Building Critical Reflection in Small Firms - The tale of 3 Diagnostic Tools

Mike Bull

Research Fellow

Manchester Metropolitan University

Centre for Enterprise Manchester Metropolitan University Business School

Aytoun Street Manchester M1 3GH

m.bull@mmu.ac.uk

www.mmucfe.co.uk

Paula Turner

Senior Enterprise Fellow

Centre for Enterprise Manchester Metropolitan University Business School

Clare Schofield

Research Fellow

Centre for Enterprise Manchester Metropolitan University Business School

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Summary

This working paper provides insight into three on-line diagnostic tools developed for academics, business support providers and owner managers of small firms to aid critical reflection, data collection and to support the business engagement process.

Objectives

This working paper; (1) tells the story of three diagnostic tools that have been developed for engagement within the small business community (a) **Clarity** – targeted at small firms; (b) **Balance** – targeted at small firm social enterprise and the third sector (c) **Leading Edge** – targeted at leadership across the small firm community; (2) begins to reflect on the adoption and experiences of these tools within three environments; (a) academic research, (b) business engagement and (c) small business users; and 3) presents our thinking on their remit to receive constructive feedback prior to developing specific themes.

PriorWork

Prior work is associated with the increased use of web based diagnostic and benchmarking toolkits as a source of problem solving in firms that have increased exponentially in recent times. We consider different types of diagnostic; interviews, checklists, analysis tools and management systems in gaining an understanding for the tools we have developed. We also consider benchmarking tools, highlighting the differences between the two.

Approach

We describe how development of these diagnostic tools has been driven by market need for critical reflection. Grounding of these tools is from a practitioner perspective and engagement with small firms in the process. We seek to open a debate about the engagement experience between support provider (business analyst/advisor or mentor) with owner/managers of small firms. It provides an opportunity for the authors to raise questions and consider further research. It also sets the scene for a fuller investigation into the experiences of using diagnostic tools to support owner/managers as ways of critical reflection on management and leadership.

Results

This working paper creates debate on the adoption of three specific tools across three very different worlds – academia, business support and small firm owner/managers. We aim to shed light on the ways in which diagnostic tools are used in small firms which will lead to further research and the creation of new knowledge.

Implications

It asks why diagnostic tools are in many ways at the zeitgeist of the business support process. Such tools offer a great breadth and variety in their processes, engagement and outcomes. Greater understanding of the process of engagement and the relationships developed by using such tools could make significant impact on the business diagnosis process and have wider implications for policy, business support providers and academic research.

Value

Evidence based research tools offer valid opportunities for practitioners, business support agencies and academics in the field of qualitative and quantitative data collection. This working paper, offered in anticipation of a later refereed paper, provides insights into the discussions with owner/managers, entrepreneurs and business support agencies about their engagement with the tools. The value of this discussion will aid in capturing an originality and narrative that has barely been explored before and so provide insights for practitioners, business support agencies and academics.

Introduction

Understanding and grappling with the phenomena of the small firm is an increasingly critical task for regional economies. In order to support management, skills development and growth a panacea of business support activities are being tried and tested, such as business coaching, peer mentoring and action learning. There are ample challenges; who likes what, when and where; business analysis, skills analysis or growth analysis – or all of it! The searching for formulas as to how intermediaries can best unlock the development and growth potential of the small business community to support strategies for regional development and prosperity are burning issues. As Bennett and Robson (2003) suggest 'The resource-based theory of the firm indicates that SMEs seek advice in order to increase their competitive capacity'. The theory goes that this is achieved through increasing their strategic and information skills (2003:798). External sources of advice are seen as potentially important catalysts for growth to enhance the human, social and intellectual capital that exists internally. How this is best managed is beyond the scope of this paper but as authors we are keen to hold onto the reality that diagnostic tools aim to serve a purpose in increasing competitive capacity.

This working paper provides insight into three on-line diagnostic tools developed by the Centre for Enterprise at Manchester Metropolitan University Business School. These tools were developed for business leaders and owner/managers of small firms to aid in critical reflection, data collection and to support academics and business support providers in the business engagement process. These tools can be applied in a variety of settings and add value to research, advisor and client.

Understanding Diagnostics

Prior work is associated with the increased use of web based diagnostic and benchmarking toolkits as a source of problem solving in firms that have increased exponentially in recent times. In a recent ISBE conference paper Mole and McLaughlin (2006) reported that there are 155 diagnostic tools available for Business Link advisors to use - they may not all be in use (or useful) but 155 diagnostics is a vast range of tools for the business support process. But are they all the same? Are there different types of diagnostics? Are diagnostic and benchmarking tools the same thing?

