Trading: What are the psychological factors that makes this practice unique? Why is it difficult to harness talent? And what can firms do to overcome this?

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Abstract

What are the factors which might prevent effective trading development? And what can firms do to promote effective development of internal talent? Is there something unique about trading which makes it hard to coach? To address these questions, this study analysed the responses of a group of professional traders to a survey, probing the factors that influenced how they learned how to trade. Senior managers of traders from major financial firms were also interviewed to get their perspectives on how trading talent could be developed. The study found that the nature of knowledge transmission between traders could be characterised as tacit sharing of trading experience. Barriers to trader development were found to focus around the high degree of commitment required by firms to diagnose how traders could be developed, and to put in place the necessary trading resources and management structures to bring about the right kind of structured-experience based learning process.

Key words: Trading, culture, organisation, behavioural finance, coaching.

Introduction

Trading is a profession like no other. Nowhere else can such vast sums of monies be made or lost, let alone made or lost in the short time frames often associated with market movements. The world of trading is dynamic, results-driven and highly pressurised. Things happen quickly, stakes are usually high and, as such, trading itself can be extremely taxing on the psyche of a human being. And, just to make matters worse, humans have not been able to evolve physiologically enough over time to deal with this emotionally challenging, fast-paced environment that is the world of trading (Coates, 2013 and Ward, 2015).

Trading sets itself apart from most other industries because it has so many components to it that can influence performance. Humans favour certainty over uncertainty (Ward, 2009). Risk taking in financial markets is an ambiguous undertaking; there is imperfect information; high consequences; thoughts; moods; process; environment; habits; past and recent performance and a host of other factors.

I have been involved in the world of trading for almost 25 years. I have always found it a fascinating puzzle which is both complex and demanding. On the one hand, it is simply a study of people: markets are arenas of buyers and sellers coming together to exchange securities. And markets, like people, are always evolving and changing, but at their core, they are always the same. Yet, within trading there lies a somewhat unique, great and intricate challenge: Is it possible to bolster, refine and constantly improve the results of participants in a complex global financial world? And if so, why wouldn't everyone embrace this?

It is probably good to start with what we know, or perhaps, what we think we know. Trading is difficult; or at least this is the popular perception. Amongst professionals, however, there have been various attempts to understand how trading proficiency can be transferred from one person to another. One of the most famous examples of this is the so-called 'turtle traders' trained by celebrated futures trader Richard Dennis and brought to life in Michael Covel's book, "The Complete Turtle Trader" (Covel, 2009). Richard Dennis was active primarily in the 1980's. He was widely recognised by his feat of turning an initial stake of $5,000 into more than $100 million. The genesis of this was the frequent discussions between Dennis and his business partner William Eckhardt. Dennis believed anyone could be taught to trade the futures market, while

Eckhardt countered by saying that Dennis was born with something unique and special that could never be replicated, no matter how much coaching or training was undertaken.

Eventually, Dennis decided to end this debate, and resolved to set up an experiment which was based around finding people to train. These people would be given Dennis's own money to trade, since he felt so strongly about his ideas. And he would teach them his own trading rules and style of trading, which he had employed so successfully himself. He called his students "turtles" referencing the turtle farms he had visited in Singapore and deciding that he too could grow traders as quickly and as efficiently as farm-grown turtles. One of his most successful "turtles" was Russell Sands who went on in later years to reveal that Dennis earned approximately $175 million of trading profits between the two classes of turtles in five years (Peterson, 2016). Dennis had proved beyond doubt that trading could be taught, and he had gone one step further by ensuring a number of his students were total novices, with no prior experience of financial markets whatsoever.

There is therefore a challenge faced by financial organisations around the world. Can they not do what Dennis did so successfully and teach their traders as well? Furthermore, how would it be obvious if they were being taught well? Not doing so is a problem that can impact society as a whole; traders execute a fundamental function within financial markets and failure in these positions can on occasion have huge consequences for everyone. So the need for success in this arena is significant. Yet, whilst doctors and lawyers must train for years before gaining sight of a real world application of their learning, traders are seemingly selected only on the basis of their very survival. And once they are selected, it appears as though there is limited formal training thereafter.

