aspects. 360 degree feedback tools can be bought 'off the shelf' (akin to a psychometric test). Examples are profiles that are based on transformational models of leadership such as the MLQ (Avolio, Bass & Jung, 1995) or the TLQ (now ELQ, Alimo-Metcalfe & Alban-Metcalfe, 2001, 2008). Bespoke tools that are typically based on an organisation 's competency based framework are at the other extreme

of a continuum. In between are 'half way house' tools that allow limited customization of existing items or scales against a local framework. Reports are almost always generated through a computer system. They typically contain graphs, usually bar charts, that show the ratings from various parties on different dimensions and may include structured narratives or free flowing comments. Whilst there was some backlash against the emphasis on numerical information some time ago as this creates a distinct and perhaps unhealthy emphasis on performance and summative grading (a relatively recent study shows that managers in fact prefer this format to narrative and potentially more formatively orientated information (Brett & Atwater, 2006)).

The process of 360 degree feedback typically commences with a recipient self-assessment on a set of items. Other raters are nominated to complete the same items (or sometimes a sub-set). The 'other' raters will typically include the immediate superior or boss, peers, subordinates and occasionally also internal or external customers (see Figure 2) or other stakeholders. Feedback givers can be recruited in various ways. In contexts where emphasis is put on formal summative ratings, the organisation, or its representatives tend to specify the other raters. Where the focus is on formative development, the focal individual will choose the other raters.

When 360 degree feedback first emerged, great hopes rested on this innovative process, where beneficial outcomes as depicted in Figure 2 were expected at different levels. Multi-source feedback purported to enhance individual effectiveness and learning, facilitate culture change and increase effectiveness at a wider team and organisational level which ultimately would result in better services to customers.

Note to editor: insert Figure 2 about here

The purpose of the actual feedback process (which should be conducted by a trained professional) is to assess and evaluate how any gaps between different ratings may have arisen and to explore them with the focal individual. According to McDowall (2008) effective 360 degree feedback should at the very least meet the following conditions:

- a) It should provide a comprehensive and valid measure of workplace behaviour
- b) The learning through feedback from different sources should prompt people to change, and engage in relevant follow up development activities

c) Feedback from each source will provide valuable information in its own right.

We will now briefly review existing literature from major occupational psychology journals to ascertain to what extent the above conditions are met in practice focusing on individual level factors. We omit a wider discussion of purported benefits at the team and organisational level to focus on evidence relevant to coaches.

#### Accuracy of ratings and 360 tools

Multiple raters should in theory provide more accurate information than singular ratings as a combination from various sources should serve to cancel out any individual bias. Fletcher and Baldry (1999) point out that this may not necessarily be the case especially if reward decisions such as promotions, bonuses or pay-rises are contingent on ratings. To assure quality Fletcher et al. (1998) suggest that 360 measures should be scrutinised and tested just like any other psychometric tool to increase confidence that the results will hold up across time or across employees, and they in fact measure what the organisation had intended to measure. In our own practice, we have used Fletcher et al.'s method to scrutinise existing 360 data sets, and have come to similar conclusions in different contexts: a) that individual items often show poor discrimination (everybody gives similar ratings), b) that items may not be measuring the competency that they have been assigned to and c) that instruments generally are overlong due to a number of redundant items. Coaches need to bear this in mind when deciding about which tools to use in their own practice or when interpreting a pre-existing profile. McDowall and Kurz (2007) put forward that psychometric tools can be judged effectively by their adherence to psychometric principles (are instruments reliable and consistent, do they measure what they set out to measure, is an appropriate point of comparison available, are they free from bias against certain groups). This also applies to multi-source feedback tools. We have summarised a 360 quality check for coaches in Table 1.

Note to editor: insert Table 1 about here

### 360 and individual development

360 degree feedback offers the unique opportunity to compare ratings from different sources against how people rate themselves providing an indication of effectiveness at work. The size and direction of the gaps between self- and other ratings indicate pressure points where dialogue could facilitate development. The evidence suggests that individuals who are *self aware*, in other words able to rate their respective strengths and weaknesses in the same way that other people rate them, perform optimally in the workplace (e.g. Bass & Yammarino, 1991; Yammarino & Atwater, 1993). Yammarino and Atwater (1997) put forward four categories of agreement:

- In Agreement - Good (high ratings from self and other)
- In Agreement - Poor (low ratings from self and other)
- Under-rater (low ratings from self, high ratings from others)
- Over-rater (high ratings from self, low ratings from others).