We propose from our initial reading of the literature that there are 4 levels of diagnostic, as indicated in Table 1. A diagnostic as we have understood from the literature is a means of determining the state of, or capability of, a particular task or activity. Diagnostics are designed for the individual or for organisational analysis. In the business context the process may involve; (a) a time specific diagnostic interview to analyse a given situation where no specific outputs are immediately expected; (b) a time specific diagnostic checklist tool of a given situation that provides tangible and immediate output (for example guidance of what you need to set up a business or how you should go about exporting – these types of diagnostics might be *'best practice'* guides); (c) a time specific diagnostic tool to analyse a given situation that produces specific/sophisticated analysis that may recommend revisiting for re-assessment); (d) a complex tool that requires on-going time and resource effort in a continuous cycle of diagnosis and benchmarking as an performance management system.

We therefore differentiate between diagnostic and benchmarking in the layers of complexity within the diagnostic process. The more quantitative and specific the diagnostic – the stronger the basis for subsequent benchmarking is[1]. Diagnostics are individually specific, whereas benchmarking brings into the analysis comparative data.

We now turn to the levels of complexity in diagnostics;

Level 1: Diagnostic Interview. At this level the term diagnostic is applied in relation to a semi-structured interview process where analyst/advisor seeks to question the small firm owner/manager about their business issues. This could be the beginning of an intervention of business support (or business analysis in the case of academics), where advisor meets client. Bridging two worlds of the small business owner and the support

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[1] For clarity we take Denkena *et al*'s (2006) interpretation of benchmarking for the purpose of this paper as;

- Measurement of the own and the benchmarking partners' performance level, both for comparison and for registering improvements.
- Comparison of performance levels, processes, practices, etc.
- Learning from the benchmarking partners to introduce improvements in your own organization.
- Improvement, which is the ultimate objective of any benchmarking study.

provider is invariably a fact finding mission by both parties in establishing a working understanding. Key to an outcome in this meeting is; (i) a marker of the foundations of how best the provider can make an intervention (and how receptive the client is) and (ii) for the client to establish if the provider can assist them in working on business issues. Mole and McLaughlin (2006) report that the more effective meetings are where the advisor shares more of the conversation with the client and that the advisor is able to ask worthy questions. The topics of conversation and the personality of the advisors are therefore critical. Furthermore, the ongoing management of the client through the process and the outcomes and outputs along the journey are also important for both monitoring the quality and the success of the intervention. The lived experience of both client and provider about the whole journey and process is also of interest in establishing the success of the intervention from both parties.

Level 2: Diagnostic Checklist. These diagnostics tend to be checklist style questionnaires, they are physical entities in themselves, providing output driven solutions to particular situations. The UK Trade and Investment Export diagnostic for instance is an on-line questionnaire that suggests will be able to;

- give you an objective assessment of your level of readiness
- identify areas which may require some attention
- suggest some actions which might be productive
- plug you in to the whole range of government support intended to make your export business more successful. (Source: www.uktradeinvest.gov.uk)

This export tool is a checklist of systems and activities that an organisation potentially needs to have in place if it is to export well. The diagnostic prompts a series of questions for self assessment (usually completed within an hour) and provides a written report that is filtered to the input based on pre-determined statements about what firms should do to export well.

	Level 1	**Level 2**	**Level 3**	**Level 4**
Level	Diagnostic Interview	Diagnostic Checklist	Diagnostic Analysis Tool	Diagnostic Management System
Prevalent Nature	Diagnostic	Diagnostic	Diagnostic/Benchmarking	Diagnostic/Benchmarking
Example	Business Advisor/ Academic Business Analyst	UK Trade and Investment Export diagnostic	The Complete Organization Benchmark	Supply Chain Operations Reference
Method	Semi-structured interview and discussion between two parties diagnostic in conversation	Quick questionnaire identifying areas for attention and a checklist prior to embarking on new activities	In-depth analysis tools that engages client and advisor/analyst to quantify levels of activity	On-going in-depth analysis requiring daily attention and resources
Input	Approx 2hr face-to-face interview	Light - approx 1hr remote self-assessment	Medium - approx 1hr – 8hrs self or facilitated assessment (face-to-face or remote)	Heavy – requires focus and buy in and needs resources for implementation. Typically weekly analysis – so 2-3 hours ongoing once set up but up to 40 person hours to instigate.
Outcome	Agreed state of play and plan for development	Best Practice guides from A to B. Clear progression route for development	An in-depth report that can provide complex analysis of a situation and in some instances suggested solutions for development	Identified working documents with key performance indicators that guide the organisation long term
Prevalent Period	Initial diagnostic with follow ups	One off diagnostic	One off or annual re-assessment	Ongoing continuous activity

Table 1: Overview of types of diagnostics

Level 3: Diagnostic Analysis Tools. These types of diagnostic provide complex analysis of complex situations, such as decision making and learning styles. This level of diagnostic is invariably more complex than simple checklist tools as the nature of the issues under the microscope are not as black and white. Invariably these tools are based on situational analysis and provide matrix style analysis. Being more complex these diagnostics also come more specialised, for example; Moilanen (2001) discusses diagnostics used in analysing and measuring organisational learning. Moilanen draws on several diagnostics in the field of various sizes and complexities, including The Complete Organization Benchmark that has 187 questions to answer (2001:8). At this level of depth of the diagnostic analysis a report providing visual and supporting text may be provided as part of the tool. In Ridley-Duff *et al* (2009), a diagnostic of director decision making in the governance of social enterprises, both visually plots the level of awareness/formality of management decisions and also visually presents the orientation of board thinking on decision-making, risk/opportunity, disputes/difference and communications on 4 axis (individualised against collectivised and exclusive against inclusive). Figure 1 shows the level of complexity involved in the analysis of the diagnostic.