Can this problem be solved on a basic level by adopting the same 'turtle trader approach' as Richard Dennis? Unfortunately for most investment banks and asset managers (which are the major focus of this paper) there is a significant limiting factor to taking Dennis's approach and applying it: scalability. In Dennis's case, it was **his** trading style, and his rules that he was passing on to others. There was virtually no trading discretion, simply a set of rules and procedures he had developed over a number of years for someone else to follow. However, If Dennis were to teach this to too many people, eventually returns would suffer, because by definition the markets are a zero sum game, and if everyone started executing the same trades, the markets would begin to trade differently, and return profiles would start to decline. Simply put, a strategy like this can only be extended to a select few, otherwise the inefficiencies of the markets will begin to be arbitraged away by too many people doing the same thing.

However, there was another important point which could be gleaned from the Dennis experience, and this is one this paper shall focus on. Dennis's style was very rules-based and process orientated, which effectively meant the number of discretionary decisions a trader would have to take was significantly reduced. This is extremely pertinent because one of the major challenges in trading is dealing with how emotions affect judgement (Fenton-O'Creevy et al., 2012, Hilton 2001). There has been extensive research into this area, research which shows (rather perversely) that human behaviour actually works against oneself in the world of trading. In a similar way to the manner in which our immune system turns against us in (say) a case of arthritis, our response mechanisms and social defences can often work against our actual interests when it comes to trading. It seems virtually nothing else can damage our egos the way losses on markets can (Davis, 2014). And the chances of our emotions and egos being tested is highly correlated to the number of actual decisions we are forced to take (Camerer & Weber 1998). But once the traders in the Dennis experiment were able to think of themselves as simply following a set of rules, rather than emotionally investing in each trade, it became much easier for them to disconnect their emotions from their trading (Ariely, 2009).

For the purposes of this paper, the concept of turtle traders is not considered the same as developing trading talent. This study targets something different to Dennis: How do we take **any** trader - specifically one who may already have their own experiences in the markets, their own ways of doing things, and their own investment strategy and style - and enhance their trading skills and performance? This is the holy-grail which alone – if it can be solved - will allow firms to implement scalable, repeatable, and profitable trading strategies across its operations. This thesis addresses the fundamental question of whether there is something 'special' about trading that makes such training difficult, and if so what it is? Furthermore it examines what organisations are doing to teach traders how to trade and how they can improve that training.

These concepts were organised into a simple model outlining the possible causes of difficulties in harnessing trading talent. To assign importance to these factors I designed a survey to gather data from traders about the extent to which each factor contributes to difficulties in development. In addition to this I gathered qualitative data from those who were or had been senior managers of traders or who were otherwise closely involved in the management of traders.

Research aims and objectives

My personal experience has enabled me to participate in and observe the industry of trading from the perspective of both the trader and the manager. From this experience I have observed that trading can be hard for traders to teach to other traders, especially when the type of trading is not completely rule based but includes an element of discretion. This led me to wonder why it is difficult for this type of mutual trader development to occur. There are many potential causes for this, both in terms of the traders themselves and in their work environments.

Firstly I set out to map what these causes might be based on my own experience and the literature review behind this paper. I then used this information to develop a survey that could be quantitatively analysed to capture the attitudes of a group of traders toward learning and teaching trading. The aim of this was to determine if there were clear factors that contribute to traders learning from traders (dyadic learning) as opposed to traders learning by themselves either from experience (experiential learning) or through courses/self-directed study (didactic learning). The hope was that the survey would also provide an indication of what could be done to improve trader learning.

Secondly I interviewed an array of senior managers who had been responsible for trading desks at major financial institutions, namely banks and hedge funds. The aim of this was to look at the issues from the ‘opposite perspective’ and get their direct opinions about barriers to trader development and what firms can do to promote it.