Evidence suggests that Over-raters tend to ignore criticism and discount failure (Bass & Yammarino, 1991) and poor performance outcomes are predicted for 'In agreement poor' raters who according the model have not addressed any shortcomings. However, self-awareness can be conceptualized as a state (transient) rather than a trait. Evidence shows that Over-raters demonstrate the highest levels of improvement following 360 feedback (Atwater, Roush & Fischthal, 1995). This is important to note for the use of 360 in coaching. Very different questioning and interview strategies may be required for an Over-rater, who at first might be inclined to disregard the information contained in the feedback profile than for an Under-rater who may lack self-confidence. Profiles that include actual comments from raters are helpful in this instance, as these provide additional evidence that can feed into the coaching process.

In all, the rationale for using 360 at the individual level is to raise or corroborate people's level of self-awareness through feedback from different sources (McDowall, 2008). However, not all feedback information is attended to equally. The credibility and the rank of the feedback source matter, as feedback from the boss generally has the greatest impact (Bailey & Fletcher, 2002; Gregura, Ford & Brutus, 2003). Peer ratings appear to vary considerably across time (Bailey & Fletcher, 2002). Reports often focus more on the pleasantness than the effectiveness of their

boss. Coaches need to bear these multiple stakeholder perspectives in mind when interpreting differences in ratings from various sources. As boss's ratings tend to be weighed heavier by focal individuals, this could be used to good advantage for over-raters, as criticism from this source is more likely to be accepted and acted upon.

Will 360 degree feedback achieve lasting impact? An early study (Hazucha et al., 1993) found that self awareness increased following participation in 360 degree feedback, and that this in turn was related to career progress. Engagement in follow up activities was contingent on support from supervisors where those who felt supported put more effort into their development and engaged in more development activities.

The association between 360 degree feedback ratings and follow up developmental activities tends to be small (Maurer et al., 2002). A thorough review also found the link between feedback ratings (both from traditional appraisals and multiple sources) and performance improvements to be negligible (Smither, London & Reilly, 2005). Effectiveness improves however, if the initial feedback process is followed up and supported by executive coaching, where notably better performance evaluations are observed as well as the setting and follow through of concrete goals (Smither et al., 2003). As reported in McDowall (2008) this also applies outside the workplace in education (Marsh & Roche, 1997). Taken together, these results indicate that coaching is helpful for initiating and embedding behaviour change following the initial feedback process. These findings can be explained in the light of existing psychological theories of motivation. Goal setting theory holds that individuals are more motivated to initiate and sustain behavior if difficult but achievable goals are set (for a full review see Latham, 2005). Whilst goal setting theories are primarily concerned with how cognitive resources are energized and attention is focused and sustained, control theory (Carver & Scheier, 1981) takes a socio-cognitive perspective. Individuals compare their own internal goals against standards set by others and strive to match these, which could be feedback ratings in the case of 360 processes.

According to control theory, three conditions have to be met for individuals to adjust their behaviour. First, individuals must have a goal or goals they are striving towards. In the case of 360 degree feedback, these could be general goals such as wanting to improve quality of working life work or specific such as improving particular aspects of competence (e.g. improving communication in team work). Secondly, people must recognise that certain aspects of their current behaviour are

not in line with these goals. Lastly, they must be willing and able to adjust their behaviour to meet these goals.

The basic tenets of control theory are helpful when working with clients and 360 feedback profiles in coaching practice as they can be communicated openly to a coachee. As coachees may or may not agree with the feedback received from others (and the level of agreement), it is helpful to understand that such information is essential for the proactive regulation of our behaviour. This is empowering for coaches, as control theory presupposes human agency and thus places the 'ball back in the court of the coachee' for controlling behavioural changes. It also fosters positive self beliefs which are crucial for 360 feedback effectiveness (Maurer et al., 2002; Atwater & Brett, 2005). In addition, it is important that people react positively to the feedback process (Antonioni, 1993; Atwater & Brett, 2005) as a negative attitude makes people reluctant to change.

For the above reasons, it is important that 360 processes are communicated well and buy in is sought from everyone involved. Mutual trust needs to be fostered. Without trust, attitudes to the process are likely to be defensive and negative, and may also result in distorted ratings. To this extent, it is important that the overall purpose of the process is clearly agreed upfront. Whilst in the U.S. 360 ratings may feed into organisational decision such as promotions or rewards, in the UK its use is largely limited to developmental purposes, and many authors would recommend this as best practice (see Fletcher & Baldry, 1999). Where 360 degree process is implemented with care, managers value its thoroughness (Mabey, 2001), and particularly appreciate the detailed graphical and numerical information that is usually detailed in the reports (Atwater & Brett, 2006).