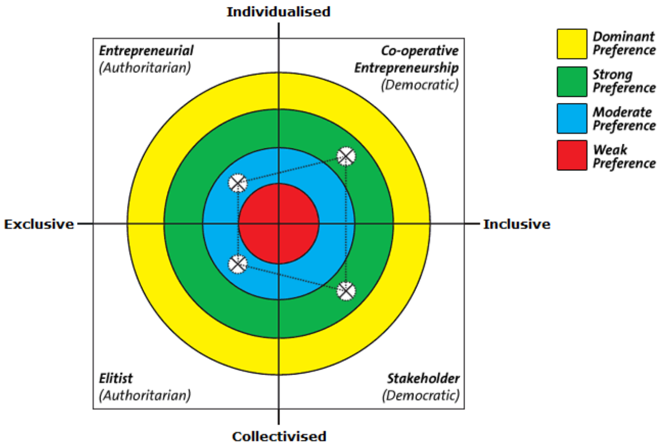

Figure 1: Director decision making diagnostic in the governance of social enterprises

Level 4: Diagnostic Management Systems. These tools require on-going resources for implementation. They are detailed and in-depth but can be beneficial for breaking down multiple and complex situations into manageable data outputs. Foggin *et al* (2004) discuss diagnostics in the supply chain management field. They report on an American diagnostic called the Supply Chain Operations Reference. Users can compare and benchmark their performance in 20-40 person hours against a database of others.

Design Concepts for small firm diagnostic tools

In this section of the paper we draw on the influences that have shaped the designs of our tools. Literature on small firms, critical reflection, organisational life cycles, learning cycles and leadership styles are considered.

Implication for small firms

A starting point for developing diagnostic analysis tools led us to management theory. Endless *'How- To'* guides on business planning, management strategy and systems for measuring and enhancing performance. Moreover, management by objectives, cost benefit and activity based management provide further examples - but there are many others. It does not take many pages into these books though before questioning the extent to which the breadth within these topics is beneficial to the small firm.

Firstly, small business research has considered that the working practices and environment of the small firm owner/manager is very different to that of large firms and that the ideologies and goals may be very different between large and small and across the spectrum of small firms (Storey 1994; Scase and Gofee 1980; Jennings and Beaver 1997). Small firms are, more often, centred round the aspirations and ambitions of the owner/managers, are less driven by formality and lack the resources and requirement for structures as they employ less people. The owner/manager is then a 'jack of all trades' juggling marketing, finance, strategy, learning, planning etc.

Secondly, many diagnostics require resources that SMEs simply don't have in terms of generating data, staff time and investments in information technology. There are both financial and human resource issues for small firms in instigating, analysing and implementing highly technical, complex, and labour intensive analysis tools. There are the time constraints of busy managers and the instant access to information that organisations need at hand in order to input data into such systems which can be off putting and laborious (Bull 2006).

Thirdly, there is little evidence to suggest that analysis tools have any real impact on the actual business practices of organisations (Holloway 1999).

Fourthly, there are inherent problems in freezing time and capturing meaningful data, as performance is a multifaceted, fluid, problematic, ambiguous and contested concept (Pestoff 1998). Further to this is the construction of reality, especially where there are subjective opinions being collected. Thomas (2004) sums this up neatly;

> *'the performance captured by a particular set of measures will always be partial and contextual, reflecting the fact that the measures have been selected, analyzed and interpreted through the lenses of the organizations and individuals involved with the process.*
> (Thomas, 2004:11).

With these issues in mind, the heterogeneity of small firms adds complexities to the designs of small firm diagnostics. Rational decision making and the structures and systems of large firms are in no way firm foundations for understanding how diagnostics can be used by SMEs. This may go some way to explaining the limited use of diagnostic tools in small firms. It would also appear that little work has been done towards adapting and contextualising diagnostic tools for environments within small firms.

Critical reflection

The diagnostics in discussion are underpinned by the idea that business leaders, owner/managers in small firms are busy people, juggling multiple agendas and in need of time for thinking through work situations. We draw on the term critical reflection. Discussions at the 5th Philosophy of Management Conference in Oxford, July 2009, suggest that there are lessons that are being learnt from ancient Greek and Roman philosophy about managers and the time and place for contemplation. Barre Fitzpatrick for example uses the writings of Marcus Aurelius (relating to Stoic philosophy - where emphasis is on self-discipline, virtue and tranquillity) to support critical reflection in management development sessions. Reynolds (1999) suggests critical reflection involves 'a commitment to questioning assumptions and taken-for-granted ideas embodied in both theory and professional practice' (1999:538). We also see the need for critical reflection that challenges the self, challenges current practices and seeks to engage people on trust and in honesty about their situation.