The objective of information gathering was to provide evidence as to the degree of importance of the factors identified in the literature review in preventing trader development, and the extent to which this is due to either traders or to their environment. This information is important because it may form the basis of a method to target trader development so as to systematically improve the performance of traders. The specific information is also valuable in discriminating between the basic properties of trading that make it challenging to transfer skills between individuals.

Literature review

This paper focusses on the factors that may prevent traders from developing a higher level of expertise. However there are many types of ‘trading’ and some would differentiate certain types of trading from ‘investment’ all together. Firstly, therefore, it is important to clarify what type of trading this paper is concerned with.

Investors seek to make a return from the long term accretion of value in an asset. Investing is usually categorised as a more traditional ‘buy and hold’ strategy (Graham, 2005 and Lynch, 2000). The level of buying and selling of a fund operating a buy and hold strategy is usually low by definition and it is not unusual for positions to be held for a large number of years. When one thinks of trading however, it is normally associated with high trading activity or ‘turnover’, and can also include being both ‘long’ and/or ‘short’ the market (Lefevre, 2008). The concept of being short the market, or a security, is sometimes difficult for people to understand. Short selling is the sale of a security that is not owned by the seller, and one that usually the seller has borrowed. Short selling is motivated by the belief that a security’s price will decline, allowing it to be bought back at a lower price to make a profit (O’Neil & Morales, 2005). Traders aim to make a significant fraction of their return from the transactions themselves regardless of the ultimate fate of the asset. What, then, do we mean by ‘teaching a trader to trade’? To be successful, traders must make many transactions that make money on average (this slight tilt of the odds in favour of the trader is their ‘edge’) (Gigerenzer, 2015). There are many ways to go about this – ‘trading strategies’ – which are beyond the scope of this paper, but for proprietary traders they normally involve a blend of market experience, rule following (a very simple example would be ‘buy stocks that have gone up more than 10% in the past month’) and understanding of how to execute the strategy; what markets, what instruments, when do you buy? How long do you hold? When and why do you sell? How do you prevent your expected losses from accruing beyond a desired level? So teaching a trader to trade involves giving them technical knowledge about markets, strategies and execution; but also it requires them to learn the practical skills of interacting with and feeling the market.

The different categories of trading

Given that 'trading' is typically associated with high turnover, and not 'buy and hold' strategies, the types of trading can be categorised even further.

Firstly, 'flow trading' or customer related trading where positions by investment banks (and to a much lesser extent hedge funds) are undertaken to provide liquidity to their customers (Coates, 2013). In many cases, these are meant to be short term positions that traders exit out of as soon as practical. This is a much harder form of trading to analyse as the instigator for the trade is not the trader, and there are conflicting interests and rationales for undertaking these trades.

Secondly, there is 'proprietary trading', where the positions are initiated from the traders at investment banks. These would usually be in liquid, quoted markets where performance and profit and loss could easily be tied back to the skill or otherwise of the individual undertaking the trade. Proprietary traders are most similar to what the asset management world refers to as 'portfolio managers', i.e. the people that are managing the capital at fund managers and instigating positions (Schwager, 2012). Our analysis refers to this type of trader: The proprietary trader at a bank, or the portfolio manager at a hedge fund. Since regulatory changes and Dodd Frank[1], post-2008, the amount of proprietary trading in investment banks has significantly reduced. Whilst some of this activity remains, most proprietary trading occurs in hedge funds and other fund management firms as opposed to investment banks.

Thirdly, distressed / off-balance sheet / Illiquid style of trading. This is more akin to private equity than high turnover trading. It is much more technical and precise in some ways than pure trading, and it is not the focus of this paper. Because a number of these instruments are also not quoted officially on markets, the psychological impacts are different and the reasons for entering them are perhaps more precise.

