

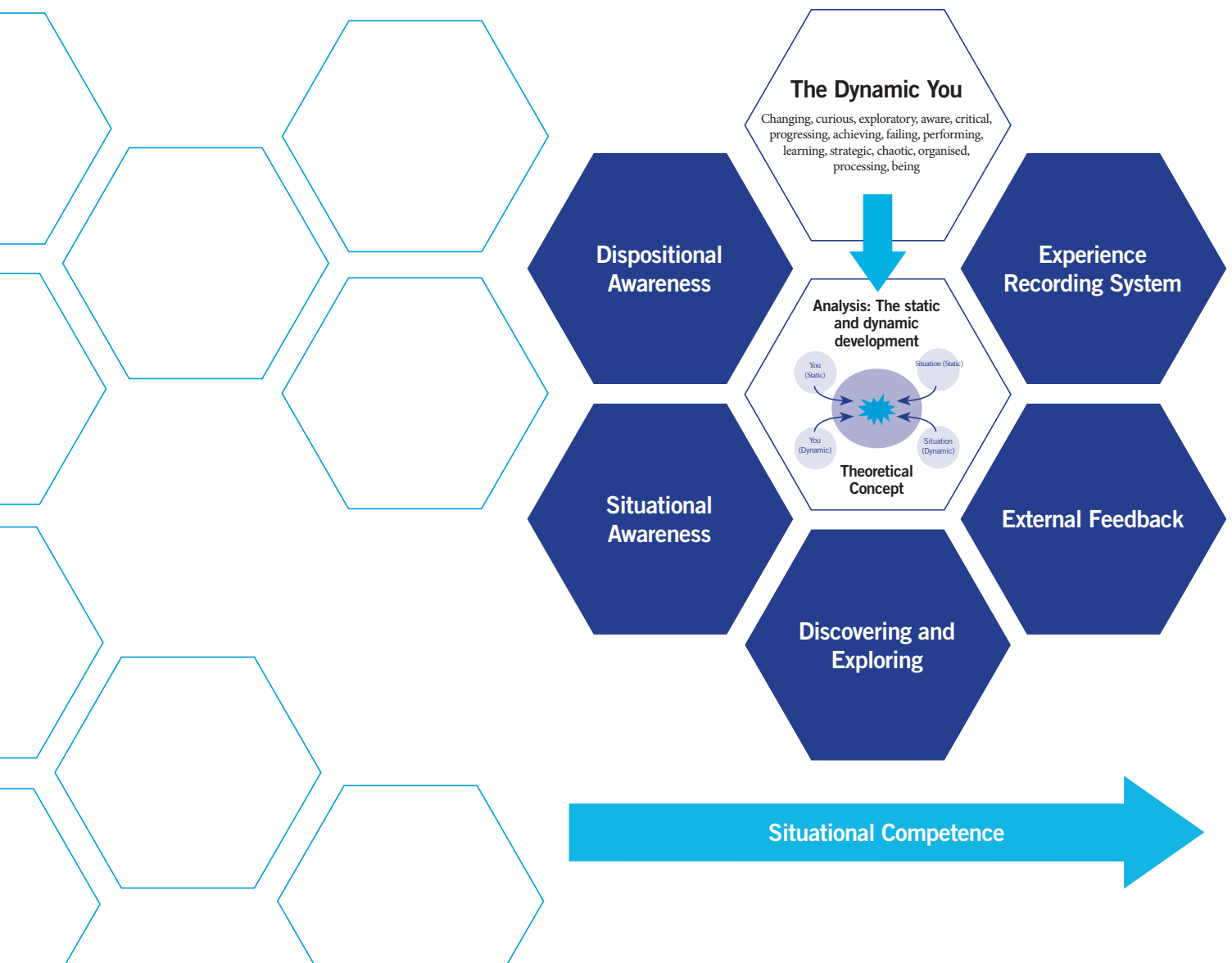


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Dynamic Development

A new approach for the personal and professional development of researchers

An Introductory Guide





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The guide has been authored by the associated development group. The lead author for the guide as a whole is the chair and where other members of the group were lead authors for specific sections this is indicated as appropriate by section in the text.

Development group:

Dr Tony Bromley, University of Leeds (Chair)

Dr Jim Boran, University of Manchester

Dr Gail de Blaquiére, Newcastle University

Sarah Gray, University of Leeds

Dr Richard Hinchcliffe, Independent consultant, previously University of Liverpool

Dr Mark Proctor, University of Sunderland

Dr Sandrine Soubes, University of Sheffield

Davina Whitnall, University of Salford

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A. Introduction

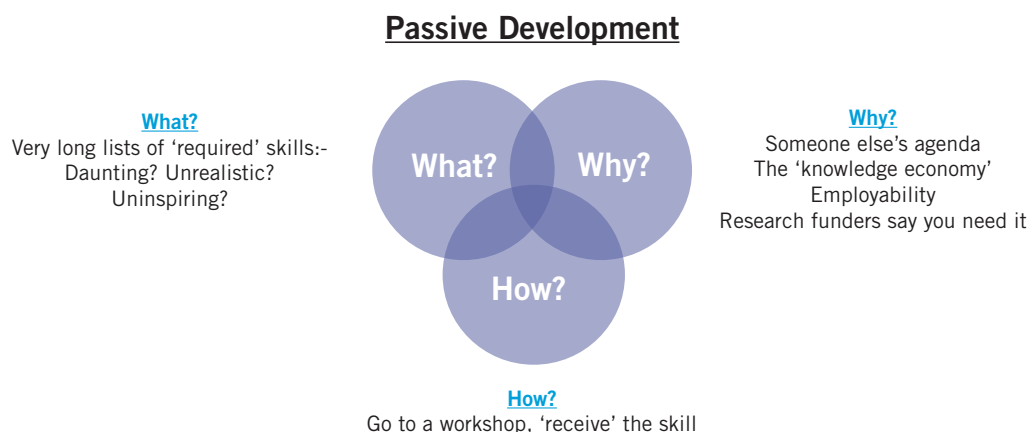


Figure 1: Posited caricaturisation of the current professional development pedagogical model from the individual participant's perspective

The Dynamic Development Model is a new approach for personal and professional development.

This guide is aimed at enabling you to take a Dynamic Development approach to your personal and professional development. In the following sections the model is presented, with the Static and Dynamic Development theoretical concept at its heart, supported by the five other aspects that constitute the Model.

A challenge to the current model for the development of researchers

We propose that current and long standing practice in the professional development sector in higher education engenders passive engagement. The 'Dynamic Development' approach acts to build active, sustainable, life-long, independence in professional development for the individual. Figure 1, provides a critical, 'caricaturisation' of the current professional development model from an individual's perspective where:

- **we tell people, 'You need transferable skills, soft skills, hard skills, employability skills etc...' and many other ill-defined terms for skills, none of which satisfactorily encapsulate meaning or understanding or provide an engaging motivator for participating.**
- **the skills 'you need' are often presented in long lists usually serving little purpose other than to demoralise in**

your inadequacy over the superiority of those seemingly with the skills.

- **that you actually have skills, doesn't seem to be readily acknowledged**
- **the reasons as to why you need these skills seem to be anything other than to do with you. 'It's for the knowledge economy', 'It's so you will be globally competitive' (whether you want to be or not), 'It's what employers want'. Etc.. What about what you want!?**
- **we will prescribe a programme of activity for you. You will attend and receive those skills from us. You will henceforth be cured skilled.**

And

- **the current development model recognises little of the development opportunity outside of scheduled activity.**

Nor

- **Does it look to build on the dynamism that exists in you already.**

Finally, the current development model we caricature as passive, has always had an 'elephant in the corner of the room' associated with it namely, you can choose not to engage with any skills development activity whatsoever and you may well be... absolutely fine.

That's a problem for skills development. Or is it?

As lead author of this guide I come from a distant time when skills terminology (soft/transferable/employability etc.) may well have been in use. However, I managed to successfully complete a degree and PhD yet I have no recollection of skills ever being mentioned. Even more amazingly, following my PhD, I became employed! And in a good job within the research and development department of a large company. I did this without ever having any employability skills training. I must be a genius! I think not.

So what is the problem here? What I am missing? We seem not to need any form of skills training? Agreed? Using my apparent 'genius' employability skills, I managed to get another job and returned to the higher education environment where I started to teach. It seemed to go well. Students learnt stuff and exams were passed (generally). It was suggested that I might register for the Postgraduate Certificate in Learning and Teaching in Higher Education. Not much point since I could clearly already teach, but you got a certificate and that seemed to be the way the profession was going. A bit of work, but nonetheless there was also the off chance I suppose I might learn something.

Now from the outset it was clear I did know something about teaching. I had picked up things along the way. What I knew started to be given names and to be put in to theoretical contexts. However, my ignorance and naivety was somewhat exposed. There are libraries full of books on pedagogical research I simply wasn't aware of, leaders in education with challenging innovative ideas I never thought of, teaching methods I'd never seen that could inspire the students I'd been working with and allow me to achieve so much more etc...

So, referring back to the 'elephant in the room', I could pick up enough to survive and become employed on my own, by my own wit and intelligence. However, I didn't know that gave me only, I'd say in the teaching example, about 10% of the knowledge, awareness and capability that I could have had. If I multiply all those 90% I was missing across communicating with people, managing people, leadership, mindfulness etc., etc., how much more could I have achieved?

Why did nobody point out there may be much I didn't know? Why did I not think this way? Why did I view something like physics differently i.e. I had no lack of awareness that I was missing at least 90% of what I

could know about physics!

Why did I not think I might be missing 90% when it comes to communicating with people? Where was my awareness? Where was my thinking? Where was my challenging? Why was I not taught any sort of model that would illustrate these things to me, help me be more aware, help me understand and analyse, help me develop?

I was still developing outside of any formalised development provision, but the notion of my personal or professional development wasn't something I particularly recognised, understood, engaged with or built upon. In contemporary times the existence of what we caricature here as a passive development approach, is at least a step forward for general awareness of personal and professional development, but what about engagement? With an active model of development (that also recognises and supports development outside of formalised provision) perhaps the elephant leaves the room?

Reflecting on the discussion so far and to summarise, a number of aspects become emergent in thinking of how to move from a passive to an active approach for development and in doing so, to begin to address the many questions we have raised. To begin with what are our key principles of a new approach?

Dynamic Development Principles:

- **The researcher has autonomy over the means of learning**
- **Researchers engage of their own free will**
- **Researchers devise or agree with the 'tutor', the method and process by which professional development will occur**
- **The 'tutor' does not direct or instruct but acts as a guide assisting learners to gain the most from the resources at their disposal**

What else do we need?

An **underpinning theoretical** concept of development that inherently engenders active engagement in development for the individual is needed, a concept that provides greater understanding of skills than previous attempts and provides a meaningful language alternative to common parlance (the afore critiqued soft skills, employability skills etc.), a concept that

provides a framework for self-analysis, self-awareness and for gaining self-understanding that can be a life-long reference point that can exist and function valuably for the individual independently of a training and development practitioner or the training room, a model that helps the individual to develop their own personalised thinking on professional development and what works for them and hence has a long term sustainability. However, to achieve sustainability, the theoretical concept needs also to be supported by a number of enabling aspects:

1. **A development recording system.** Firstly, the system needs to work for the individual. It may well be very simple and does not have to be, for example, an extended reflective log, unless of course that is the individual's preference. Whatever, it must be the individual's choice. In terms of understanding individual development, some way of recording an individual's development, thinking, and analysis is needed, such that they can see progression.
2. **External feedback is needed:** Developing the ability to ask for and listen to critique, to be honest with ourselves, to accept praise, to have reference points for what is a high level of ability in an area and how that compares with us. Without an external reference point an individual may well be over critical or over confident. How do any of us know how good we are?
3. **People need to go out and discover and explore.** If someone is going to actively develop they need to participate, they need to take control, they need drive to get out there and look. Without drive development won't prosper. A workshop is only one small fraction of the opportunities out there to further professional development. There needs to be motivation, to explore all the development opportunities there are.
4. **People need to develop situational awareness contextualised for themselves.** If we can gain understanding of situations particularly before jumping 'head first' in to them, with self-awareness we may be able to be better prepared for how we will respond to a situation and how we can best manage, develop and grow in that situation. We may learn what we are best at and what is best left for others. We may make better choices for ourselves.
5. **Finally, we need to support people to develop their dispositional awareness.** Who am I? What do I value? What motivates me? What do I like? What don't I like? What do I enjoy? What do I find easy? What do I find difficult?

And most importantly of all, you need to be at the centre

of your development.

Figure 2 encapsulates the bullet points above and presents the 'Dynamic Development Model' in diagrammatic form.