Research suggests that critical reflection should be at the core of organisational and leadership development. The process of critical reflection can help leaders to improve their leadership practice through problem observation and recognition, which in turn acts as a channel for further reflection (Densten and Gray, 2001) and organisational development. Critical reflection can also:

- Provide leaders with a variety of insights into how to frame problems differently, to look at situations from multiple perspectives or to better understand followers.
- Encourage multiple perspectives to be generated that challenge the participants' background, knowledge, and experiences.
- Assist leaders to acquire the knowledge and skills to make better judgments in ambiguous situations.

According to Densten and Gray (2001) critical reflection provides opportunities for leaders to gain understanding of how they perceive and interpret their observations. The main objective for integrating critical reflection in the diagnostic process is to raise self awareness of situations, provide opportunities for thinking and working through actual practices in order to maximize individual potential by allowing participants to evaluate the significance of their experiences.

Organisational Life Cycles and Learning Cycles

Organisational life cycle models (OLC) and learning cycles are metaphors in understanding organisational complexities that provide useful lenses for developing diagnostic tools. OLC models such as Greiner (1972); Adizes (1979; 1999); Churchill and Lewis (1983) conceptualise the changing and evolutionary process of the life of an organisation over time (Figure 2 shows Adizes model). Seedcorns of ideas grow from embryonic, through birth, infancy and adolescence to maturity (and possibly slow death) are conceptualised. At each stage of change a firm faces different obstacles and challenges. Synonymous with firm development and life cycle change is the learning cycle. Kolb and Fry (1975) are worth drawing on here. They propose a cycle of learning, figure 3 illustrates, proposing that development is reached by a pattern of events from concrete experience, observation and reflection, forming abstract concepts and testing in new situations.

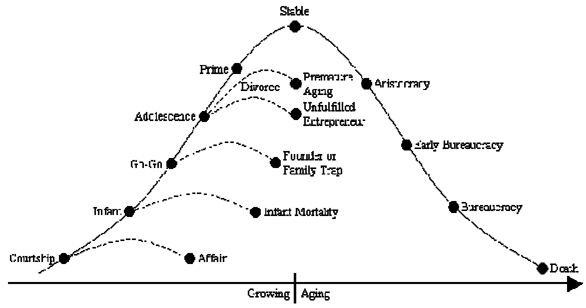

Figure 2: Adizes (1999) Organisational Life Cycle Model

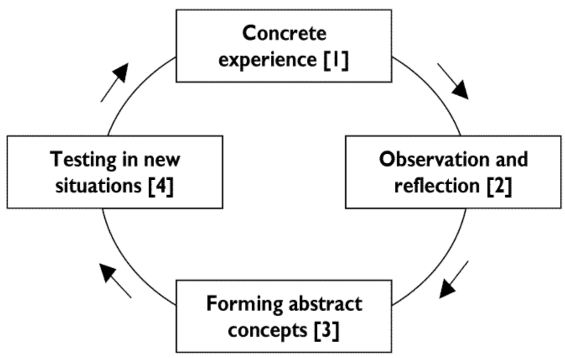

Figure 3: Kolb and Fry (1975) Learning Cycle

Inherent in both these metaphorical concepts is staged levels in development. Following this train of thought we consider that change plays a major role in organisational development. Change may come from a number of sources, internal and external to the business, some crises, others incremental. New knowledge in the forming of abstract concepts (3 in the figure) may be introduced through the diagnostic process, either by an exchange of knowledge or critical reflection and learning from lived experiences. It would seem appropriate to suggest that embedding diagnostic analysis tools at this stage of the (albeit metaphorical) cycle could enhance the learning process and accelerate the process.

Balanced Scorecard

Both Balance and Clarity have been adaptations of Kapan and Norton's (1996) Balanced Scorecard (BSC). The BSC model is complex, requires resources and is arguably more than what is necessary for SMEs in light of the former argument and the heterogeneity of SMEs. However, the BSC takes a holistic approach of the firm and this lends itself well to the diagnostic process (The multi-criteria perspectives are; 'financial', 'customer', 'internal processes', 'learning and growth' and 'vision and strategy'). Figge, *et al* (2002) state that;

> *"The concept of the BSC is based on the assumption that the efficient use of investment capital is no longer the sole determinant for competitive advantages, but increasingly soft factors such as intellectual capital, knowledge creation or excellent customer orientation become more important" (2002:3).*

Research also suggests that adaptation for SMEs is supported; Morrison *et al* (2002) suggest that the BSC could be used as a learning pathway to shape strategy and the process of financial management practices in the SME sector. Deakins *et al* (2002) calls for a modified balanced scorecard approach, refined for the small firm, to represent dynamic financial decision making processes influenced by environmental factors, including customers, creditors and suppliers. They present arguments that a more balanced and evolutionary approach needs to be taken that accounts for the qualitative aspects of decision making behaviour and learning by SMEs.