One issue that is generally problematic both in 360 degree feedback but also in appraisal is the question of who is actually best placed to rate other people's performance. For instance, line or senior managers may have little idea of what an individual actually does on a day-to-day basis. Thus, one study found that behaviour change as measured by comparison of 360 degree ratings over time was more closely related to initial self-assessments than initial ratings from other sources (Bailey & Austin, 2006). This finding points to the fact that we should give as much attention to self evaluations, as to ratings from other sources, and that we should look at underlying trait measures to explore the reasons for performance issues.



As discussed above, the use of 360 tools in coaching is particularly helpful where reliable evidence from the actual work context is required. Whilst 'managers who don't want to hear' might brush off the discussion of a traditional personality profile, evidence gathered from various sources in the workplace is much harder to ignore. However the validity of such information is dependent on the tool's robustness but also the opportunity to map 360 dimensions against particular job requirements, and interpret the feedback accordingly. Chances are that 360 information is valuable and called upon where coaching has a particular purpose – to improve work performance and/or realise people's potential. This is where robust instruments that are based on cutting edge psychological research are of particular merit and can contribute valuable information to coach and coachee alike as a sound 360 tool will allow performance and potential to be unraveled in fine granularity.

The Saville Consulting Wave ® Performance 360 tool is the latest addition to the Saville Consulting Wave range described in MacIver et al (2007). The Performance 360 instrument derives from the initial Validation Player instrument used in the Saville Consulting Wave development study to validate a pool of 214 facet scales against empirical criteria of job performance and potential. It features 36 Behaviour items, six Ability and three Global Performance Items that are each rated on a seven point effectiveness scale.

The relevance of the same behavioural, ability and global performance areas can be measured through the companion Importance 360 or Job Profiler multi-rater tools. Potential for each area can be predicted from related personality, aptitude and competence attributes.

Saville Consulting Wave and Aptitude Assessment tools have been built specifically to predict and measure work performance based on the design principle of a 'matched model' where trait predictors and performance criteria are structurally aligned spanning an assessment continuum that ranges from dispositional trait measures to competency measures of performance in a work setting. Performance 360 measures performance through self and other ratings on effectiveness inventories (see Figure 3a). Trait personality characteristics are often assessed with self report questionnaires while ability or aptitude is assessed with tests. Traditional personality measures focus on how people differ from each other on behaviour, behavioural preferences or characteristics that effect their behaviours, but unlike ability/ aptitude tests without indicating whether there is a positive or negative impact

on work effectiveness of this difference. The lack of validated links between traditional personality dimensions and performance criteria hampers a gap analysis.

In Saville Consulting Wave the Performance 360 assessment and Styles assessments are structurally aligned and psychometrically linked through Competency Potential equations that draw on a broader range of valid facets to optimise the empirical prediction through variables outside the matched model. Figure 3 shows Performance 360 dimensions (Figure 3a), line manager friendly Competency Potential outputs that predict the dimensions (Figure 3b) and the matched model counterparts in the Wave Styles questionnaire (Figure 3c) that enable 'Deep Dive' analysis as described in Kurz, Saville & MacIver (2008) of Facet Ranges, Normative-Ipsative Splits and Motive-Talent Splits. For example the Performance 360 criterion dimension of Generating Ideas is predicted by the Professional Styles Competency Potential score with the same name that in turn is based primarily on the Styles dimension Inventive combined with four other facets that boost validity.

MacIver et al. (2006) showed excellent point-to-point prediction of the 36 Behaviour dimensions averaging .21 (.39 uncorrected) for styles and .25 (.46) for the 'validity-tuned' competency potential dimensions.

Understanding abilities in the work place requires a terminology to assess key aspects as well as validated links to underlying aptitude areas. In the course of the standardisation of Professional Aptitudes individuals were asked to rate themselves on a number of matched ability dimensions. Table 3 shows a good correspondence between aptitude predictor and ability criterion data. Gap analysis can reveal to what extent individuals have the underlying aptitudes to make them go further, or have limitations that may help to understand performance issues.

Finally, global measures of overall performance effectiveness were developed that assess contextual performance independently of the Behaviour and Ability model in Saville Consulting Wave following on from the validation work of Nyfield, Gibbons, Baron & Robertson (1995) who pioneered the use of job proficiency and promotability criterion scales. Table 3 shows strong prediction of a global performance rating based on items related to Expertise, Accomplishment and Potential. The predictors are Unit Weight composites of Great 8 scores derived from the work of Bartram (2005) that showed high validity for the Occupational Personality Questionnaire in the prediction of job performance. Prediction is particularly strong for Demonstrating Potential but weak for Applying Specialist Expertise where ability measures may be

more potent. It is encouraging to see that the Professional Styles questionnaire improves on the prediction offered by the well-established OPQ32i tool in this co-validation sample of respectable size (N=169).