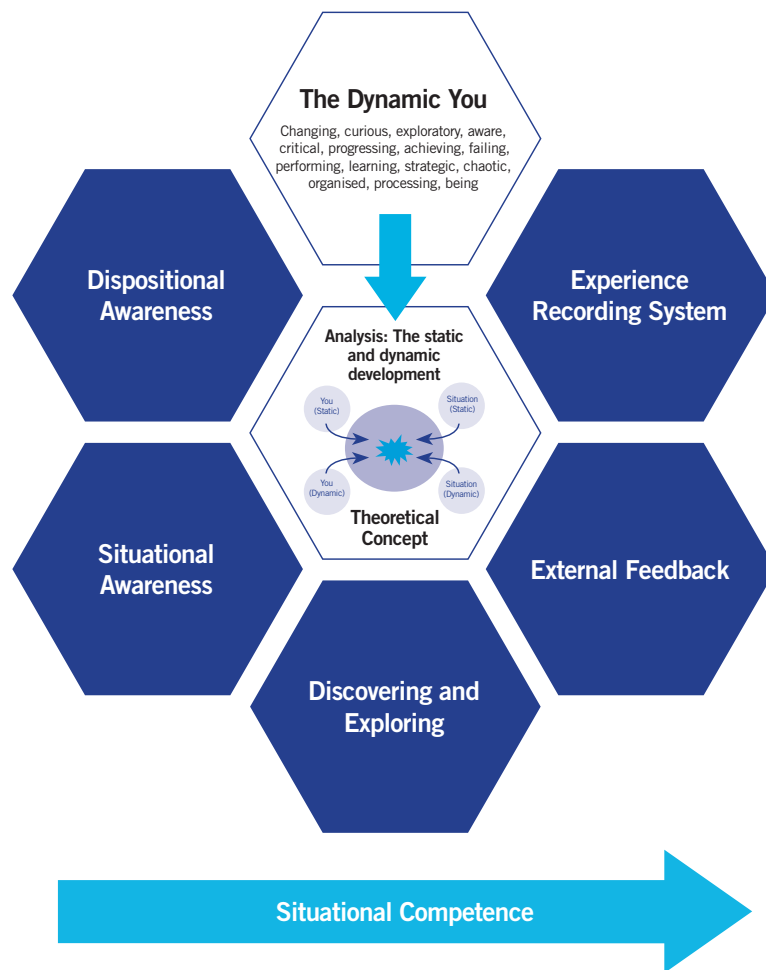


Figure 2: The Dynamic Development Model in diagrammatic form.

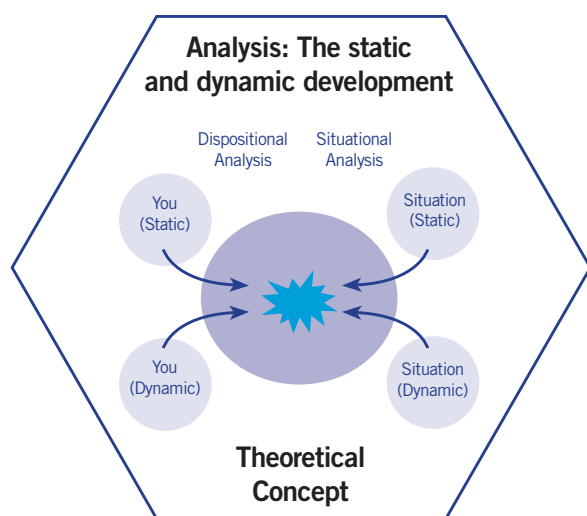
B. The Dynamic Development Model explained

We now consider in some detail each of the six areas (Figure 2) that constitute the Dynamic Development Model:

- **The static and dynamic development theoretical concept. This is the theoretical concept which sits at the 'heart' of the model and pulls together learning from the other five components**
- **Experience recording system**
- **External feedback**
- **Discovering and exploring**
- **Situational awareness**
- **Dispositional awareness**

And be aware that everything is dynamic. Everything you learn and understand about your self and situations can change with you and your development.

The static and dynamic development theoretical concept



lifelong learning, knowledge, instrument, tool, device, implement, vehicle, dashboard,

Introducing the 'Static and Dynamic' professional development theoretical model

Introduction

The Static and Dynamic Development (SDD) theoretical concept sits at the heart of the Dynamic Development Model, mutually supported by the five other components

of the model detailed in the sections that follow.

The concept acts as a tool that you can use to help analyse, understand and support your self-awareness, situational awareness and understanding of self in a given situation. It is hoped that this will act to provide sustainability for your professional development in the long term as you can refer back to the model at any time and reflect on your development.

It is also a key new aspect for personal and professional development. In previous approaches an explanatory professional development model has not been put forward, rather individualised skills have been 'taught' without an underpinning, explanatory model to pull things together for the individual. In the Dynamic Development model the SDD concept is used to pull together learning from the other five components of the model.

Situational competence: an alternative to 'Skill'

Firstly arising from the underpinning, we suggest key points of language as offer of alternative to 'soft', 'hard', 'transferable' etc...

Definitions:

- **Managing the dynamic and static components of a situation and within you, to a successful outcome, demonstrates situational competence.**
- **A dynamic component has a sense of momentum in a situation or in you.**
- **A static component has a sense of no change, stability and consistency in a situation or in you.**

The theoretical underpinning of the static and dynamic theoretical concept¹

The theoretical thinking behind the SDD concept emerged from previous work (by the lead author of this guide) evaluating the impact of researcher training and development activity². In deriving that evaluation methodology, the work of Pawson and Tilley on realistic evaluation³ and the work of Kirkpatrick and Kirkpatrick⁴ on evaluating training and development, was drawn upon⁵.

Stepping on from the evaluation work, a theoretical perspective for professional development was presented (by the lead author) at the 2015 Researcher Education and Development Scholarship (REDS) Conference, *'In theory – A realist approach to the development of*

1. This section is an adapted extract from: Bromley, T., (2017) "From passive to active development; the Static and Dynamic Development (SDD) model", in Bromley, T. (Ed.), Vitae Occasional Papers Volume 4. A collection of papers from the Vitae Researcher Development International Conference, 12-13 September 2016, Manchester, UK The Careers Research and Advisory Centre (CRAC) Limited, Cambridge, pp. 15 – 22. <https://www.vitae.ac.uk/vitae-publications/guides-briefings-and-information/vitae-occasional-papers-2016.pdf> (Accessed 25th July 2018)
2. Bromley, T. (2012), "Impact Framework 2012: Revisiting the Rugby Team Impact Framework," available at <https://www.vitae.ac.uk/vitae-publications/reports/ieg-report-2012.pdf/view> (accessed 30th March 2017).
3. Pawson, R., and Tilley, N. (1997), Realistic Evaluation, SAGE Publications, London.

researchers⁶. In hindsight, the REDS paper was a precursor paper to the SDD concept.

The development in the theoretical thinking from the evaluation context to a professional development concept can be outlined as follows:

Realist evaluation considers what are termed C-M-O relationships; namely the consideration of and relationship between a 'Context', a 'Mechanism' that acts, and the related 'Outcome' emergent from the action of that 'Mechanism' in that particular 'Context'.

Kirkpatrick provides, what might be termed, a 'logic diagram' for the learning and development of an individual suggesting steps in an individual's response to a training and development activity as; reaction; learning; behavioural change; outcome.

Bringing the idea of realist evaluation together with the proposal of Kirkpatrick might suggest that, there is a learning 'context' in which Kirkpatrick's learning 'logic diagram' acts within the individual as a learning and development 'mechanism' that leads to an 'outcome'. This combining of the ideas of Realist Evaluation and Kirkpatrick has been published in more detail elsewhere [Bromley 2009]⁷.

If the Kirkpatrick logic diagram is considered as a learning and development mechanism, then it is proposed that, inherently, 'mechanism' has a sense of dynamism as does learning and development in the individual. Mechanism is not static, it has a sense of self momentum. Mechanism is dynamic. Secondly, it is proposed that context has a sense of being static. There may well be different contexts and there may be change in the context but the context is inherently more predictable.

An outcome of the above thinking is that there might be value, in respect of the development of people, in considering what might be 'static' and 'dynamic' characteristics of the individual, what might be 'static' and 'dynamic' characteristics of a situation and how those individual (dispositional⁸) and situational 'dynamic' and 'static' components might interplay. This is the static and dynamic theoretical concept; SDD model.

Figure 3 provides a diagrammatic representation of the SDD Model which we have come to describe as the 'Game Board'. The Game Board acts as a tool to provide a visualisation of an individual's dispositional and situational analysis of a given situation.

Firstly considering the individual and to begin with a dispositional analysis, a number of approaches could be considered.

For illustrative simplicity, Table 1 lists the outcome of a Myers Briggs Type Indicator^{9, 10} and Strengths Finder¹¹ analysis of the author.

Myers Briggs Type Indicator	Strengthfinder
Introvert; Intuitive; Feeling; Judging	Futuristic; Learner; Developer; Strategic; Learner

Table 1: The MBTI and Strengths Finder attributes of the author.

Regardless of any situation, any of the attributes listed in table 1 might, in general, be static or, in general, be dynamic. It is a static factor that 'I like to learn' however on a particular day for a specific situation, 'I need to learn' might become a driver (dynamic) of behaviour.

There might well also be, for example, personal values that generally act as drivers. For more simple terms 'I like a plan' may be a static, but when the individual is placed in a perceived chaotic situation 'I like a plan' may become the driver (dynamic) 'I need a plan'.

What we have described in this paragraph is dispositional awareness for the individual. We now need to build on dispositional awareness toward dispositional analysis for a given situation.

4. Kirkpatrick, D. L., and Kirkpatrick, J. D. (2006), Evaluating Training Programmes, Third Edition, Berrett-Koehler Publishers Inc., San Francisco.
5. Bromley, T., Metcalfe, J and Park, C. (2008), "The Rugby Team Impact Framework" available at <http://www.sddu.leeds.ac.uk/wp-content/uploads/2016/02/Rugby-Impact-Framework2008.pdf> (Accessed 30th March 2017).
6. The presentation is downloadable from the conference website <https://www.sheffield.ac.uk/ris/ecr/events/reds2015> (accessed 28th March 2017).
7. Bromley, T. (2009), Evaluating Training and Development Programmes for Postgraduate and Newer Researchers Society for Research into Higher Education series Issues in Postgraduate Education: Management, Teaching and Supervision. London, available at http://www.srhe.ac.uk/publications/guides_on_postgraduate_issues.asp (accessed 25th July 2018).
8. The word 'disposition' is commonly used in psychology fields whereas 'personal' is commonly used in professional development fields. We use the word 'disposition' as we believe it is better defined and as such more accurately describes our conception than the word 'personal' in this context.
9. See <http://www.myersbriggs.org> (accessed 25th July 2018).
10. We have used MBTI here for illustration as it is a widely used technique across the personal and professional development sector with reference to disposition. However we do acknowledge the critique of such techniques. Which is something to consider. MBTI is not part of the Dynamic Development Model and need not be used.
11. See <https://www.gallupstrengthscenter.com/home/en-us> (accessed 25th July 2018).

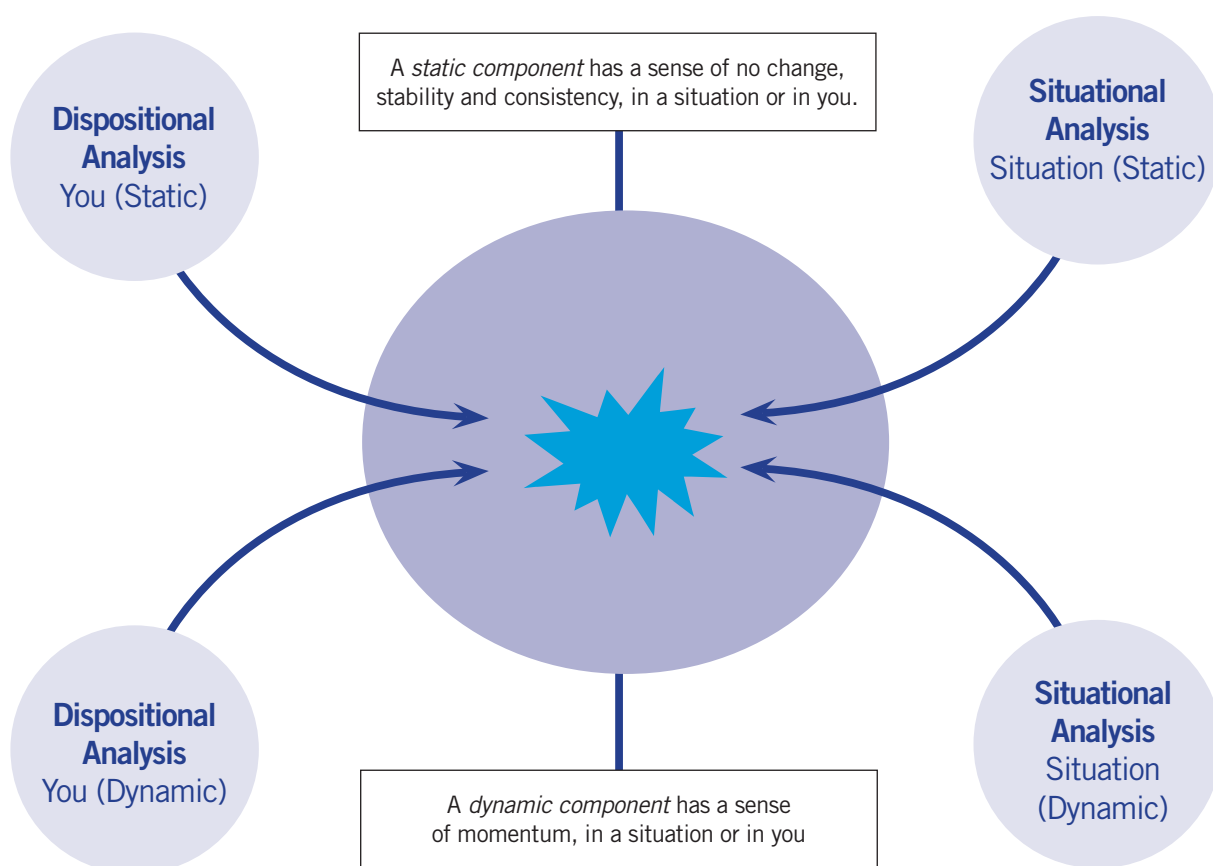


Figure 3: The Game Board: A diagrammatic representation of the SDD model.