Leadership Theory

The Leading Edge reflective tool is underpinned by an holistic approach to leadership theory and practice and directed towards SME owner-managers. The tool draws on four key theoretical leadership styles elicited from the academic literature: traditional, transactional, transformational, and distributed (Nonaka, Toyama and Byosiere 2001; Leban and Zulauf 2004; Epitropaki and Martin 2005). Drawing from 20th Century Leadership theory there has been an evolution to the depth of understanding and over time this has given way to the four most popularised theories on the leadership styles of managers. However, the leadership diagnostic neither infers one style as 'better' than another or one style 'suits' a situation over another. In this way the leader is left to critically reflect and explore their self identity for learning and personal development.

About our Diagnostic Tools

In this section of the paper we outline the three diagnostics we have developed. The context for the discussion is that web based solutions can add value to both owner/manager and support provider in new and imaginative ways. We provide the reader with an understanding of the design, functionality and application of these tools.

Methods of use

All our tools are on-line resources - this means that they can be used in isolation, one-on-one interviews and in small group settings. The method of data collection therefore changes in the technique used. Rich qualitative data can be gathered in small groups and one-on-one interviews, by recording and note taking much the same way as using the tool as an aide memoir in an interview situation. In group settings the diagnostics can also be useful if IT facilities are available. In these sessions users can share and discuss issues that arise – these sessions are particularly useful in engaging management teams from the same organisations, working individually and then comparing results at the end.

There is also potential for quantitative data collection which can be segmented from the main database for individual project evaluation and reporting. User access via personal account and protected log in provides an alternative way of gathering quantitative data than questionnaires. Diagnostics also *give back* to the user more than quantitative questionnaire data gathering for research purposes than can sometimes alienate small firms in collaborating with research projects.

Clarity

Clarity is an on-line management analysis diagnostic tool for SMEs. Clarity was first developed in 2003 during an ERDF business intervention project to assist local SMEs across Greater Manchester in unlocking barriers to growth. Key questions Clarity seeks to unpack are;

‘Where do you think time and effort goes in your business?’,

‘What activities are financially invested in?’

and *‘What areas of management are neglected across your business?’*

The objective of Clarity is for owner/managers to discuss their ‘in the moment’ feelings for where their organisation is at, along a five point scale from *‘We spend no time, energy or financial resources’* up to *‘We invest substantial time, effort and financial resources’* across the following sections: Marketing; People; Innovation; Operations; Finance and Regulation.

Upon completion of the diagnostic an instant graphical snapshot indicates on a histogram (bar) chart, the levels of time, energy and resource spend across the six sections and then across each of the issues within each section.

Balance

Balance is an on-line diagnostic management analysis tool for strategic managers (CEOs, Boards, managers) of socially enterprising organisations (charities, voluntary organisations, co-operatives and social enterprises). Balance was developed in 2005 with ESF regional funding. Key questions Balance seeks to map out are how sophisticated management practices are by unpacking;

‘Where do you think time and effort goes in your organisation?’

‘How established (formal) have practices become in your organisation?

and *‘Where is time spent or neglected across your organisation?’*

The objective of Balance is similar to that of Clarity, for strategic managers to discuss with their advisor their ‘in the moment’ feelings for where their organisation is at, along a five point scale from *‘We currently do nothing about this issue’* up to *‘We are sophisticated in our systems and processes’* across the following sections: Stakeholder Perspective; Internal Activities; ‘Multi-Bottom Line’; Learning’ and ‘Visioning’.

Upon completion of the diagnostic an instant graphical snapshot indicates on a histogram (bar) chart, the levels of focus across the five sections and then across each of the issues within each section. A report is also provided as a resource to support development across each of the issues within the tool. The resource text is written to specifically address each level of aptitude, so the more sophisticated the organisational practices the more complex the advice.

Balance also has a benchmarking assessment against the database of approximately 300 prior assessments from socially enterprising organisations, predominantly from the UK. Balance is therefore useful as an approach for organisations to demonstrate their transparency of management practices to their stakeholders as part of social accounting and auditing.

Leading Edge

Leading Edge is an on-line leadership diagnostic analysis toll for business leaders. Leading Edge was developed in 2007 through an ERDF funded management and leadership programme for the Financial and Professional Services sector. It is aimed at stimulating leadership development in knowledge intensive organisations. The tool enables owner managers to develop their leadership competence and capabilities across their business. Based upon four components, namely; Self; People; Organization and Market, owner/managers are required to identify and reflect on their key leadership challenges and how they approach particular situations in practice.