In summary the Saville Consulting Wave approach enables investigation of dispositional and situational variables to explain the full complexity of job and contextual performance in the workplace as viewed from 360 stakeholder perspectives.

### Using 360 Feedback Profiles in Coaching: Case Study 'Jo'

We would now like to guide our reader on how to use such feedback ratings as part of a coaching session by discussing the excerpt depicted in Figure 3.

First, a coach using 360 needs to undertake 'a priori investigations' about which 360 dimensions or scales are relevant to the coachee's job. Such information should ideally be based on some sort of job analysis data or at the very least a consultation with key people in the coachee's organisation. This process can be much facilitated through online tools that allow job profiling (see Table 1 for the 360 effectiveness check).

Once this has been established, interpretation of the profile and differing ratings can be done in the light of the role. The focal individual here is 'Jo' who is a senior project manager in a start-up business unit of a major technology company. Importance 360 feedback suggested that the focus of this role is on effective management of the task, rather than strategic innovation. We presented an excerpt of Jo's profile in Figure 3.

The data presented on the right-hand-side of the output is based on ratings by the feedback recipient and nominated others on the 'Creating Innovation' Section in the 'Solving Problems' cluster that corresponds to the 'Thought' cluster in the Styles model. For 'Generating Ideas' there is agreement between self and boss ratings that are both in the ineffective band, yet peer and report ratings are considerably higher. Several potential interpretations are possible and these would need to be corroborated in a feedback session.

First, the coach needs to go back to the earlier investigation of whether this particular aspect is core to the feedback recipient's job, and thus needs to be addressed at all, or with varying degrees of priority. In the present context, this is not an issue in the current role as Jo's task is to chase highly imaginative technologists

to complete their projects to externally agreed deadlines. If Jo were to be considered for promotion to a more senior role we should look at her Styles results that suggest moderate competency potential for Generating Ideas, and a rather strong inclination to generate original ideas. In a more challenging role where creativity is called for Jo has fairly high potential for success.

If the Generating Ideas dimension was central to the role and a coach-facilitated feedback sessions it would be of paramount importance to get to the bottom of the differences across the four rater groups. It is possible that there are different possible explanations for the patterns in the ratings, so it is important that the coach keeps an open mind and explores various alternative 'hypotheses'. Here, it is tenable that both the manager and Jo see Generating Ideas as unrelated to the focal job role, and both view this as 'in agreement poor'. Feedback interview questions might include "In what way is coming up with new ideas core to your job?", "Could you give me some concrete examples?", "What stops you from coming up with new ideas, and what helps?" In contrast, peer and report raters might find Jo an inspirational source of ideas on how to manage projects more effectively, and thus perceive her performance as fairly effective, hence the difference in ratings. The other raters have then actually observed relevant and effective behaviours, which are not salient to Jo or her manager as they might be focused on a more narrow understanding of this behavioural domain. In this instance, it can be helpful to bring circular questions in the 360 interview (asking how behaviours might be perceived by others, and what the effect on others might be), to encourage Jo to widen her own perspective.

An alternative hypothesis is that Jo may be an 'under-rater' who self rates performance as lower than others, but actually performs effectively. This could be coupled with a lack of self-confidence, which might be central to understanding the boss's ratings which are also low. If there is a lack of confidence, effective behaviours might not be salient to others such as the boss, or underplayed by the feedback recipient. In this instance, coaches would need to take care to question Jo particularly sensitively, first focusing on effectiveness in the workplace, then shifting the focus to how confidence and self esteem could effectively be nurtured and supported. The coach could explore further by bringing in motives and talent from a Styles assessment. Aptitude assessment results of Jo actually were above average for five of the six areas.

It is possible that an observed difference between these could provide the coach with further prompts as to whether an individual is realising their full potential

with regards to Generating Ideas but also how Jo might be adapting to pressures in the workplace. The gap analysis between potential and performance 360 rating will help to establish whether the person or the environment / situations should be developed, and how difficult such a change is likely to be.

Taking the last example of Jo holding a senior project management role in a technology consultancy, one hypothesis for exploration holds that Jo is capable of creating innovation, but due to the pressures of the consultancy environment performs at less than optimal level. When this Styles assessment is used alongside the Performance 360 report it allows an understanding of the degree to which an individual is fulfilling their potential in performance terms. This further exploration can generate greater insight into potential reasons for the differences in the effectiveness ratings on Performance 360. Returning back to our earlier proposition that self-regulation is key to understanding 360 effectiveness, the coach may need to decide how best to facilitate this. For instance, it can be important in which order psychometrics are discussed with the coachee. As 360 output is typically conceptualized as a criterion measure, it can be helpful to present this to coaches first to help in the formulation of discrete goals, before any 'predictor evidence' (such as aptitudes, motives and talents) is used in subsequent sessions to work out exactly how such goals could be achieved.