'Market Wizards'

Improving trader performance is about isolating what traders are doing to make money (and doing more of it) and what they are doing that is losing money (and doing less of that) or at least, this is the short description of the techniques employed by famous

[1] Dodd-Frank Wall Street Reform and Consumer Protection Act 2010

trading coach Brett Steenbarger (Steenbarger 2006). In simple terms this is almost like the trite market saying that one should 'buy low' and 'sell high'. However, the practice is harder than the theory. In his classic book, Market Wizards (Schwager, 1989) Jack Schwager gained access to a reclusive, secretive group of hedge fund managers who hitherto had been extremely reticent to discuss their trading philosophies and stories. What emerged was a picture of the psychology and mind games involved with successful investing. The famous quote from Walt Kelly's cartoon strip, Pogo (Kelly, 1970):

"We have met the enemy, and he is us"

provides as good a one-line summary of the art of trading as any. When asked to explain what was important to success, the Market Wizards talked far more about things such as discipline, emotional control, process, persistence, patience, a willingness to take risks, and a mental attitude towards losing than they did about specific investment techniques. The message was crystal clear: the key to winning in the markets is internal, not external (Mauboussin, Callahan, & Majd (2016), and Gigerenzer, 2015).

Schwager's book title suggests that bringing these elements of trading success together is a kind of magic. This was also alluded to in his follow up book "The new market wizards (Schwager,1992). However ideas from behavioural finance would argue that this magic can be reduced to how people perceive and react to uncertain information (Shefrin, 2007, and Credit Suisse, Hens & Meier, 2014). This view takes a psychological approach to trading performance, suggesting that problems in trading are due to cognitive biases and gaps that can be corrected by restructuring trading processes and trader perceptions (Steenbarger, 2002, Steenbarger, 2006 and Steenbarger, 2009). In this view there are two important considerations to trader development and performance. Firstly, how the trader processes information and reacts to gains and losses, and secondly how the trading environment supports or detracts from this.

Trading biases

One factor that makes trading difficult is that markets are de-personalised and highly unpredictable (Malkiel, 2008 and Taleb, 2007) but that the human mind looks for certainties and frames events in terms of the motivations of other people (Douglas, 2000). Together with the prospect of gaining or losing money, this can result in people following poor decision making patterns because the behaviour that would lead to the best reward profile works against their nature (Hilton 2001, and Kent, Hirshleifer & Subrahmanyam, 1998). In trading, such decision making patterns are often called 'biases' and include the 'disposition effect', where traders tend to prefer taking a gain but holding a loss, with the hope that eventually the loss will 'come good' (Kahneman, Slovic, & Tversky, 2013 and Garvey, 2004) which is a particularly impactful because large realised negative returns are hard to recover, a loss of 50% on an investment requires future return of 200% just to break even, which is unlikely and over time this bias threatens the capital foundation of the trader (Freeman-Shor, 2015) ; 'availability bias' where the chance of an event is thought of according to how easily information supporting it can be found (Kahneman et al, 1982); 'confirmation bias' in which people overweight information that confirms their own judgement (Freeman-Shor, 2015) and 'optimism bias' where people are simply too influenced by feelings of control over events (Fenton-O'Creevy, Nicholson, Soane & Willman, 2003). In fact one of the modern seminal achievements in economics, prospect theory (Kahneman & Tversky, 1979) describes how decision making is influenced by sub-conscious thought around gain and loss rather than 'rational' choices as in classical economic theory such as the efficient market hypothesis (Malkiel, 2008). One way to reduce the threat of bias is for traders to make their trading actions very explicit (objectify) and monitor their investment edge and their trading behaviour as much as possible (Steenbarger, 2006 and Steenbarger, 2009). This requires several aspects; process orientation around structuring their investments, a high degree of commitment to carry out the work that maintaining such an investment process requires, an ability to modify their trading behaviours in response to wins, losses and market changes and finally the discipline to consistently implement their strategy.

The role of emotion

A key disruptor of a trader's ability to carry out the demands of maintaining and consistently executing their investment edge is emotion. It has been established that emotions stem from different areas of the brain than do rational thoughts (Peters, 2012). There is evidence that traders that fail to control emotions underperform those that do (Lo, Repin & Steenbarger, 2005) but this should not be construed as meaning that all emotion in trading is bad. In particular discretionary traders often refer to the power of their ‘gut feelings’ and there is evidence to suggest that good traders have not completely eliminated emotion, rather they have developed it whilst subconscious information processing and are able to regulate it (Coates, 2013, Lo & Repin, 2002, and Fenton-O’Creevy et al, 2012).