Commonalities by design across the diagnostics

Each of our tools has been designed individually for the three different markets; small firms, social enterprise and leadership. They have some common features:

(i) All our tools are questionnaire based diagnostics that aim to support advisors and academics in the business support engagement process.

(ii) All our tools are to aid and add to the conversations with small firms and provide topics in conversation.

(iii) All our tools are designed with simplicity and time in mind. Our tools are on-line (so requires a broadband connection to the internet) an advisor can hand over the reins of completing the tool to the client or can facilitate a discussion around these issues and work with the client to decide on their current stage. Ideally, over time, the client will become comfortable with the system and in some instances can be left to re-assess whenever they feel is necessary.

(iv) All our tools are based on 'in the moment' judgements from the client – we capture subjective opinions as opposed to objective facts – in doing so our diagnostics do not require copious amounts of factual information about the business, financial figures or evidence of practice that can interrupt the flow of conversations and trains of thought.

(v) All our tools aim to put the client at the centre of the diagnostic for people to take control of their analysis.

(vi) All our tools provide instant analysis and reporting for clients.

(vii) Regular re-assessments can support the monitoring and evaluation of interventions as well as increase the commitment and ownership of owner/managers to the process.

(viii) Our tools are not designed to prescribe to owner managers what they should be doing – just what they *are* doing.

Where the tools differ by design

Clarity and Balance

Balance and Clarity aim to support the intervention and diagnostic process of exploring issues of a particular business with a particular owner/manager – and their views at a moment in time. On leaving the room however, both parties can be satisfied that a benchmark of quantitative indicators have been explored and agreed. It is from this point in the process that an advisor can discuss the issues that are most appropriate to the situation, that are considered strategically important to the owner/manager so both sides can agree to an intervention to support and develop the situation. Fundamental to the design of both Clarity and Balance are the theories of organisational life cycles and learning cycles, previously discussed. Using these tools is a way for support providers to have a clearer sense of continuity when delivering uniformed regional projects across large geographical areas.

Leading Edge

Leading Edge is a framework for owner/managers to rate their own leadership behaviour in a way that is not classified as "good" or "bad." Its design is theoretically informed by the analysis of the user's traditional, transactional, traditional and distributed learning behaviour and provides an analysis based on these four styles. Narrative is provided to explain the snapshot at the end of the tool for leaders to self reflect on the findings.

Adoption of the tools in small firms

In this section we begin to reflect on the adoption and experiences of these tools across three very different environments; (a) academic research, (b) business engagement and (c) small business users. We aim to shed light on the ways in which diagnostic tools are used in small firms and are in many ways the zeitgeist of the business support process. Little research currently exists on the evaluation of take up of diagnostics.

Academic research

All our diagnostic tools have recently been commercialised and the uptake of them as research tools is an interesting proposition for data collection and analysis. At this stage these tools have been included in successful MMU research project bids. As researchers ourselves we are interested by the theoretical framework and philosophical positioning of such tools. On the one hand the quantitative data that is collected via these tools is something that can be written up and published where correlations and patterns in the data set is sought. Conversely, the qualitative data collected via using the tools as aide memoirs in the interview process is also rich. Further research and literature searches are planned to seek relevance of the adoption of other tools and the ways in which researchers have collected data via diagnostics.

Business engagement

All three of the diagnostics are adopted as tools for business engagement and support.

An early version of Clarity (off-line) was adopted on an NWDA & ERDF co-funded programme called Into Enterprise, which was delivered across the region through University of Cumbria (lead); UCLAN, Voluntary Action Cumbria and MMU. The tool provided the early intervention diagnostic and subsequent monitoring and evaluation of the programme, providing the region with a standard format for interview conversation, some measure and benchmark at the outset of the project and also mapping tools to evaluate the distance travelled and progress of each client.

One of Balance's early adopters was 3se[2], as one of the diagnostics their advisers used on their social enterprise support programmes. Feedback from the advisors was very positive. The tool was used as a diagnostic for business advisors but also to monitor and evaluate the provision of training support over time.

Leading Edge was a core integrated component within our Financial and Professional Services leadership programme (see Figure 3). As the figure shows, the tool was incorporated into the programme feeding, informing and complimenting the training package. Leading Edge is now acting as a recruitment tool within MMU's LEAD leadership growth programme for small firms.