### Conclusion

We conclude that 360 degree feedback measures make an effective contribution to the coaching process, as differences in ratings provide both the recipient and the coach with valuable information about levels of effective performance at work. It is essential however, that the tool itself has undergone thorough psychometric validation and thus offers reliable and robust information. Where this is achieved 360 data provides the coach with a sound model for exploring accuracy of information and levels of self-insight and confidence with their coachees. It is essential that coach and coachee understand this in the context of the requirements of a particular role, and have some indication of how focal individuals can realise their potential. In summary, 360 may provide a very finely grained measure of performance and potential which provides structure and robustness to the coaching process, and can be used to even greater effectiveness if coupled with measures of motives and talents.

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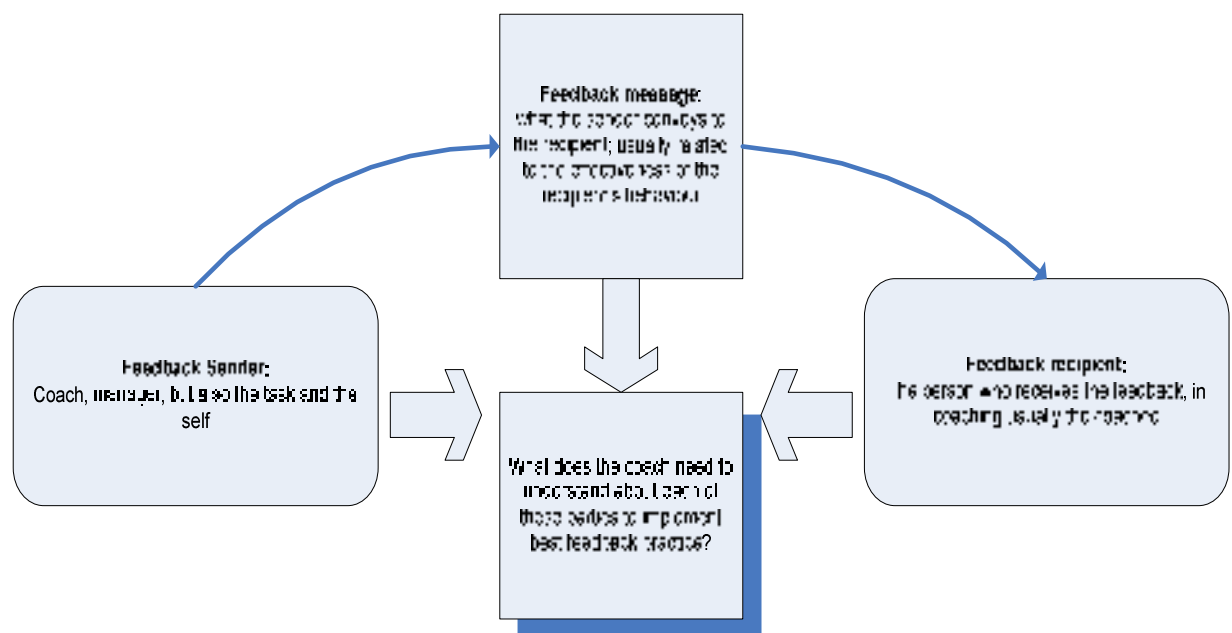
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## Useful Web-links

[www.savilleconsulting.com](http://www.savilleconsulting.com)

**Figure 1: The Feedback Process**



McDowall (2008), reproduced with permission from Kogan Page

Table 1: Checking 360 Degree Feedback Tool Effectiveness Quality.

<b>Level of Analysis</b>	<b>Questions about the tool</b>	<b>Who provides the information</b>
The tool itself	Is there any information available about: Reliability? Validity? Comparison groups?	Tool publishers, or organisation (for bespoke tool)
The job or role	Which of the 360 dimensions are crucial to the focal individual's job or role?	This needs to be done through job analysis, key consultation or tools such as the job profiler
The individual	Is the information as presented in the profile correct? Which of the rater categories as explained above does the focal individual pertain to? Do they over-, or under-rate? How can gaps between self- and other ratings be explained? What has been learned from the discussion of the profile? How can this be taken forward?	Feedback discussion(s) between feedback giver (e.g. coach) and feedback recipient (focal individual)
The team	Is there any evidence that use of 360 degree feedback results in better communication, teamwork etc? Are there any issues that need to be targeted specifically? Is this backed up by aggregation of different profiles?	The organisation , e.g. commissioning managers
The organisation	Is use of 360 linked to improved outcomes at the organisation al level, such as productivity, satisfaction, turnover, participation in training and development? Should any of the above provide focus for the coaching process(es)?	The organisation, also validation studies undertaken by the test publisher or independent researchers

Figure 2: The 360 Degree Feedback Process and Purported Benefits.