In Figure 4, we introduce a situation and start using the Game Board to analyse the situation for the individual.

The right hand side of Figure 4 proposes a situational analysis of a conference presentation considering what might be important static and dynamic factors. The left hand side considers which dispositional factors (from Table 1) may be most relevant for the conference presentation situation. Remember this is an illustration from the individuals perspective (i.e. in this example, the author). Were you to do your own analysis, you may well construct Figure 4 differently. That is important as it is you that is at the centre of the dynamic development approach.

By way of analysis, dispositional factors 'Strategic', 'Feeling' and 'Introverted' were selected as important statics for presenting. And in addition the preference for there being a plan. 'Achieving' was seen here as a dynamic

driver and expressed as a 'need to achieve'. Also newly introduced was 'confidence', recognising that confidence varied and was dynamic for the author in the situation 'conference presentation'.

In the situational analysis, aspects of conference presentation seen as consistent and non-changing during presentation (static) were: PowerPoint slides, the location, preparation and practice of the presentation done beforehand, the research ideas expressed in the slides, the subject knowledge inherent in the individual. Seen as situationally dynamic were: the audience, the question and answer session, and the schedule of the presentation (e.g. overruns of other presenters).

Finally, highlighted in red in Figure 4, is part of the analysis of the conference situation for the individual proposing factors that might dominate for that individual in the particular situation. That there is an audience plays against the introverted disposition and also that the audience is dynamic and hence changing, potentially unpredictably, also challenges the 'need a plan'.

The audience aren't 'planned' and adhering to a script. However, the 'need to achieve' driver can help overcome

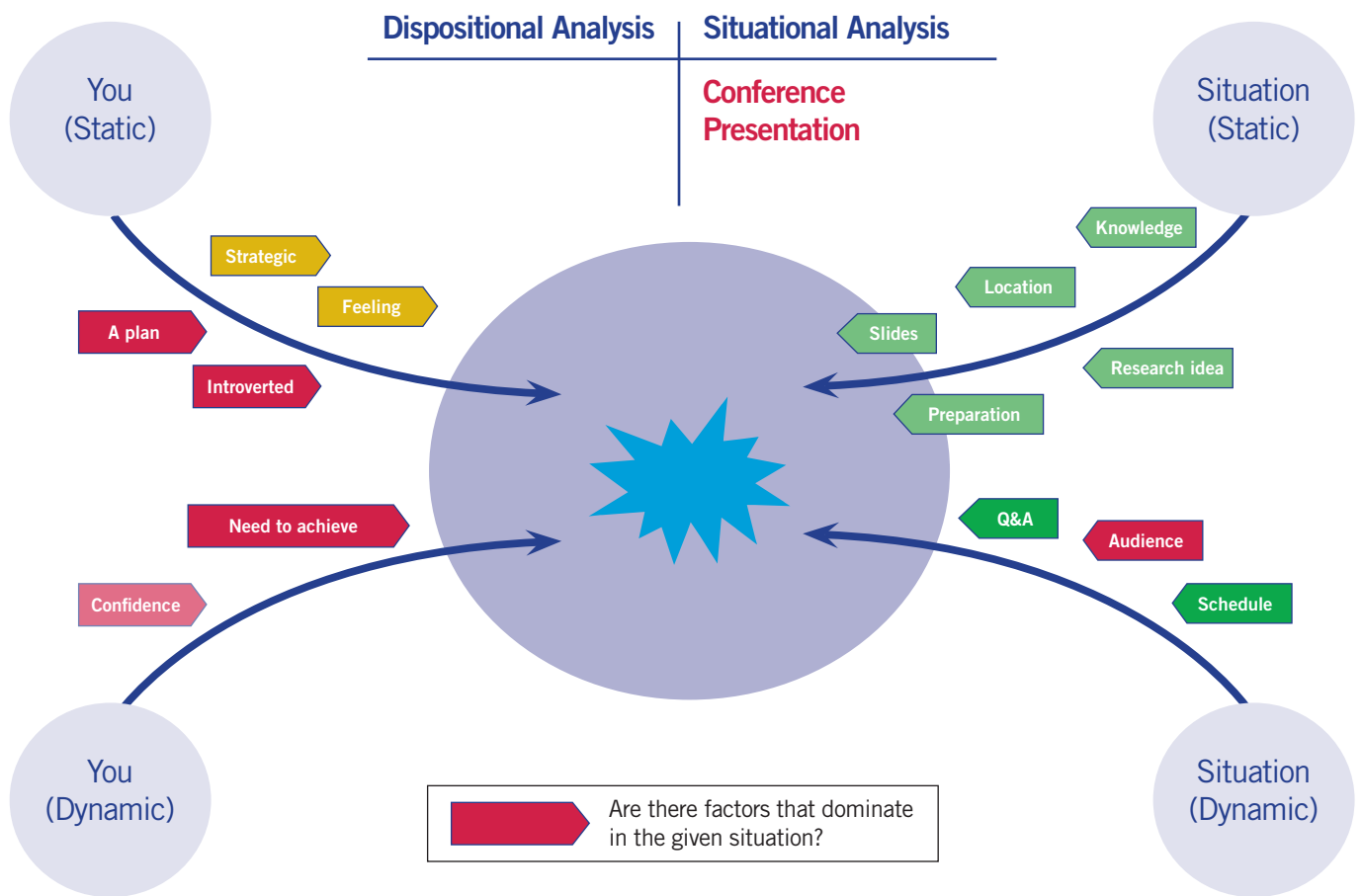


Figure 4: A dispositional and situational analysis diagrammatic representation using the Game Board for the situation of: conference presentation.

both the static dispositional aspects. There is a drive to do a successful presentation to get new ideas across.

So to re-cap, an hypothesis of the Static and Dynamic Development model is that an understanding of dynamic and static factors characteristic to the individual (disposition), combined with an analysis of the static and dynamic factors in a given situation, will aid an individual in understanding themselves in the given situation. The understanding will support them in recognising what they may need to do in terms of their own personal and professional development with reference to the situation. And that might be that they need to understand more about the situation or themselves before further reflection.

The potential of the Static and Dynamic development concept

It becomes apparent that in considering the idea of 'static' and 'dynamic' components with reference to development, an alternative language to skills emerges as defined earlier

in the section, 'situational competence'.

In analysing the situation of presenting (Figure 4), the SDD approach in effect dissects and therefore expresses in more depth the presenting situation from the perspective of a specific individual (the author). The application of the static and dynamic concept provides a much more 'live', 'three dimensional' and individually relevant expression of presenting than is achievable in comparison to presenting simply appearing on a listing of skills and more easily supports an individual to place themselves in the situation of presenting.

This SDD concept should support better, and more practical, understanding of a situation and self-analysis of development. It may well also be supportive in development terms in that it is unlikely that any individual lacks ability in all the different static and dynamic components of presenting identified. The expression of other situations in static and dynamic terms by those expert in the situation may also provide a valuable resource for learning. As individuals dissect situations

for themselves in these terms they will, additionally, build a personal resource of various situational perspectives, presented in their own terms, to reflect upon.

Expressing situations in static and dynamic terms suggests situations are a composite of many components. There may well be commonality between static and dynamic components in different situations. For example, an accomplished presenter can manage an audience (dynamic) as can an accomplished teacher; ‘managing an audience’ being common to both situations. Rather than the notion that skills are transferable it might be better to understand that mastery of a static or a dynamic component of one situation may have commonality with another situation.

The following extract comes from a paper by McAlpine¹² who studied early career researchers transitioning in their roles, ‘Becoming a PI¹³: From doing to managing research’.

‘Thus, though getting the grant was a positive experience, individuals found themselves dealing with new challenges (not doing ‘what I thought I would be doing’ (Juliet)) which many characterized as a shift in perspective from ‘doing’ to ‘managing’ research – ‘become a manager’ (Sam).

All but Romeo and Will described a range of responsibilities they had to take on that they were not prepared for: managing the grant (Jerry), dealing with people (e.g. Frances, Fiona), managing the team (e.g. Pedro, Fabien, Jerry), line managing individuals (e.g. Laura, Cathy) as well as setting priorities amongst tasks (e.g. Mike), negotiating the ‘political’ environment (e.g. Fabien), developing a management style (e.g. Greg, Geoff, Victor), getting people to do things they don’t want to do (e.g. Dan).’

[Source: McAlpine 2016]

If the McAlpine quote is considered from a ‘static’ and ‘dynamic’ personal and professional development framing then it appears that the transition is one of working with and familiarity of ‘static components’ (paragraph 1) to having to successfully learn how to work with dynamic components (paragraph 2).

Table 2: expresses this notion of ‘Static’ and ‘Dynamic’ further.

So two questions to ponder in respect of ‘static’ and ‘dynamic’ might be:-

1. Do higher education institutions traditionally engender development of ‘Static components’? Hence they don’t engender development of the full set of components

Static components	Dynamic components
Preparing presentation slides	Managing an audience
Project planning	Managing a project
Writing a business plan	Running a business start up
Writing a funding application	Managing a funded project
Writing interview questions	Interviewing
Writing a review of management theories	Managing people
Being able to understand	Being able to teach

Table 2: An illustration of ‘static’ or ‘dynamic’ framing.

(static and dynamic) of a situation.

2. Do employers actually want understanding *and* competence in managing the ‘static’ and ‘dynamic components’ i.e. situational competence?

Experience recording system¹⁴



Online tools, LinkedIn, Personal Portfolio, HEAR, memory, trauma, diary, PDR, recollection, personal journal, blog.

In order to be able to see progress you are making you will need to have some form of recording system so that you can look back as a reference point. The system needs to be your choice and one that you feel comfortable using.

You may feel that pen and paper is quick, simple, works adequately well, and will not break down. So, you may wish to focus on pen and paper approaches.

12. McAlpine, L. (2016), “Becoming a PI: From ‘doing’ to ‘managing’ research”, Teaching in Higher Education, Vol. 21 No. 1, pp. 49-63.

13. PI – The ‘Principal Investigator’ on a research project.

14. Lead author of this section Mark Proctor

You may feel that the best experiential recording system is your own memory because you are tuned into a learning model which develops muscle memory: a critical incident can reveal a weakness making an individual feel 'consciously incompetent', they learn by going through a 'consciously competent' stage to arrive at an 'unconsciously competence' stage. Then, something may create another critical incident during their practice and initiate another learning cycle. The classic examples here are learning to drive a car or possibly reacting to classroom dynamics to learn by doing.

If you focus on electronic systems, these systems need to be decided on a case by case basis because they need to be personalised as Beetham et al¹⁵ describe so you can own and manage your learning. Again find the one that works for you.

For further details refer to the 'Experience Recording: using different E-systems' section of this guide.

External feedback



External voices: Sources of wisdom, coaching, supervision, friendship, collegiality, feedback, 360° appraisal, assessment, motivation, peer pressure, antipathy, admiration

'How might you gain feedback that you value and trust in a safe way?'

For Dynamic Development to be a self-sustaining developmental model, it has to be applicable and effective for you without the need for a structured professional development programme and regardless of the career path you take. To support your developmental reflections you will need to have people you trust and are comfortable in seeking feedback from. We are not always the best judge of our abilities! Make sure you 'sound out' your trusted people on conclusions you come to about your development.

Look to become comfortable in soliciting feedback, listening to it, reflecting upon it and using it. Feedback might come from a friend, colleague, mentor, etc..

Looking in to the ideas of ideas of coaching and mentoring will be useful here. Even where you don't have access to a structured programme of coaching and/or mentoring, understanding coaching and mentoring concepts can help you seek aspects of these concepts in your informal relationships.

Discovering and exploring



Seeking, resource investigating, checking out, stumbling upon, curiosity interest, inquisitiveness, adventure, monitoring, debating

We believe that development will occur anyway, even where an individual is not consciously engaged or active in their development. However, we propose that the pace of development will vary.

To understand what you could do, what you could achieve, you need exposure to possibility. An active individual will seek opportunity. We can't force people to be active or motivated in their development. This one is over to you. It is difficult to fully gain situational awareness without experiencing the situation. Get out there and explore!