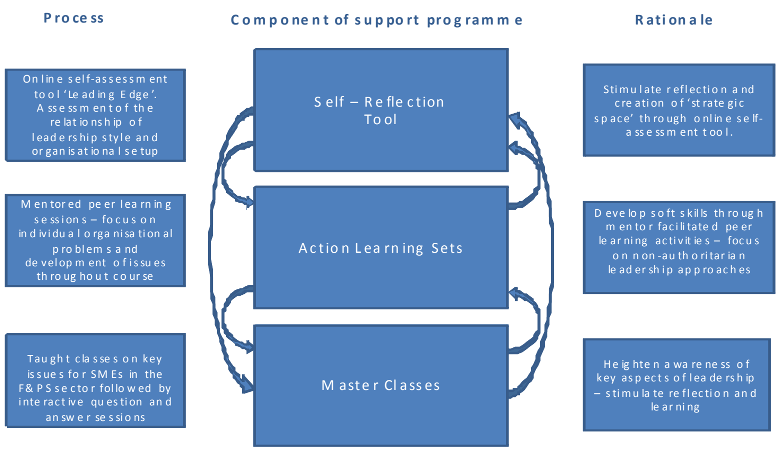

Figure 3: Leading Edge Components

2 3se were part of ChamberLink in the North West of England – they have subsequently been absorbed into the Business Support Solutions service

Small business users

Basic evaluation of Clarity (off-line) was conducted with 24 businesses during the pilot phase (2004). The following comments provide a snapshot of the feedback we recorded and tables, 2,3 and 4 indicate the quantitative feedback we collected on the intervention day:

- "Clear awareness of underlying elements that move my business forward in any given direction"
- "Excellent - never had such an honest and relevant reflection. The consultant was excellent in her explanations"
- "Reinforced my own thoughts about the business and can help in providing a useful tool to help implement change - perhaps"
- "Helped focus"

Quantitative feedback;

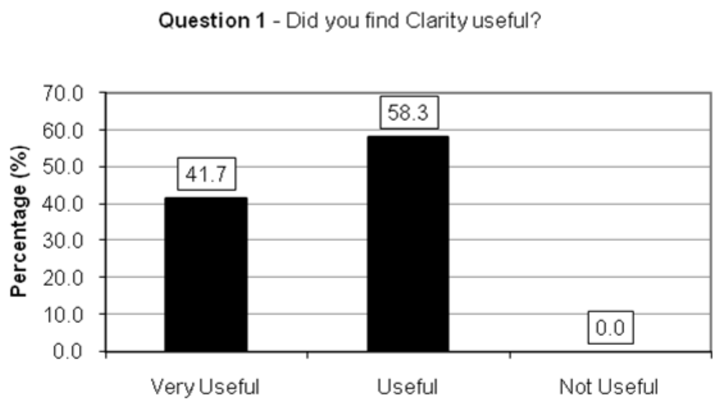

Table 2: Clarity Evaluation - Was Clarity Useful?

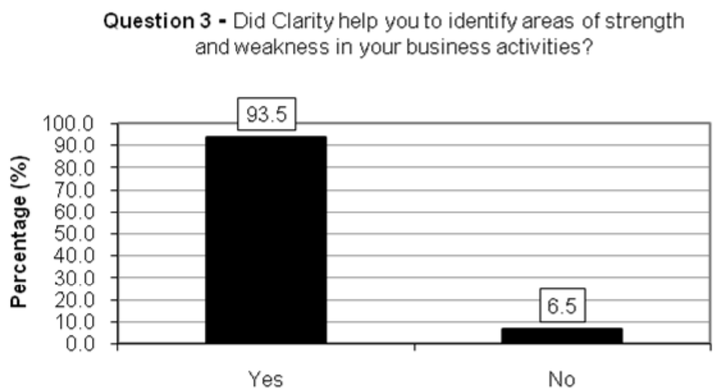

Table 3: Clarity Evaluation - How did Clarity help your business?

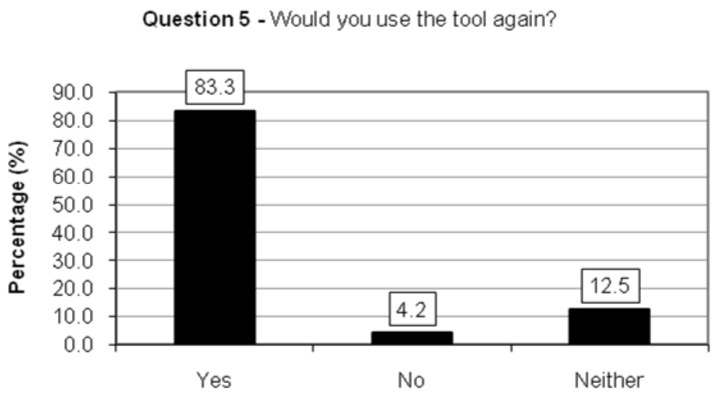

Table 4: Clarity Evaluation - Would Clarity be useful to you again?

Basic evaluation of Balance is also encouraging and the following evaluation was recorded on the initial research of 50 enterprises in 2006. However, we now have a sample size of 300 assessments, and are now considering use of our resources for further evaluation work:

Balance (n=50)	Very Useful	Useful	Not Useful
How would you rate the tool today?	83.3%	10.0%	6.7%
Do you think at first glance that the tool/information will be useful in the future?	86.6%	6.7%	6.7%
How did you find the experience of reflecting and thinking?	89.9%	6.7%	3.4%
Any further comments?	"I'm going to get all our managers to it, it could help us all to focus better"		
	"It's not quite what I thought it was going to be – but I'm really pleased I took part."		
	"Balance has worked for us. It has influenced our thinking and our organisational development".		
	"Good actions and stages, like it"		
	"It's good. It needs to say do this every year, and it also needs to say don't read it all at once but break it down"		
	"It's been very helpful in focusing my thoughts"		
	"I'd like to try it again in say 12 months time, can I do that?"		
	"It [the report] helps me and clarifies things – I've looked at it as I've gone through our business plan and it's reassured me as I've gone – it added some clarity to my planning"		
	"It's [the report] a bit overwhelming at first but its not really once you start reading it its very clear."		