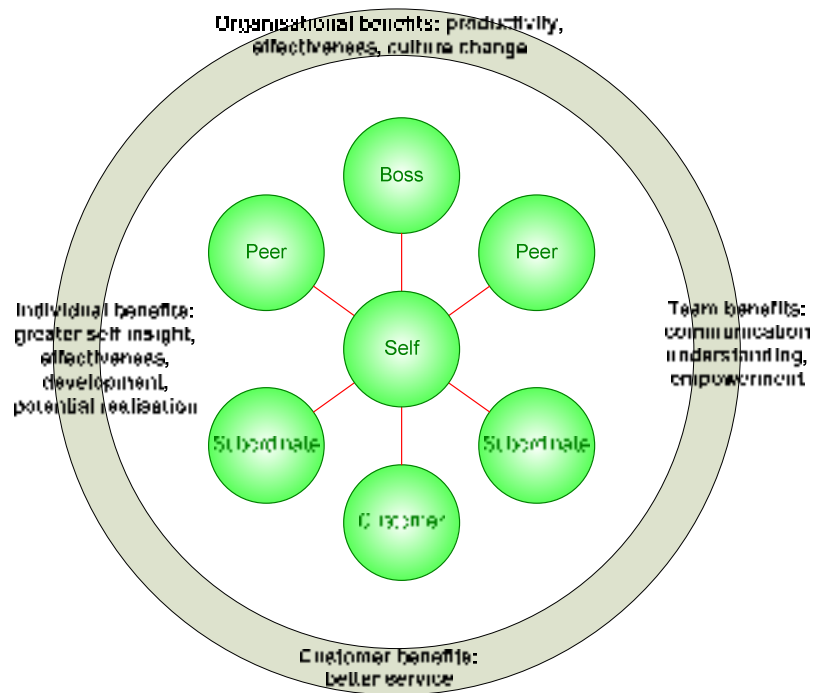




Figure 3a: Saville Consulting Wave ® Performance 360 Criterion Dimensions with Boss, Self, Peer and Report markers against inventory rating scale and colour coded numerical Sten score value .

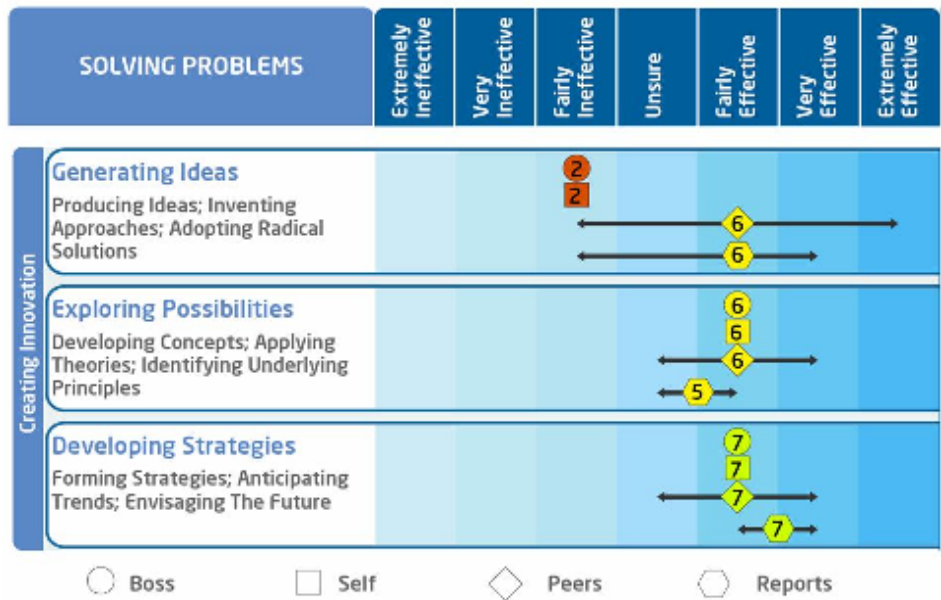


Figure 3b: Saville Consulting Wave ® Competency Potential Section with colour coded Section Graph and Dimension Sten Scores.

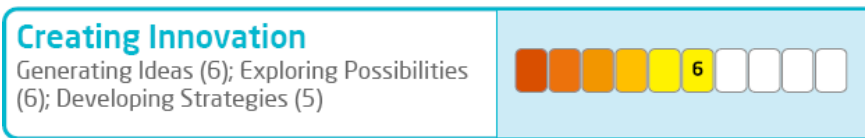


Figure 3c: Saville Consulting Wave ® Professional Styles Dimension Stens.