Speak with somebody you know well, about a situational competence that you believes the person is better at than you are. 'Interview' the person about what they do, why they do it, what their perspective is, what they think are key parts of being successful in the situation.

Look for 'opportunities' everywhere from which you can learn and develop. Perhaps the opportunity for public engagement, the opportunity to organise or apply for funding etc.

Explore employment opportunities and consider the situational competencies you have in relation to those asked for in a respective job description. Look at how they might develop further situational competencies to increase our capital. (For a discussion of 'capital' see part C

15. Beetham, H., McGill, L. and Littlejohn, A. (2009), "Thriving in the 21st century: Learning literacies for the digital age (LLiDA project): Executive Summary, Conclusions and recommendations", available at <http://oro.open.ac.uk/52237/1/llidaexecsumjune2009.pdf> (accessed 25th July 2018).

‘Understanding and building potential futures’.)

Situational awareness



Seeing, understanding, analysing, interpreting, checking, experimenting, reflecting

Alongside dispositional awareness, developing an increasing understanding of situations from the individual's perspective is crucial to the success of the dynamic development model. This is in two parts; how do you the researcher 'characterise' or 'perceive' a given situation and how do you see yourself in that situation?

Use of the SDD model supports development of situational awareness. So make sure you revisit 'The static and dynamic development theoretical concept' section and the examples of using the gameboard provided at the back of this guide,

There is also opportunity to draw from the wealth of methodological experience particularly from the social sciences in the observation of situations.

More simply, for example, utilise common forms such as those used to provide feedback on presentations to support your analysis of situations. Look to practice observing situations in dynamic and static terms and then check your understanding with someone you feel is really competent in the situation you have observed.

Dispositional awareness



Internal voices: goals, feelings, ambitions, needs, desires, self-discipline, responsibility, beliefs, motivations, confidence, insecurity, behaviours, attributes

Looking outside: Needs of others, employers, teams, colleagues, economy, institutions, governments, community, empathising, fearing, politics, philosophy, belief systems, interpreting, evaluating

Alongside situational awareness, developing an increasing understanding of your disposition is crucial to the success of the dynamic development model. There are many ways that this can be done. Again, we suggest using the Static and Dynamic concept and the examples provided at the end of this guide.

The SDD Game Board blank (Figure 3) can also be an effective coaching tool used on a one-to-one basis. This is something you could introduce in to either formal or informal coaching relationships you have. The tool can help you to consider and express situations in more depth, which can lead to better conversations about respective situations and how the you sees yourself in those situations.

We would also encourage a broad exposure to the range of techniques and ideas commonly used to support learning about disposition. See what works for you, but be aware of the qualifiers and critiques of the various ideas that exist. Common ideas include Myers-Briggs Type Indicators (MBTI), Belbin team roles, Neuro-Linguistic Programming (NLP), strengths-finder, 360 degree analysis, etc.

C. From situational competence to capital,¹⁶ to potential futures

As we said from the beginning, the dynamic development model aims to support autonomous, sustainable development. Through the use of the model, we aim for you to build situational competencies. We also aim to illustrate and recognise the competencies you have and for you to build upon them.

Here we consider how to look at your situational competencies as a portfolio, and how that can support you in understanding potential future employment opportunities. We do this by introducing the concept of 'capital'. In her research on conceptions of researcher development in the post-Roberts period, Soubes (2017)¹⁷ proposed the use of the sociological concept of 'capital' in supporting researchers to navigate the academic research landscape. The French sociologist Pierre Bourdieu developed a number of key concepts (e.g. capital, habitus, field) which have been used by higher education scholars (Soubes, 2017) and have shown to be extremely useful in understanding mechanisms of academic reproduction. Academic reproduction represents the mechanisms by which researchers come to know how to behave, how to act, how to be academics.

This relates to the concept of habitus: "a system of dispositions, that is of permanent manners of being, seeing, acting and thinking, or a system of long-lasting (rather than permanent) schemes or schemata or structures of perception, conception and action." (Bourdieu, 2005)¹⁸. Learning to inhabit academia is linked to educational and family background as well as research socialization. Researchers are socialized to academic life through their undergraduate studies and the influence of their PhD supervisors and research environment. The transition of researchers in the fields of doctoral and postdoctoral research can be understood as a process whereby different types of capital are acquired and accumulated. Capital represents what is valued in the social space in question.

In the field of research, 3 types of capital can be identified:

- **Scientific or research capital**
- **Academic capital**
- **Social capital**

Scientific or research capital:

relates to research and its forms of recognition, such as papers and grants, but also approaches to developing scientific knowledge and expertise. While it may be considered as the most valued form of capital in the research environment, practices that mediate its accumulation may vary.

Academic capital:

relates to knowledge about how to do things in academia,

such as knowing about funders, writing applications, or engagement in activities beyond the restricted focus of the principal investigator/ research supervisor's research project. It includes activities considered peripheral, such as teaching or public engagement.

Social capital:

relates to connection to a broad network that brings substantial symbolic capital.

Now we apply this concept more broadly, reflecting the range of careers open to researchers. Regardless of the career move, even be it within academia from postgraduate research through to academic¹⁹, there are transitions along the way. Similarly in accessing the full choice of careers open to researchers, there are transitions to negotiate. We can restate our earlier sentence more broadly, 'The transition of researchers can be understood as a process whereby different types of capital are acquired and accumulated. Capital represents what is valued in the social space in question.' And we can reframe and add to our previous expression of capital as follows:

Expertise capital:

relates to research and other approaches to developing knowledge and expertise. And also to the knowledge and expertise that is developed.

Operational capital:

relates to knowledge about how to do things in a particular field which we sub divide into:

- **Academic field: such as knowing about funders, writing applications, or engagement in activities beyond the restricted focus of the principal investigator/ research supervisor's research project. It includes activities considered peripheral, such as teaching or public engagement.**
- **Non-academic field: As we are all starting here from the academic field we create this rather large category of 'non-academic' as the alternative, for illustration. As an individual, if there is a specific field you would like to transition in to you can do a more focused analysis of that specific field. The field might be (as examples) the charity sector; financial sector; industrial sector, healthcare, etc.**

Social capital:

relates to connection to a broad network that brings substantial symbolic capital, which, as above, we sub divide into:

- **Academic field**
- **Non-academic field**

16. Lead author of this section: Sandrine Soubes

17. Soubes, S., (2017), Postdoctoral researcher development in the sciences: a Bourdieusian analysis, EdD thesis, University of Sheffield, available at <http://etheses.whiterose.ac.uk/18296/> (accessed 25th July 2018).

18. Bourdieu, P. (2005). Habitus. In J. Hillier & E. Rooksby (Eds.), *Habitus: a sense of place*, 2nd ed., Farnham and Burlington: Ashgate pp. 43-53.

19. Statistically speaking the majority of researchers do not follow this career pathway. See <https://www.vitae.ac.uk/impact-and-evaluation/what-do-researchers-do> (accessed 17_05_2018)

These different forms of capital can be gained during doctoral and postdoctoral periods through building situational competencies in each of the three areas of capital (Table 3). However, the volumes and overall configuration of capital researchers gain play a role in how researchers are able to navigate both their current field of research and beyond. The shape of researchers' capital represents a form of power; it contributes to positioning them in different transition zones in their professional environment. Volumes and configurations of capital will contribute to the types of transitions researchers feel able to undertake in their professional lives. The logic (the type of capital valued) of different professional fields varies greatly. A certain volume/ configuration is likely to make transition towards fellowships/ lectureship more likely than others; while other volume/ configurations of capital may facilitate easier transition towards particular non- academic professional environments.

Your challenge is to develop a balanced volume configuration of capital that not only allows you to be well positioned in the field of research (if you wish to undertake an academic career), yet at the same time does not undermine your positioning within other professional fields. The notion of balanced configuration is critical to facilitate ease in transition. A researcher with an unbalanced configuration may find their career transitions more challenging.

Table 3 (on page 22) proposes a range of situational competencies that be might developed as a researcher, mapped into one of the three categories of capital we presented earlier: expertise, operational and social. In considering this list, also look at the balance for academic and non-academic fields. Thinking of situational competencies in a capital context provides another perspective in which to consider the static and dynamic components of respective situational competencies; which components are only relevant to a specific academic field?; which components are broadly non-field specific i.e. they would be relevant in a range of fields inside or outside of academia? You may also find that an entire situational competency is non-field specific rather than just respective individual components.

Job descriptions are commonly expressed in competencies. How does a given job description map against the capital categories? Through building your situational competencies, how much capital have you developed in each of the areas? What career options does your current capital portfolio offer offer you? Be clear that Table 3 is only one illustration and your personal table may well be different. Indeed, you may not preference the construction of any table at all! After all - we did critique long lists in our opening challenge to current professional development practice in this guide, (although in this case the list would be the researcher's). Should you

wish to develop a list of your own capital you can download a blank from the website: www.sdduonline.leeds.ac.uk/dynamic-development.

Regardless of a list, we would encourage you to at least think about your range of situational competencies, what capital that provides, and what employment opportunities the capital opens up for you. Particularly consider capital in terms of non-academic fields.

An alternative to training needs analysis

The concept of capital can also offer an alternative to traditional training needs analysis approaches. It would not be unusual for a new postgraduate researcher to carry out a training needs analysis in the early stages of their research, compared against a list of 'required' skills, identifying the gaps for which they 'need' training. This is commonly critiqued²⁰ as a 'deficit' approach, looking at self and considering what is missing.

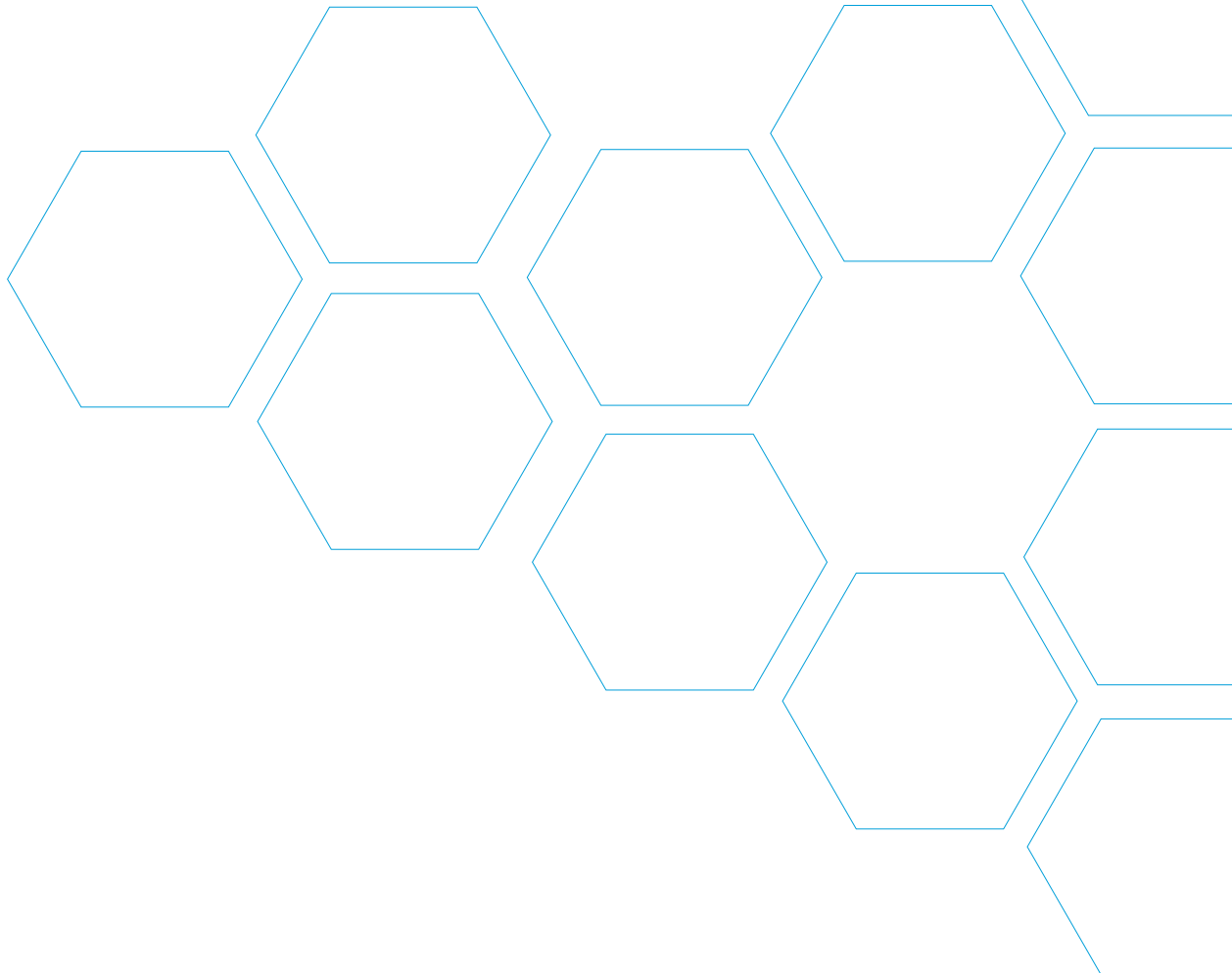
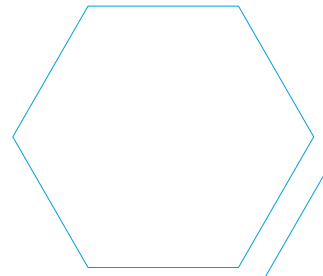
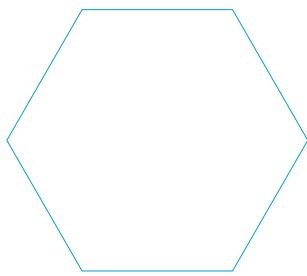
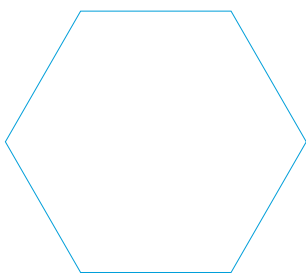
Alternatively, taking a Dynamic Development approach, at the start of a research degree we could explain the ideas of situational competence and capital before asking researchers to think about the situational competencies they already have and how that translates to the capital they already have. And then the researcher could consider the capital they'd like to add to whatever they already have.