Social desirability factors can also play a role. If a trader feels that they have made a poor investment or that they are not quite sure why the amazing stock that they were telling everyone about two months ago, is now down 10% then a common reaction seems to be simply to do nothing and hope it goes away (Freeman-Shor, 2015). Consequently a poorly performing investment languishes in the portfolio.

The role of the firm

If part of developing trading skill is related to the overcoming of bias by objectifying the investment process and if another part is regulated (that being the internal state when implementing that process), we can now ask the question: How does the trader’s environment help this? There is less work on this side of trading performance but the expectation is that environments that intensify potential biases or un-controlled emotion would negatively affect trading performance. Unfortunately it seems that some such factors do exist within the investment industry, namely large (but sometimes arbitrary) monetary rewards, secrecy around behaviour and information, vast quantities of often incomplete and disorganised information and management that is more based upon corporate hierarchy than upon constant and consistent nurture of traders (Fenton-O’Creevy, Nicholson, Soane, & Willman, 2004).

There is also the problem that it can be difficult to attribute trading profit and loss to individuals, which in a way shows the random external effects of the market (Taleb, 2007). Excessively risky or poorly justified trades can make money, while clearly thought through and well executed ones can lose it, so attributing credit based upon the quality of the trading process itself is a more subtle problem than awarding an annual bonus based on desk profit and loss.

Factors affecting trading development

In light of the research described above, I identified the factors outlined below as key to trading development.

Each factor can be attributed to either the **trader** themselves or their **firm** (or both) (the ''origin' of the factor). For each factor, the requirement on both the trader and the firm to generate a positive learning effect is listed:

1. <u>Commitment: The degree of work/commitment required</u>
   Trading requires a high degree of effort over a sustained period in order to refine the skills, develop a process and actually engage with the markets.
   Trader: Trader works hard enough to objectify their investment process
   Firm: The firm provides practical support to the trader's development
2. <u>Discipline: The degree of discipline required</u>
   Consistent application of a market advantage is key to a profitable trading strategy. This requires discipline in the face of shifting markets and personal life events.
   Trader: Trader follows own processes accurately
   Firm: Firm supports implementation of trading workflows to aid this
3. <u>Context: The personal circumstances of the trader</u>
   Trading can be a stressful and time consuming occupation. An inability for the emotional responses or personal life of the trader to accommodate this could causes problems with their development.
   Trader: The trader is free of personal difficulties that impact trading
   Firm: The trader's firm is sympathetic to the pastoral needs of the trader
4. <u>Market: The tendency of market environments to shift</u>
   The way that different assets in a market are behaving relative to each other can shift over time. This can alter the nature or viability of a trading edge. Traders must be able to recognise and adapt to this.
   Trader: Trader understands how market conditions impact trading performance and improvement
   Firm: Culture at the firm minimises stress due to trading losses

5. Collaboration: Constructive trader personalities and relationships

   Trading requires a high level of independent thought and strong drive. Perhaps having too many of these people working together causes problems, so this needs to be diagnosed and proactively managed.

   Trader: Relationships with colleagues are constructive and knowledge shared

   Firm: Firm encourages collaboration between traders and has a positive error culture

6. Process: The degree of planning and process required

   Developing, executing, monitoring, refining and adapting a trading strategy demands a repeatable process and significant preparation.

   Trader: Trader creates sufficient process to support review of trading

   Firm: The firm supports the trader’s efforts to tightly structure what they do

7. Behavioural: Behavioural biases

   Successful trading requires that the trader has insight into how their own trading performance and behavioural biases interact. It might be that for most people this is extremely hard to achieve.