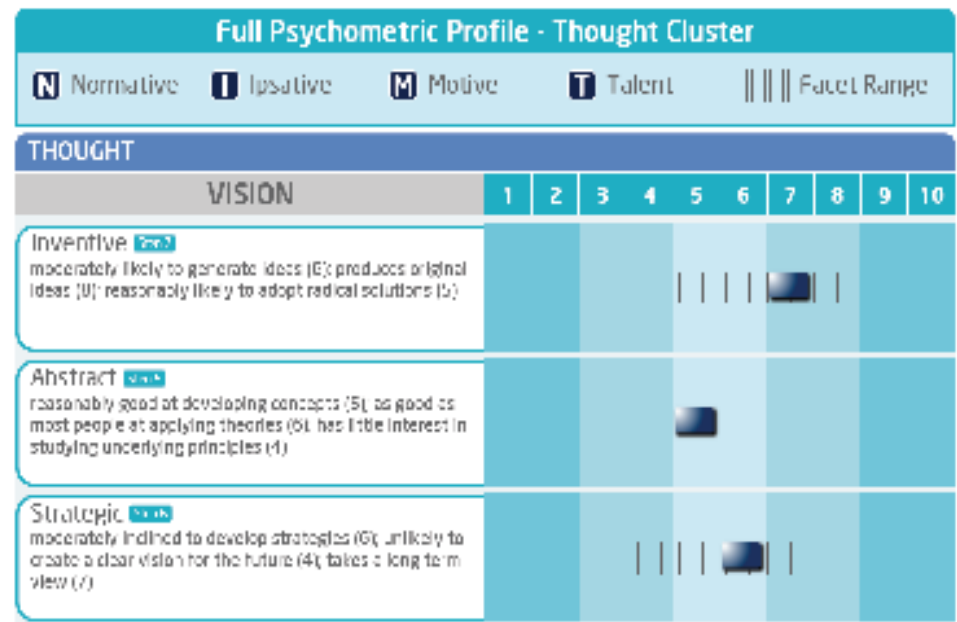


Table 3: Professional Aptitudes test validities against Educational (GCSE Points; N=227), Competency Self-Assessment (N=263) and Overall Performance Self-rating (N=263) Criteria.

	GCSE Points	Thinking Competency	Working with Words	Working with Numbers	Working with Diagrams	Overall Performance
Verbal Analysis	.50	.16	.30	.15	.16	.20
Numerical Analysis	.46	.32	.18	.44	.32	.21
Diagrammatic Analysis	.39	.22	.01	.18	.23	.08

Table 4: Co-validation Prediction of Global Performance through Occupational Personality Questionnaire and Professional Styles 'Great 8' Scores (N=169)

Criterion	Applying Specialist Expertise	Accomplishing Objectives	Demonstrating Potential	Global (Sum of 3 Items)
Predictor				
OPQ32i Corporate Leadership Score	-.04	.07	.17*	.09
Professional Styles Trait Score	.04	.24**	.22**	.21**
Professional Styles Competency Potential Score	.08	.26**	.27**	.26**

## References

- Alimo-Metcalfe, B., Alban-Metcalfe, R.J. (2001), "The development of a new transformational leadership questionnaire", *The Journal of Occupational & Organisation al Psychology*, Vol. 74 No.1, pp.1-27.
- Alimo-Metcalfe, B., Alban-Metcalfe, R.J. (2008). The impact of engaging leadership on organisation al performance. Paper presented at British Psychological Society Division of Occupational Psychology Conference, Stratford Upon Avon, January 2008
- Antonioni, D. (1996) Designing an Effective 360-Degree Appraisal Process, *Organisational Dynamics*, 2, 24-38.
- Atwater, L and Brett, J F (2005) Antecedents and consequences of reactions to developmental 360 feedback, *Journal of Vocational Behaviour*, 66, 532-548
- Atwater, L & Brett J F (2006) Feedback Format : Does it influence manager's reactions to feedback? *Journal of Occupational and Organisation al Psychology*, 79, 517-532
- Atwater, L., Roush, P. and Fischthal, A. (1995) The influence of upward feedback on self and follower ratings of leadership. *Personnel Psychology*, 48, 35–60.
- Bass, B.M., Avolio, B.J. (1990), *Transformational Leadership Development: Manual for the Multifactor Leadership Questionnaire*, Consulting Psychologists Press, Palo Alto, CA,
- Bass, B.M., Avolio, B.J., Atwater, L. (1996), "The transformational and transactional leadership of men and women", *International Review of Applied Psychology*, Vol. 45 pp.5-34.
- Avolio, B., Bass, B.M & Jung, D.I. (1995). **MLQ** Multifactor Leadership Questionnaire. Mind Garden, Redwood City, CA, 1995
- Bass, BM and Yammarino, FJ (1991) Conguence of self and others' leadership ratings of naval officers for understanding successful performance. *Journal of Applied Psychology*, 40, 437-454
- Bailey, C and Austin M. (2006) 360 Degree Feedback and Developmental Outcomes: The role of Feedback Characteristics, Self-efficacy and Importance of Feedback Dimensions to Focal Managers' Current Role, *International Journal of Selection and Assessment*, 14, 51-66
- Bailey, C and Fletcher, C (2002) The impact of multiple source feedback on management development: Findings from a longitudinal study, *Journal of Organisation al Behavior*, 23(7), 853-867.
- Carver, C. and Scheier, M. (1981) Attention and self-regulation: A control theory approach to human behavior. New York: Springer.
- Fletcher, C and Baldry, C (1999) *Multi-Source Feedback Systems: A research Perspective*, *International Review of Industrial and Organisational Psychology*. London, John Wiley and Sons Ltd.