This may well be a far more positive experience!

20. For example as expressed by my colleague Dr Helen Morley who I thank for inspiring this section of text

Potential evidence to demonstrate situational competencies:		
Expertise Capital	Operational Capital	Social Capital
Developing expertise in new techniques/ methodology	Developing projects: different from research contract project	Working with known/renowned PI or PhD supervisor (pedigree)
Applying techniques to new system (e.g. to new model organism) or bringing new techniques to own research system Connecting different areas of research	Accessing independent funding (e.g. Research funding, travel funds, outreach funding) <ul style="list-style-type: none"> - Experience of applying for funding - Experience of being successful in accessing funding - Understanding of the expectation of funders and how to write a funding application - Awareness of the funders and areas with availability of funding 	Institutional location of UG/PhD degrees
Gaining broader knowledge by changing field, topic or area of research	Participating in non-research activities: <ul style="list-style-type: none"> - Being a Postdoc representative on a departmental, faculty or university committee - Establishing a research network - Delivering outreach and public engagement activities contributing to the impact agenda 	Rank of the institution where research projects have taken place and/or renowned research group
Developing a good publication record	Teaching: <ul style="list-style-type: none"> - Formal or informal - Sought or imposed 	Size of the research group
Publishing in high impact factor journals	Supervision of UG/ Masters students on project developed by Postdoc	Possession of own collaborators, independently from PI
Receiving prizes	Being a reviewer for journals or funders	Being known by others in the research field as having a specific, particular expertise
Developing instruments, techniques, methodologies usable by others	Reflection: on previous experiences and considering other options	Experience of interactions with senior academics
Developing new research ideas or focusing on a research aspect that no one else is looking at.	Negotiating with PI that side projects and fellowship applications are as important objectives as research project objectives.	Convincing experts to help you
Continuing to engage in project after funding has run out	Changing lab when having learnt enough techniques or realising it may not be a good enough research environment anymore	Socialising with other researchers
Adaptability in research approach (changing approach if something else better appears even if different from written funded application).	Organising research conference, choosing topics, keynote speakers, introducing and chairing sessions.	Negotiating job location with family needs (not capital in itself but element mediating other forms of capital)

Table 3: Examples of potential evidence demonstrating situational competencies and hence acquisition of capital (Adapted from Soubes, 2017)



D. Dynamic Development resources

Dispositions and situations expressed in static and dynamic components

By way of further illustration and to support understanding, this section provides a number of examples of skills that have been 'unpicked' using the Static and Dynamic Development theoretical concept.

Remember that this is an analysis of a situation and reflection by the individual, of that situation, for them. You may well see things differently, but the analysis will still support understanding.

Example 1: Conference presentation (Tony Bromley)

Example 2: Confidence development (Davina Whitnall)

Example 3: Interdisciplinary working (Gail de-Blaquiere)

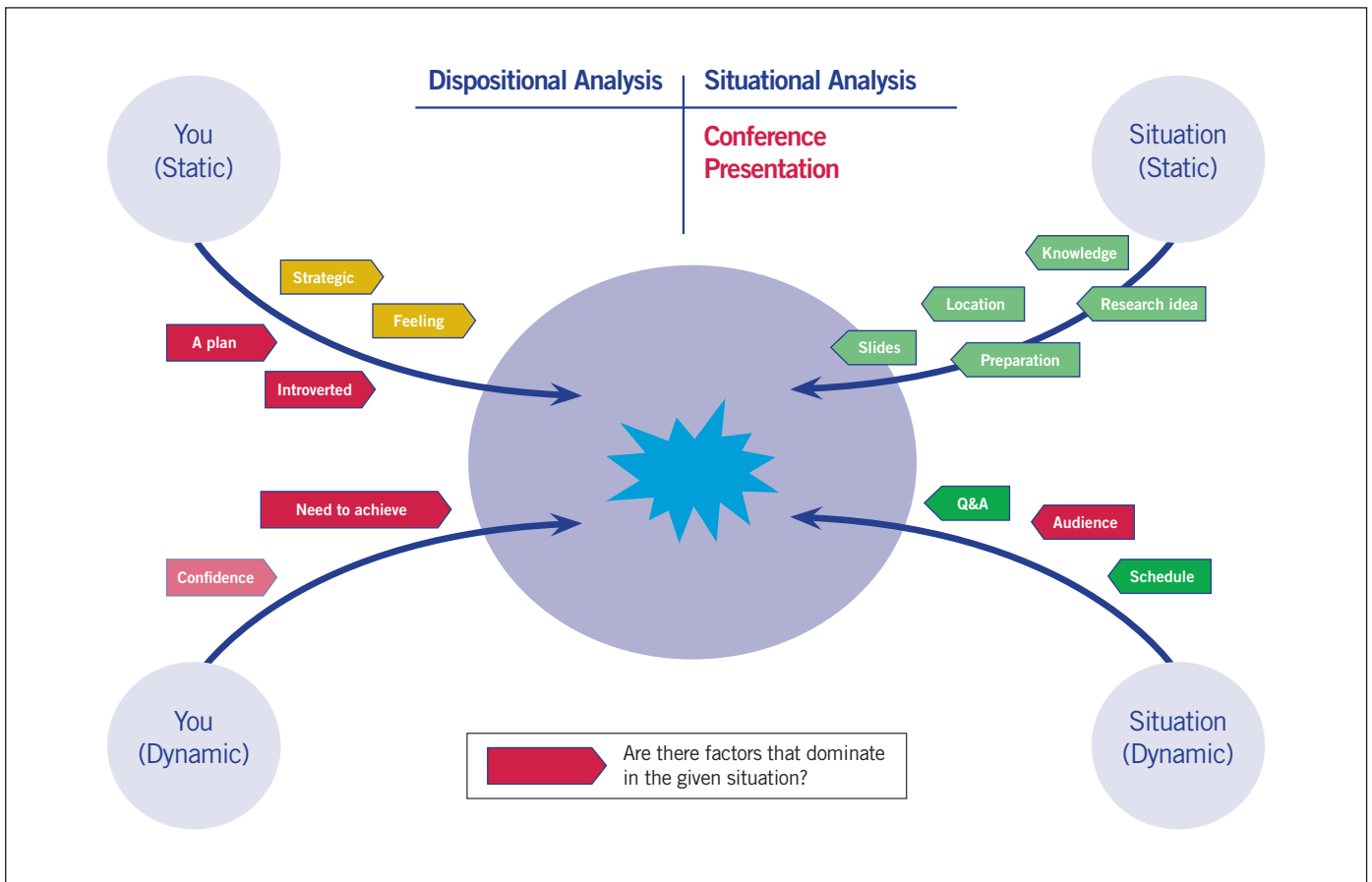
Example 4: Leadership (Tony Bromley)

Example 5: Project management (Tony Bromley)

Example 6: Strategic reading (Mark Proctor)

Example 7: Working with integrity (Gail de-Blaquiere)

Example 1: Conference presentation



Explanation (Tony Bromley perspective)

I looked at this in the first instance, from the perspective of my identified dispositional factors characterised as per the table below:

Myers Briggs Type Indicator	Strengthfinder
Introvert; Intuitive; Feeling; Judging	Futuristic; Learner; Developer; Strategic; Learner

The right hand side of the diagram proposes my situational analysis of a conference presentation considering what I see as important static and dynamic factors. The left hand side includes the dispositional factors from my table above which I think are, for me, the most relevant to the conference presentation situation.

By way of analysis, dispositional factors 'Strategic', 'Feeling' and 'Introverted' were selected as important statics for presenting. And in addition the preference for there being a plan.

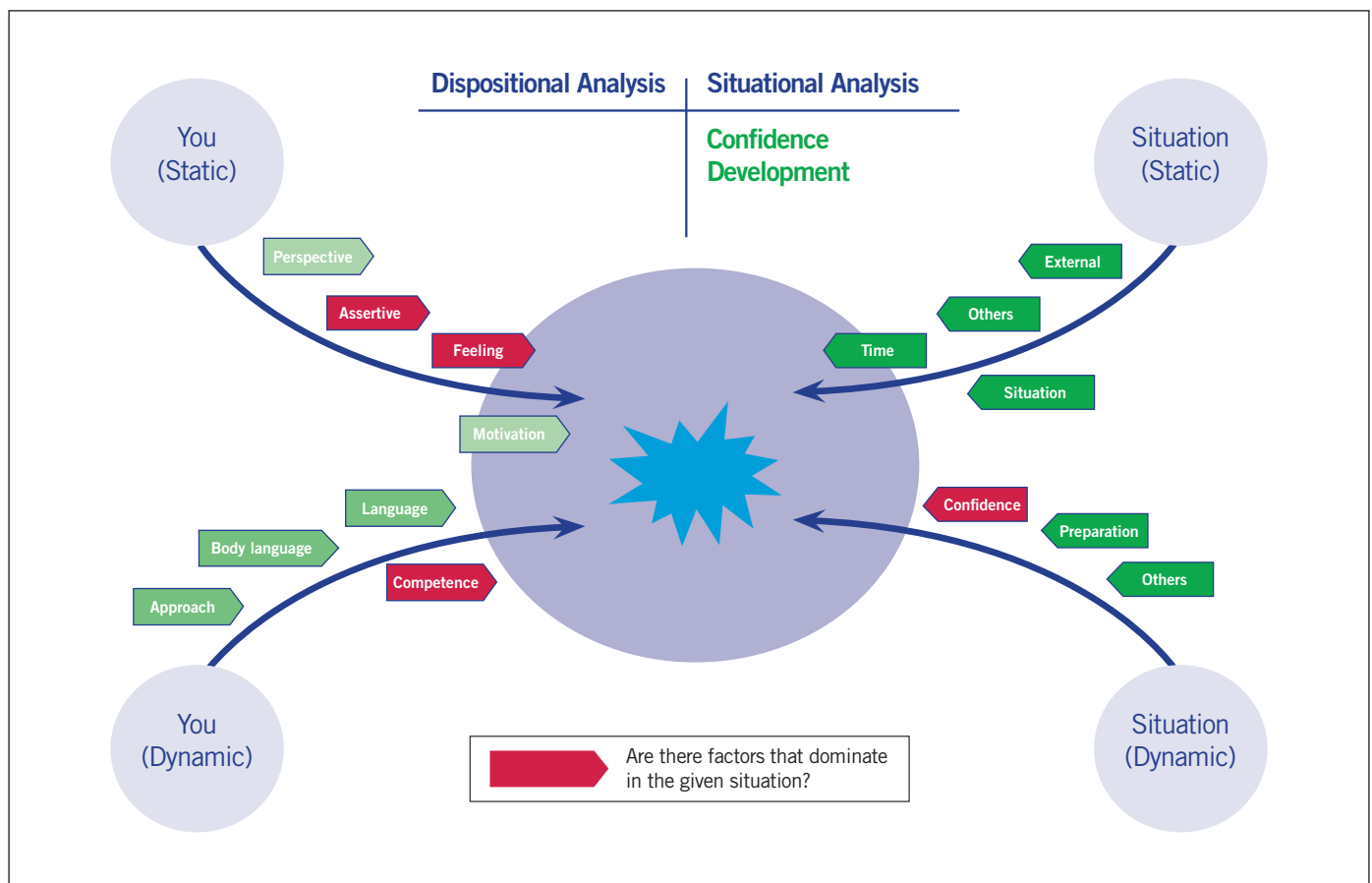
'Achieving' was seen here as a dynamic driver and expressed as a 'need to achieve'. Also newly introduced was 'confidence', recognising that confidence varied and was dynamic for the author in the situation 'conference presentation'.

In situational analysis, aspects of conference presentation seen as consistent and non-changing during the presentation (static) were, PowerPoint slides, the location, preparation (e.g. practice of the presentation done beforehand), the research ideas expressed in the slides and the subject knowledge inherent in the individual. Seen as situationally dynamic were, the audience, the question and answer session and the schedule of the presentation (e.g. overruns of other presenters).