   Trader: Trader modifies their trading in response to gain and loss

   Firm: Trader has sensible performance goals

8. Education: The degree of required education

   Trading within a hedge fund is a highly technical occupation. Furthermore the industry is notoriously fast moving. It might be difficult for traders to keep on top of this.

   Trader: Trader has sufficient specialist knowledge and/or experience

   Firm: Firm provides sufficient opportunities for knowledge acquisition.

9. Emotion: Necessity for emotional control

   Biases in decision making can be heightened when people are in an emotional state. An inability to control emotion could be a barrier to trading development.

   Trader: Trader is able to manage stresses when trading is difficult

   Firm: The environment of the trader facilitates stress management

10. Explicitness: Tacit nature of trading knowledge

    For some traders it can be hard to articulate what they are doing to others. This could be a natural barrier to transmission of trading skill between individuals.

    Trader: Trader can articulate and relate their trading knowledge to others

    Firm: Firm actively aids traders in defining and refining their investment strategy

11. Difficulty of performance measurement

    Due to the random nature of financial markets and the returns to investment strategies, it can be challenging to precisely attribute trading outcomes to actions. This would frustrate outcome based performance feedback.

    Trader: Trader knows how he/she makes money

    Firm: Adequate tools for traders and managers to dissect trading performance

Methodology

Data was gathered using two techniques. Firstly, a survey was conducted, addressed to traders, which gathered quantitative data based on the model developed from the literature and outlined above. The survey was then analysed to discover whether the proposed trading development factors did in fact affect trader learning.

Each question on the trader survey addressed a cause in the model. Also included in the multiple choice survey sent to investment professionals was a profile of the trader themselves, aimed at specifying their characteristics. This was included to provide the possibility of identifying the common occurrence of trader characteristics and potential sources of difficulty in coaching traders. At the end of the survey a question was included in which the traders could report what they saw as the most important factors in developing trading.

Secondly qualitative data was collected by interviewing previous managers of traders in various major financial organisations (or those who otherwise had been able to observe the management of traders at close quarters). The particular focus of these interviews was to determine what firms do to nurture trading talent and what the subjects thought could be done better. A qualitative method was selected because there was not enough existing data to formulate a specific model about what organisations could do to improve trading development. This also provided an opportunity for new themes, beyond my own model, to surface.

Description of research setting

The traders targeted were all active traders in various instruments although dominated by equity long short traders. Active traders were targeted in particular because of the belief that the highly discretionary nature of this type of trading could provide the best expression of factors that could hamper trading development. The sample was heavily based on people who could be targeted by my personal network, together with some of their own peers.

I deliberately targeted a number of ex-managers of traders for the interviews. This was due to the likelihood that they would be more candid if no longer employed by the organisations that they would refer to in the interview. Again, contacts accessible through my personal network made up the bulk of the sample. In addition, I targeted existing managers of traders.

Finally, I chose to interview a few individuals with no direct experience of managing traders but who had consulted or coached in this space, and therefore had a well-rounded, objective view of the areas I was keen to explore. These were largely people who were known to me, although there were a few in my interviewee collective who were not; those who I had targeted directly in recognition that they were experts in their field and were likely to have interesting insights into my topic.

Generally speaking, these individuals were based in London. Those I approached with a view to them conducting the survey were mostly contacted by e-mail. Those on the management side I was interviewing, I endeavoured to speak to in person, if at all possible, although there were cases in which we spoke by telephone.

Data gathering and reporting

Data gathering

The trader survey was directed to currently active traders through the electronic platform Survey Monkey, who were invited to participate by e-mail (see Appendix 1). This method was chosen because of the relative ease of creating and distributing the survey. The manager interviews were conducted in person, or by telephone – again, they were invited to participate in this exercise by e-mail (see Appendix 2).

Design of the data gathering process

Interviews were conducted on the basis of quite general and open-ended starting points but with follow-up exploration of relevant topics volunteered by the interviewee. This approach was adopted so that we could make sure that the conversation was along the lines of the greatest expertise of the subject themselves and that there was space for them to volunteer their clearest insights.