Table 5: Balance evaluation results

Balance has also been incorporated into a series of social enterprise master classes by Business in the Community on their Business Bridge programme. Balance was used as the opening workshop to capture current state of play and following interventions participants were asked to re-evaluate after the final session. The sessions were very well received but unfortunately the take up of re-diagnostic has been mixed. Various factors such as mislaid username and passwords, forgotten web address details and time issues were the main reasons for not re-assessing. A closing workshop to re-state and revisit the tool may have been more successful, so further research is being considered.

Leading Edge has been used with 82 firms at the beginning and end of a five month programme that included masterclasses, action learning sets to stimulate reflection and creation of thinking time. The reaction to using the tool by small firms was very positive:

“The tool gave me a chance to look at my organisation and how to make it work to my best advantage.”

“Leading Edge was a key attraction to the programme and it was a real eye opener. It helped me look at things I hadn’t thought of before, to focus in a more analytical way and to learn from myself.”

Remaining issues

This working paper outlined three diagnostics used in different markets, in similar and different ways. We hope to have provided the reader with some themes of our thinking that needs refining and developing in our thoughts - but also to call for further research around this topic where there are remaining issues and unexplored areas for advancing the knowledge on diagnostics. We attempt to outline some of these areas below;

The theoretical concept of critical reflection in small firms is under-researched. How much relevant literature is there on critical reflection? More precisely on management? and even more precisely on small firms? What empirical evidence is there to support the notion of critical reflection in small firms?

Methodologically, what evidence is there about the adoption of diagnostic tools for quantitative and/or qualitative data collection in small firms?

There is little research on diagnostics in small firms that we have seen, why is this? Who benefits from the diagnostic process? What has been done and how do small firms utilize tools in their work practices? How best can SMEs benefit from diagnostics? And when? And Why? How can diagnostics be used beyond the initial diagnostic interview? How often should they be used? And is re-assessment likely to be useful - and in what ways? And how can (and why should) the process be embedded in organisations?

In exploring different ways for utilizing diagnostic tools requires drawings on different contexts. One field of research is the business support engagement process with small firms. A second the role of academics in analyst roles and thirdly the owner/managers themselves and their experiences of something being done *‘to them’* or *‘with them’*.

A further piece of research is the longitudinal data that comes over time with the population of users within these tools. Initial research for example of the Balance data (n=50) has been published (Bull and Crompton 2006, Bull 2006). Plans are afoot to re-analyse the data now the sample is of a sufficient size that quantitative research will be meaningful (n=300).

Finally, what evidence is there that suggests diagnostics increase competitive potential? We have our thoughts and the reflections of owner/managers on this but we currently lack the sufficient data and longitudinal data to record these tools in use over periods of time.

Conclusions

In conclusion, this working paper has presented four levels of diagnostics, followed by the design features and influential literatures that have shaped the three tools developed by the Centre for Enterprise at MMU. We have outlined the key features of our diagnostic tools and reflected on their usage and adoption in practice for academics, business support providers and small firms. Their commercial potential has to date been under-exploited. Further exploration is required to build theory on how small firms mobilise competitiveness through use of diagnostic tools. Deeper understanding is required about how capability can be built within small firms using a diagnostic as a leverage device.

We need to critically evaluate not just the completion of a diagnostic but how small firms can then recognise or acquire resources that actually shape their capability to exploit new opportunities for competitiveness.

Building critical reflection is the key theme that has emerged from the design and use of each tool. We have learnt that use of diagnostic tools like ours create opportunities for both space and time so managers to think strategically as use of ‘soft process technologies’ can encourage both better collaboration with external sources of business support and enact strategic change.

Feedback to date from advisors and small firms is very positive and we have demonstrated that all of the tools introduced through this paper offer a great breadth and variety in their processes, engagement and outcomes. Greater understanding of the process of engagement and the relationships developed by using such tools could make significant impact on the business diagnosis process and have wider implications for policy, business support providers and academic research.

In summary, evidence based research tools offer valid opportunities for practitioners, business support agencies and academics in the field of qualitative and quantitative data collection. This working paper, offered in anticipation of a later refereed paper, provides insights into the discussions with owner/managers, entrepreneurs and business support agencies about their engagement with the tools. The value of this discussion will aid in capturing an originality and narrative that has barely been explored before and so provide insights for practitioners, business support agencies and academics.

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