Finally, highlighted in red are factors that might be dominant for me in the particular situation. That there is an audience plays against the introverted disposition and also that the audience is dynamic and hence changing, potentially unpredictably, also challenges the 'plan'.

The audience aren't 'planned' and adhering to a script. However, the 'need to achieve' driver can help overcome both the static dispositional aspects. There is a drive to do a successful presentation to get new ideas across.

Example 2: Confidence development



Explanation (Davina Whitnall perspective)

Situation (static):

The situational static represents the fixed environment that fosters confidence. These are the elements that promote or hinder confidence development such as time, others or the situation itself. These elements are often perceived as fixed and immovable with limits to how they can be changed or developed.

Situation (Dynamic):

The Dynamic position considers what can actually be done to improve confidence within these fixed boundaries. The individual is encouraged to consider confidence more deeply and how this could be improved. A good exercise is to consider a situation when you felt most confident.

You (Static):

The static situation for confidence identifies all of the attributes that you would associate with having confidence such as assertiveness, finding your voice, feeling capable and having the motivation to do this.

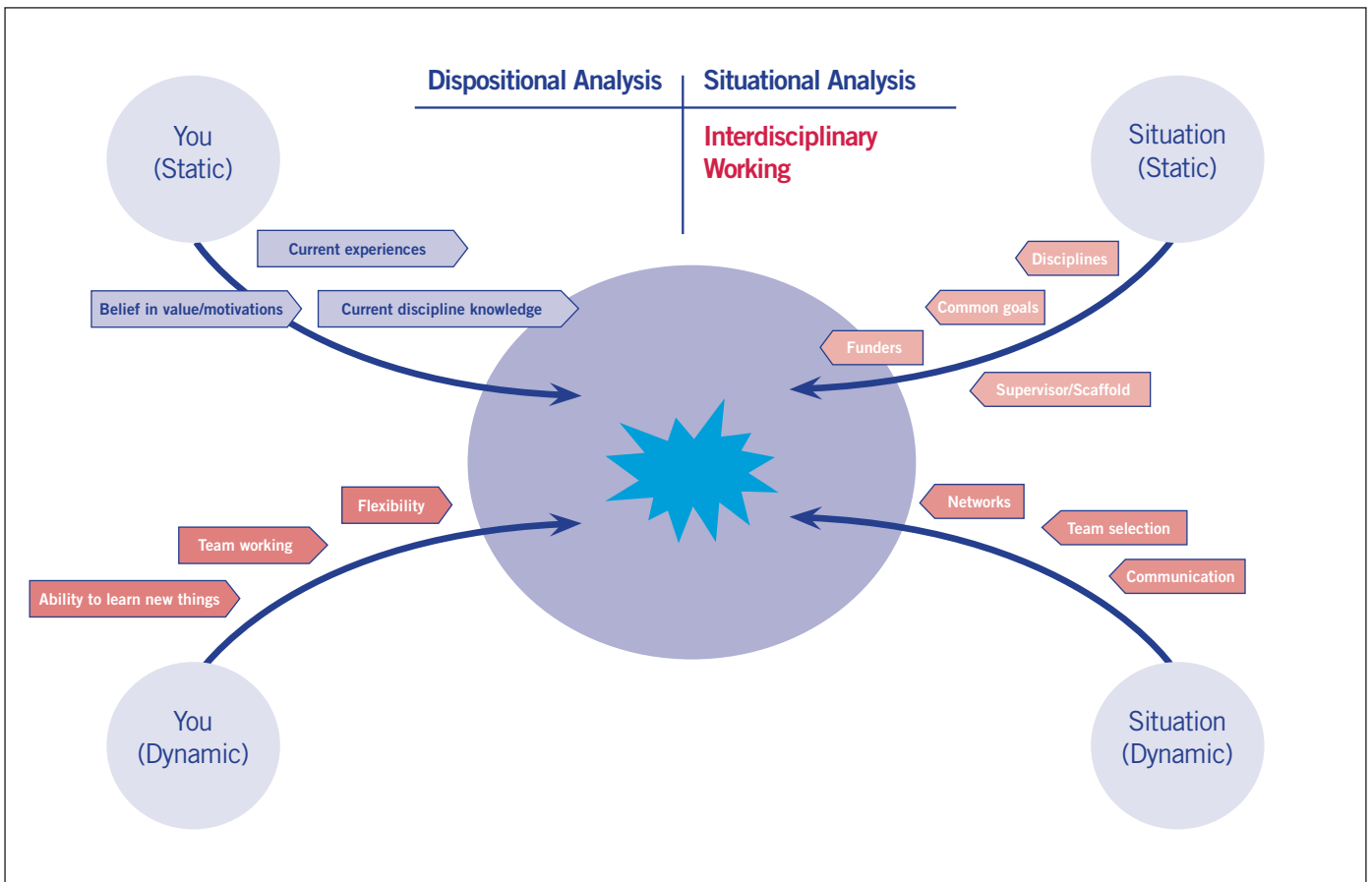
The static position reflects on what you think is needed and the sort of behaviour that would be considered confident behaviour. This is best used in the broadest sense as everyone perceives confidence differently as well as having varying confidence development needs.

You (Dynamic):

The Dynamic position focuses on the detail of developing confidence and what this means in tangible terms. Once output of this is that considering this detail, generates a 'to do' list of development opportunity such as developing competence, positive body language etc.

Developing Competence also begins to move toward the situational analysis as this may be more fixed in terms of time or opportunity and may not just be subjective to the individual.

Example 3: Interdisciplinary working



Explanation (Gail de Blaquiére perspective)

Situation (Static):

Static elements in this situation relate to the current research landscape which, though changing, is based in traditional academic disciplines. Most Supervisors/PIs will be experts in a particular area, and aiming for the student/project to achieve successful results and be completed on time. Funders may have clear aims for the research outcomes and its impact.

Situation (Dynamic):

Dynamic elements could include the disciplines and expertise in interdisciplinary working of the supervisory team the size and breadth of networks available to the project and the level of communication between the parties on the focus and outcomes of the research.

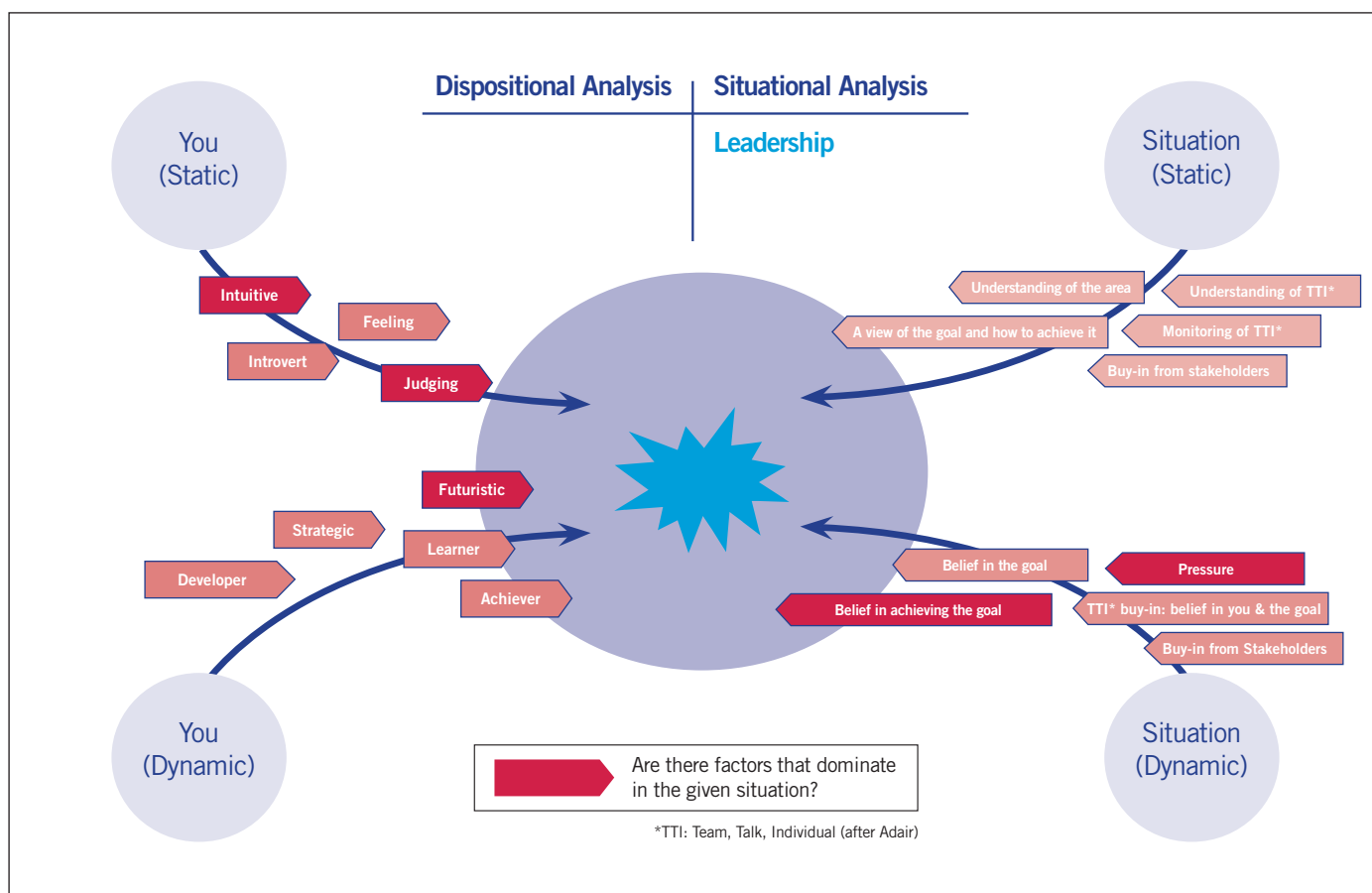
You (Static):

Static elements will be based on your knowledge and current experience in your discipline together with the amount of belief and motivation you bring to the project.

You (Dynamic):

Dynamic elements will come into play with your level of ability to learn new knowledge, methods or understanding different disciplinary norms, your capacity to work successfully with evolving teams and your flexibility during the project.

Example 4: Leadership



Explanation (Tony Bromley perspective)

Situation (static):

In terms of situation static I have listed things I see as foundations that need to be in place in respect of leadership. I think you need an understanding of the area and some basic understanding of leadership principles, which could be your personally developed ideas, rather than taught models. I think you need some goal/vision of what you are trying to achieve and also at least some initial buy-in to the vision by someone other than yourself. I think if you have no idea of where you want to head (vision) it is difficult (but not impossible) to lead.

Situation (Dynamic):

I think that if you are leading a group of people, either directly or indirectly, that their (and your) belief in the vision/ goal can be variable, it is dynamic and not necessarily predictable. As you and they invest more, and with that understand more, belief can grow but can alternatively dissipate. I think the same is true of belief in whether the goal/vision is practically achievable. This is true of any stakeholders in the vision. Finally there will be varying pressure to succeed from self and stakeholders.

You (Static):

There are many ways of looking at this. I have listed all the outcomes of my Myers-Briggs Type Indicator analysis as static factors to see if it tells me anything about how I experience leadership.