To design the survey I started by thinking of questions that could address every part of the conceptual model (see literature review). For each factor questions were generated that related to each of the possible origins, trader and firm, endeavouring to address only one cause at a time and to be unambiguous (table 1 shows the questions related to each factor). To provide a quantitative basis, every question would be answered on a five point scale (strongly agree, agree, neither agree or disagree, disagree, strongly disagree). Answers on this scale were converted to numerical scores when analysed (see Appendix 3). Questions were phrased in such a way that to agree (or disagree) with them strongly made sense. Furthermore, questions with a degree of cultural desirability were rephrased so as to be depersonalised (for example by phrasing in terms of ‘Traders I know...’).

I aimed to use the survey results to show which factors might positively or negatively contribute to learning of skills by traders. The survey was structured so that questions could be grouped into factor categories, so I could score each factor in that category.

There were 4 categories of question about trading development in the survey (table 1):

1. Questions around how traders reported learning the skill of trading. Did they learn most from others (dyadic), from personal experience (experiential) or by directed learning (didactic)? Traders reported which type of learning they had most experienced.
2. Questions involving learning factors that probed the 11 potential factors for trading development (see literature review). These measured how the trader rated various relevant features of how and where they work.

3. Questions involving performance factors that aimed to capture the subjective importance to performance of each of the 11 learning factors. Traders rated how impactful each factor was on themselves or their performance.
4. Questions incorporating trading development factors whose importance to skill development was evaluated by the respondents. Traders were asked to rate how important each factor is the trading development.

The full set of questions included in the survey is contained in Appendix 4.

Table 1: Relationship of survey questions to the factors suggested as affecting trader development

Learning type	**Learning factor**	**Performance factor**	**Development factor** **(respondent importance rating of each item)**
Dyadic 6. I have learnt most of what I know about trading from others	Commitment : Trader 12. Pleasure and fun sometimes keep me from getting work done. Commitment: Firm 15. In the past I have been supported in my efforts to improve my trading by the firms I have worked for.	Commitment 13. Trading success is down to how hard you work on improving your trading. 14. In times that I have invested significant effort in improving trading, my performance has improved.	Trader Personal talent Self-directed education Formal education
Experiential 7. I have learnt most of what I know about trading from personal experience	Discipline: Trader 16. People would say that I have an iron self-discipline. 17. I am able to work effectively toward long term goals. 18. I write down a justification/thesis for each trade. 19. I follow pre-determined plans about how I will manage and exit positions. 20. I often ignore my pre-defined rules of processes. Discipline: Firm 23. In the past I received help to improve my investment processes from firms employing me.	Discipline 21. Trading success is down to personal discipline 22. In times that I have focussed on my trading routines my performance has improved.	Coaching Emotional control Having the right strategy for the right market Trading reviews Having a great mentor Strategies for stress management Strategies for personal development Strategies for personal care
Dydactic 8. I have learnt most of what I know about trading from courses/reading	Context: Trader 24. In the past I have experienced events in my personal life that have reduced my ability to improve my trading. Context: Firm 27. In the past, personal circumstances and constraints have been accommodated by firms employing me. 28. In the past I would have received help if I had informed my firm about problems at work	Context 25. The commitment required to build trading skill can cause personal problems. 26. In times that my work environment has been supportive my performance has improved.	Environment Talented colleagues and support Information sources Access to analysis of the market Access to technology Pleasant physical work environment Positive workplace culture