Fletcher, C, Baldry, C and Cunningham-Snell, N (1998) The Psychometric Properties of 360-degree Feedback: An Empirical Study and a Cautionary Tale, *International Journal of Selection and Assessment*, 6, 19-33.

Gregura, G J, Ford, J M and Brutus, S (2003). Manager attention to multisource feedback. *Journal of Management Development*, 22, 345-361.

Hazucha, J F, Hezlett, SA and Schneider, RJ (1993) The Impact of 360-Degree Feedback on Management Skills Development, *Human Resource Management Journal*, 32, 325-351.

Jones, S. (2007) 'Staff Appraisals: Waste of Time'. Retrieved from <http://news.bbc.co.uk/1/hi/business/7126971.stm> on 12<sup>th</sup> December 2007

Kluger, A N and DeNisi, A (1996), The Effects of Feedback Interventions on Performance: Historical Review, a Meta-Analysis and a Preliminary Feedback Intervention Theory, *Psychological Bulletin*, 119, 254-284.

Kurz, R., Saville P. & MacIver R. (2008). Coaching using Saville Consulting Wave. In: Passmore. J. (Ed): Psychometrics in Coaching. Kogan Page, London.

Latham, G.P (2006), Work Motivation: history, theory, research and practice. London: Sage

Mabey, C (2001) Closing the circle: participant views of a 360-degree feedback programme, *Human Resource Management Journal*, 11(1), 41-53.

MacIver, R, Saville, P, Kurz, R, Mitchener, A, Mariscal, K, Parry, G, Becker, S, Saville, W, O'Connor, K, Patterson, R & Oxley, H (2006). Making Waves – Saville Consulting Wave Styles questionnaires. *Selection & Development Review*, 22 (2), pp17-23.

Marsh, H W and Roche, L A (1997) Making students' evaluations of teaching effectiveness effective - The critical issues of validity, bias, and utility. *American Psychologist*, 52(11), 1187-1197.

Maurer, T J, Mitchell, DRD & Barbeite, FG (2002) Predictors of attitudes toward a 360-degree feedback system and involvement in post-feedback management development activity. *Journal of Occupational and Organisation al Psychology*, 75(1), 87-107.

McDowall, A( 2008). Using Feedback in Coaching. In Passmore, J. (ed.). Psychometrics in Coaching. London: Kogan Page

McDowall, A & Kurz, R. (2007). Making the most of psychometric profiles – effective integration into the coaching process. *International Coaching Psychology Review*, Vol 2 (3), 299-309

Nyfield, G, Gibbons, P J, Baron, H & Robertson, I (1995). The Cross Cultural Validity of Management Assessment Methods. Paper presented at the 10th Annual SIOP Conference, Orlando, May 1995.

Smither, W, London, M and Reilly, R R (2005) Does Performance Improve Following Multisource Feedback? A Theoretical Model, Meta-Analysis, and Review Of Empirical Findings. *Personnel Psychology*, Volume 58, 33-52

Smither, J.W., London W. Flautt, R., Vargas, Y. & Kucine, I. (2003) Can working with an executive coach improve multi-source feedback ratings over time? *Personnel Psychology*, 56(1), 23-44

Yammarino, F and Atwater, L (1993), Understanding self-perception accuracy: implications for human resource management, *Human Resource Management*, 32, pp.231-47.

Yammarino, F. and Atwater, L. (1997) Do managers see themselves as others see them? *Organisation al Dynamics*, 25, 35–44.