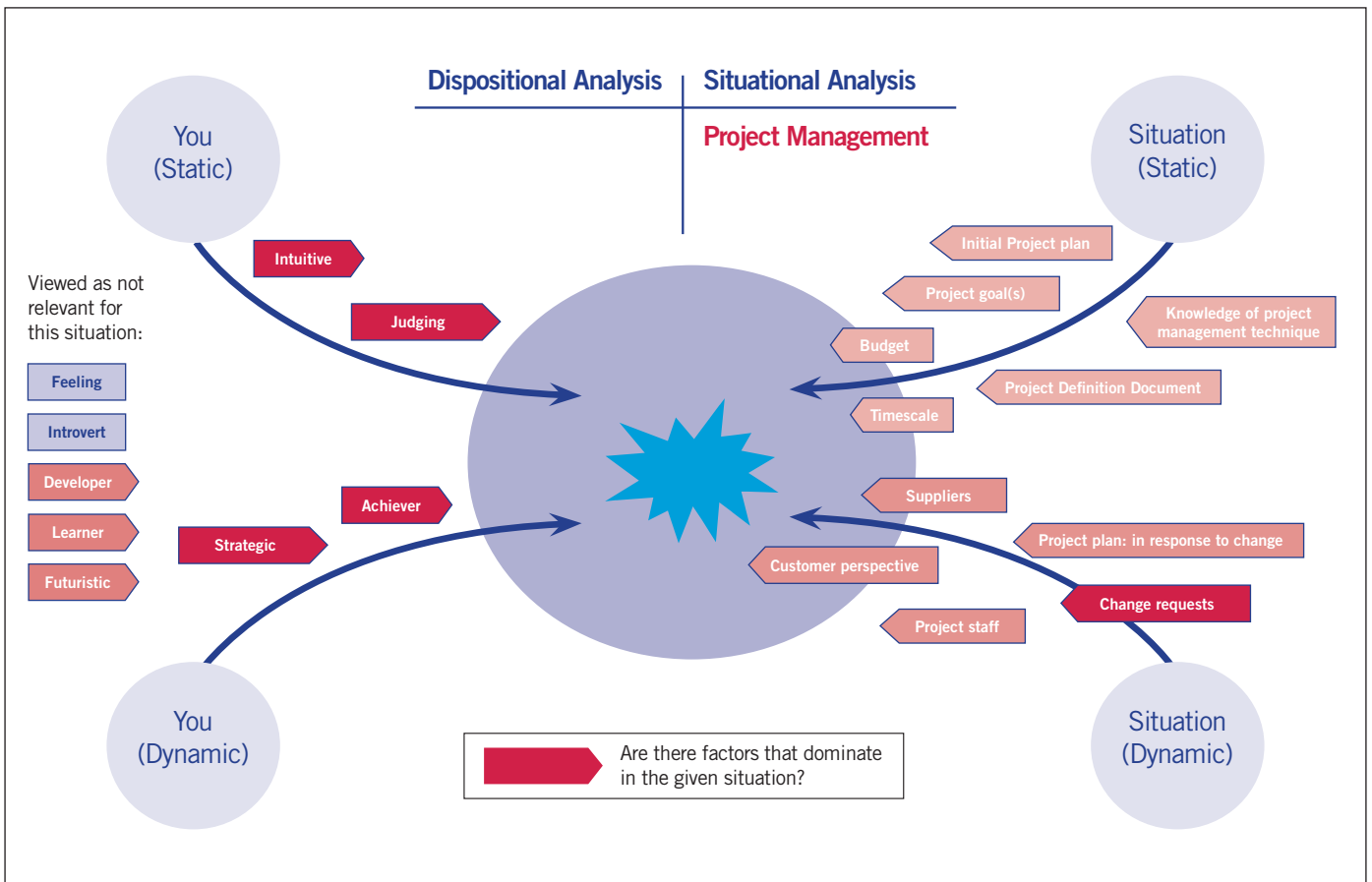
You (Dynamic):

For dynamic factors for this analysis, I have considered my top 5 strengths as determined by a 'Strengths finder' analysis. I've chosen these as dynamic because, to me, they have a sense of movement and are driving me. I am driven to achieve, to learn, to develop things, etc.

Analysis:

Me in this Situation: For me personally the dominant factor here is my drive for future thinking and to change that future (futuristic dynamic in red). I always want to change futures, improve, innovate and create something better (or at least what I perceive as better!). However, this in itself will create an additional personal pressure on top of the leadership situational pressure that exist to achieve a goal/vision. The intuitive aspect in me should help in seeing the 'big picture' and managing the ups and downs of belief in a group in respect of the goal/vision. The judging aspect should support keeping to task and staying organised.

Example 5: Project management



Explanation (Tony Bromley perspective)

Situation (static):

I would see project planning as a static. It is relatively easy to work out a plan. You need a plan that is, time-bound and expressed diagrammatically with a Gantt chart(s). You need a project definition and a clear outcome target for the project and you need a budget. However any project manager will tell you that the plan is great until people (dynamic) get involved!

Situation (Dynamic):

The dynamics all relate to the people involved in the project, and managing changes to plans that they create. The aspects I've listed as dynamic can all be categorised as change either by request or by default. The project management situational competence is in managing all this change to still deliver the project. Customer views change, suppliers don't deliver to time and project staff come in and out of the project etc. All dynamic!

You (Static):

There are many ways of looking at this. I have listed the outcome of my Myers-Briggs Type Indicator analysis as static factors to see if it tells me anything about how I experience project management. Although potentially things might change, I do recognise myself consistently (static) as for example an 'introverted thinker' as described by MBTI.

I've also put 'Feeling' and 'Introvert' to one side here, as I don't think they are particularly relevant for me to this situation. The plan sets the rules so that is that! This gives me some sense of detachment in that if there is disagreement, I'm just working to the plan.

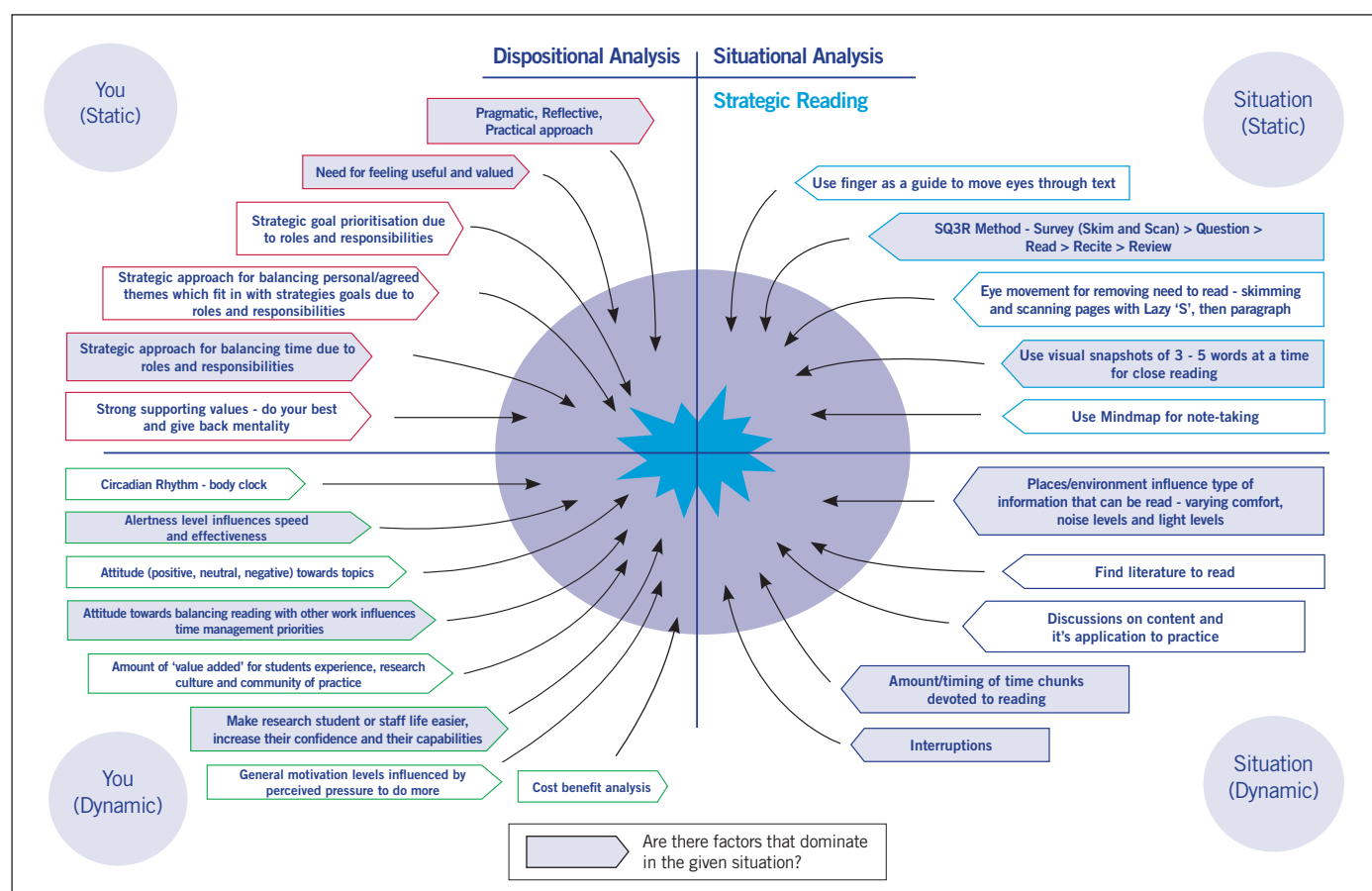
You (Dynamic):

For dynamic factors for this analysis, I have considered my top 5 strengths as determined by a 'Strengths finder' analysis. I've chosen these as dynamic because they to me have a sense of movement and of driving me. I am driven to achieve, to learn and to develop things. I have also put 'Developer', 'Learner' and 'Futuristic' to one side as I don't think they are relevant to this situation.

Analysis:

Me in this Situation: I have strategic drivers and achiever drivers (dynamics) which should support delivery of a project. I need to finish the project. But it is handling the situational dynamics that is the issue. Those aspects weren't part of my plan! However, project management technique has an approach for how to handle change requests. My intuitive static contributes the preference for thinking problems through which is useful here and should help thought in changing plans. My judging preference leads me to want an orderly life. And this fits well with the themes of project management.

Example 6: Strategic reading



Explanation (Mark Proctor perspective)

What influences my strategic reading practice and how can I do better?

In this example, I used the SDD model to analyse the complex relationship I have with strategic reading.

Why focus on strategic reading?

I have been using strategic reading approaches for 10 years since I attended a reading workshop. However, I think that my effectiveness in doing this varies because I do my reading in bursts - sometimes I'm happy with my approach and other times I'm not so happy with it - which makes me question the way I priorities my time and manage it. So, I wished to identify rapid reading processes to consider how I use them. I wished to identify why I approach reading in the ways I do. I also wished to uncover related strategies that I have adopted and embedded in my decision-making processes as tacit knowledge. By doing this, I wanted to decide if I was happy with my approaches or evaluate new ways of working.

My approach for the 'Situational Analysis' side of SDD model.

By reflecting on what I learnt in a strategic reading workshop 10 years ago using the STARL-P framework, I was able to identify strategic reading processes to include in the model.

Almost all of these were placed on the 'Situational Analysis' side of SDD model. The exception was the statement 'Alertness level influences speed and effectiveness' which was dispositional, so this was placed on the 'Person profiling' side of the model in the 'You (Dynamic)' section.

My approach for the 'Person Profiling' side of the SDD model.

I believed that I needed to use a 'deeper' reflexive approach to understanding why I do things. To be able to uncover this type of information fully, I needed to draw on knowledge that I had gained by completing several styles questionnaires: for learning styles; for personality styles; for leadership styles; and for management styles. I also needed to draw on my personal and professional life-stories to uncover my values, my beliefs and my life-positions; all in a focused and useful way. Some information I wanted would be about 'You (Static)', which included: core values; beliefs; life-positions; and dominant personality traits. Other information I wanted would be about 'You (Dynamic)', because they were affected by the environment, such as: my feelings, my attitudes, and my motivation levels.

So I interviewed myself using a number of critical questions. I created the questions to help me reveal this type of information in relation to prioritising my time, managing my time, and reading in the way I do.

I tailored these questions to be in the context of work. Questions included: Consider times when you have, as well as have not, used strategic reading at work. Answer the following questions, then consider their impact on your strategic reading using the SDD model:

In one sentence, as a mission statement, describe a personal reason for doing your job? What is it that makes reading so important? What are your core beliefs which you use to prioritise reading the way you do? What are your core beliefs which you use to balance time? What are your dominant approaches to reading? How would you describe your dominant strategic reading style? What needs to happen for you to be able to do your job and use reading in an effective useful way? What other needs do you have generally?

Make a list of things which interrupt you whilst reading. Make a list of reasons why you value reading. What distracts you from your plan? What is it about you which drives you to succeed at work? What demotivates you? What motivates you? How do these affect your feelings towards reading at work? What do you do to decide whether or not to read strategically? What else affects reading? How do they affect reading?

N.B. In the model, I recorded detailed strategic statements and actions to enabling me to make sense of what I had learnt here - without needing to apply the full evaluation again, and in a way which could inform my practices.

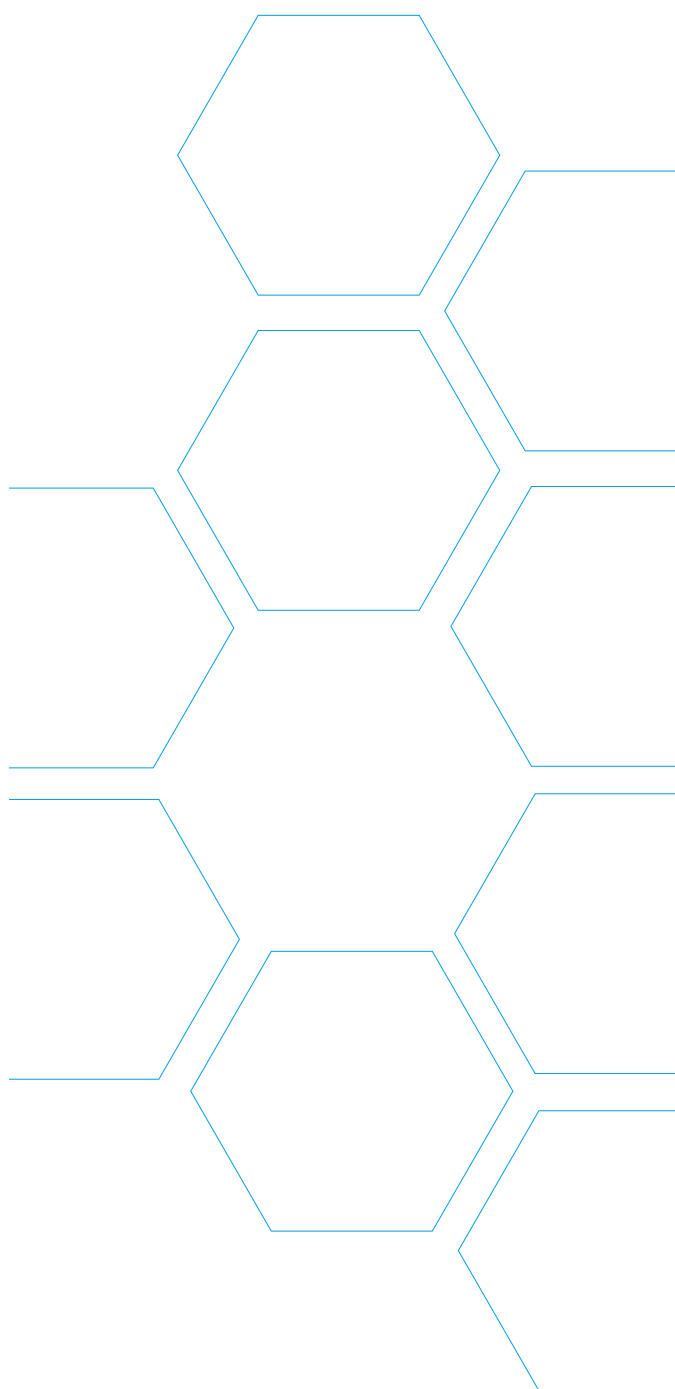
Was this useful for me?

I wished to identify strategic reading processes to consider how I use them. I use strategic reading to gather useful information quickly so I can spend more time making use of the information as I tailor it to developing workshops, etc. This has remained constant.

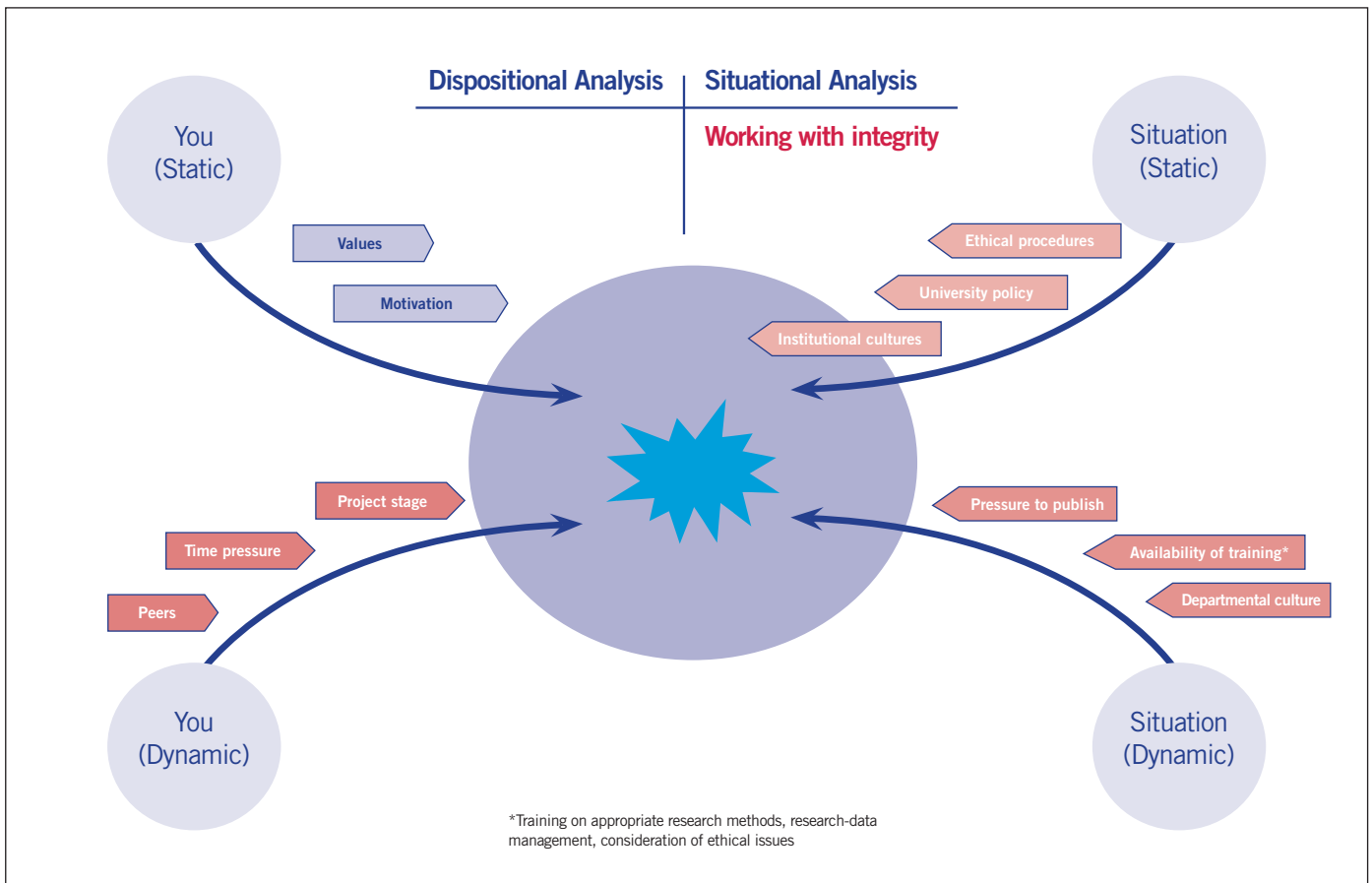
I wished to identify why I approach reading in the ways I do. I recognise that I am motivated by my core beliefs and values (from the 'you static' area). The perceived level of benefit to others truly drives me, but I need to divert my attentions at times when other activities become of greater benefit or more of a priority (from the 'you dynamic' area) - which is why my reading time occurs in bursts of time.

I also wished to uncover related strategies that I have adopted and embedded in my decision-making processes as tacit knowledge: I use a pragmatic approach (from the 'you static' area) so I just try something and evaluate it for the next time, and the reading in bursts seems to work relatively well for me and my job. So, I have continued to work in this way for a long time without thinking about it very much. Also, the dominant cost-benefit analysis to me and others also seems to be a generally useful strategy.

By doing this, I wanted to decide if I was happy with my approaches or evaluate new ways of working: I generally do the best I can with the time I have and I'm relatively happy with the way I appear to be working from the SDD model as well as what I finish up with. Ok, so dynamic factors influence this, but the approach seems to be working in the long term. So, yes I am generally happy for now. For that reason, I will probably not change my long term strategies.



Example 7: Working with integrity



Explanation (Gail de Blaquiére)

Situation (Static):

Static elements in this situation would be the prevailing research culture including policies, procedures and training outlining a requirement for and level of research integrity required by all at the institution.

Situation (Dynamic):

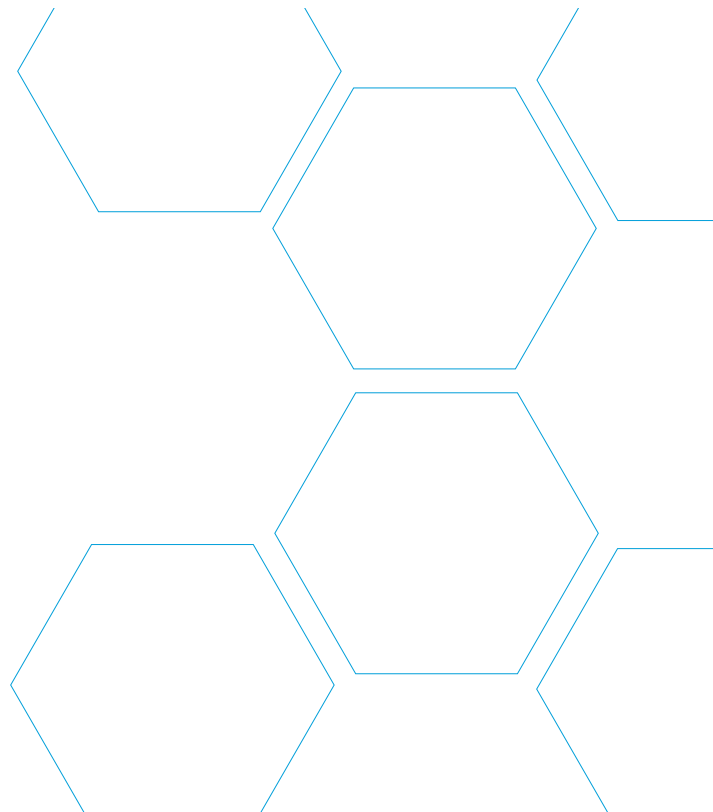
External dynamics could affect an individual e.g. the pressure to publish. Research culture in individual groups may influence decisions. Availability of training and support may vary.

You (Static):

Static elements in this situation would be provided by your own values and personal motivation based on prior experience and training. This would provide a specific and individual level of moral integrity.

You (Dynamic):

Dynamic elements which may affect the situation could include your level of experience, time available for your project and the effect on your behaviour of fellow peers.



Experience Recording: using different E-systems²¹

This section provides additional guidance regarding the use of E-systems for experience recording.

Experience recording: utilising e-systems you currently use

Consider how you can 'hijack' the electronic systems you currently use to apply to experience recording. The SAMR model (Ruben Puentedura)²². SAMR is a simple to understand framework which has been used to evaluate mobile learning technologies in teaching contexts²³ and is useful for this context as well. The example below explains and illustrates the SAMR acronym by considering a starting point of using a 'pen and paper' approach to experience recording and then asking what might be Substitution, Augmentation, Modification and Redefinition of 'pen and paper' in e-terms and of what additional opportunity that might provide. See where you are in terms of a starting point and consider if this developmental approach might be useful for you to progress in use of E-systems.

The SAMR acronym stands for:

- **Substitution** of pen and paper approaches
 - e.g. word processing or note-taking applications. This may be more convenient to, but offers no added value over traditional pen and paper approaches.
- **Augmentation** of pen and paper approaches
 - e.g. reflections can be shared using social networking or collaborative tools. You could use google docs, email, a blog, or e-portfolio to gather feedback from others. This offers the chance to validate your thoughts after the main reflective process, but little else if the purpose is to use these technologies to share reflections and gain feedback.
- **Modification** of pen and paper approaches
 - e.g. reflections can be co-constructed in real time or asynchronously with a wiki based approach using collaborative tools such as a google docs. The other people support you in gaining a better understanding as you conduct your reflections. Possibly by taking on the role of a virtual coach to provide you with ongoing critical questions to direct deeper evaluations. Possibly to offer their own reflective commentaries on a situation if they were there so you can discuss and compare stories to co-construct your understanding. And this partnership approach, as part of a community of practice, promises to offer a very critical approach.

- **Redefinition** of pen and paper approaches

- e.g. reflections can be built into story based approaches using alternative multi-media/social-media technologies; possibly in combination with making an object, or generating a collection of objects. This could be directly compared to the creation of exhibits for an art exhibition and is a form of self-expression. The idea is to create something as a metaphor for a critical incident, or a series of incidents in a life-changing story. So, this will enable you to tell your story. It is worth stressing that you could use text to describe your story; however, you could equally well capture your story in any format, such as in: audio; video; photographic; cartoon; and storyboarding formats.

Once you have worked through the SAMR model, consider how you could map other electronic systems to different areas of the model easily. This can help you to quickly start using these systems as recording devices.

Experience recording: utilising additional e-systems, the Padagogy Wheel

Take a look at the Padagogy Wheel²⁴ (Figure 10).

The beauty of the Padagogy Wheel is that electronic systems are grouped together in categories and mapped to Bloom's learning taxonomy. So, you are able to examine a whole suite of electronic systems to decide if you would like to try alternative 'new similar' ones in a category and explore more creative approaches using electronic systems in the Evaluate and Create categories.

21. Lead author of this section Mark Proctor

22. Common Sense Education (2014) Ruben Puentedura on Applying the SAMR Model, available at: <https://www.youtube.com/watch?v=W6j8soDYoaw> (accessed 21 June 2018)

23. Romrell, D., Kidder, L. C. and Wood, E. (2014), "The SAMR model as a framework for evaluating mLearning", *Journal of Asynchronous Learning Networks*, Vol. 18 No. 2, pp. 1-15.



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Bromley, T., [2016] *'Flipped Development: From passive to active development'* Vitae Researcher Development International Conference 2016, Manchester, 12th -13th September.

The presentation at the Researcher Education and Development Scholarship 2018 conference:

Bromley, T., [2017] *"Rethinking Skills: the Dynamic Development Model"* Researcher Education and Development Conference, October 12th 2017, University of Leeds.

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Dr Tony Bromley, University of Leeds (Chair)

Dr Jim Boran, University of Manchester

Dr Gail de Blaquiére, Newcastle University

Sarah Gray, University of Leeds

Dr Richard Hinchcliffe, Independent consultant, previously University of Liverpool

Dr Mark Proctor, University of Sunderland

Dr Sandrine Soubes, University of Sheffield

Davina Whitnall, University of Salford

<https://www.sdduonline.leeds.ac.uk/dynamic-development/>