	29. In the past I would have received help if I had informed my firm about problems at home.		
	Market: Trader 35. I am aware of how changes in market regime will affect my trading edge. Market: Firm 38. When I lose money my firm is supportive in helping me maintain perspective.	Market 36. Trading success is down to reading the market regime. 37. My trading has greatly improved whenever I have experienced extreme market conditions.	
	Collaboration: Trader 39. Traders I know take advice from others in pursuit of trading improvement. 40. Traders I know are reluctant to share skills and techniques. Collaboration: Firm 30. At firms that have employed me, people often thought a lot about how an error could have been avoided. 31. At firms that employed me people often got upset and irritated if an error occurred. 32. Firms where I have worked have been highly collaborative. 33. Firms where I have worked have been highly competitive environments. 34. Firms where I have worked actively encouraged traders mentoring other trades.	Collaboration 41. Trading success is down to what you learn from others. 42. In the past my trading performance has been improved by learning from others.	
	Process: Trader 44. Good traders record rationales and outcomes for all trades 45. Good traders review the reasons for all trades either working or failing 46. My investment process is highly repeatable. Process: Firm 49. In the past I have found it easy to set up my personal investment workflows in my workplace.	Process 47. Trading success is down to how repeatable your process is 48. In times that I have most strongly defined my trading edge my performance has improved	
	Behavioural: Trader 60. Good traders are aware of when their trading is 'hot' after a run of successes or 'cold' after a run of losses 61. I trade less if I am losing money 62. I trade more if I am making money 65. If I losing money I de-risk and take capital out of the market 50. Good traders are aware of the impact that losing	Behavioural 51. Trading success is down to overcoming normal reactions to gain and loss 52. When I have worked hard to overcome my emotional responses my performance has improved	

	money has on their trading behaviours Behavioural: Firm 53. I have a goal for the year 54. My goal for the year is reasonable and attainable in risk terms		
	Education: Trader 55. In the past I have faced trading challenges due to insufficient knowledge or education 56. In the past I have sought specialist education in trading or related fields Behavioural: Firm 59. Firms that I have worked at always supported efforts to obtain education and training in trading	Education 57. Trading requires a long process of learning for success 58. In times that I have focussed on learning my performance has improved	
	Emotion: Trader 64. If I losing money I take time away from the desk Emotion: Firm 66. In the past the environment at work let me manage stress when trading was tough 67. My partner and family know if I have had a bad day and can help me manage stress	Emotion 63. After a really bad day trading I find it hard to think about anything else	
	Explicitness: Trader 68. I can easily explain exactly how I capture my edge when trading 69. I will often use ideas developed by others in trading 70. I will often share ideas about how to improve trading with others 72. I enjoy discussing my trades with other traders 73. I get advice from other traders about my positions Explicitness: Firm 75. Firms that I have worked for helped me to define and refine my trading style and edge	Explicitness 71. Good traders are born not made 74. It is essential to subject trade ideas to strong scrutiny from colleagues	
	Measurement: Trader 76. I think carefully about the role played by my trading when I make money 77. Good traders know exactly how they are making or losing money. Measurement: Firm 79. In the past my trading development has been hampered by inadequate tools to tell why I was making or losing money	Measurement 78. It is hard to know luck from skill in trading	

Most of the questions in table 1 were developed for this paper, but some were taken from existing survey based studies. Question 12 was taken from (Maloney, Grawitch & Barber, 2012) and questions 30, 31 were taken from (van Dyck, Frese, Baer & Sonnentag, 2005).

In addition to questions about various factors contributing to the ease with which trading is developed, I asked questions aimed at discovering the profile of trader type (see Table 2). These questions were also answered on a five point scale (just like me, like me, not sure, not like me, not at all like me).

Table 2: Questions aimed at determining the type of trader.

Trader attribute	Questions
Analytical	I feel more comfortable if I have a well-researched idea behind a trade I think that you can't make money trading without having better understanding than average traders
Hesitant	I often hesitate when putting a trade on I think that you can usually find a better price point if you are patient when you enter or exit trades
Investor	I find the changes to individual positions exciting, especially if my trade idea is confirmed I think that rewards to trading are more certain over a longer time horizon
Impulsive	I can't always say why I chose the exact trade timing that I did I think that precise timing of trades is not important
Validation	When I lose money I feel ashamed I think that the market is often deluded
Targeted	I am very specific about what and when I choose to trade I think that trading requires high levels of personal organisation

Analysis

Trader survey

Here I summarise the results of statistical analysis of the trader survey responses; the full supporting analysis is in Appendix 3. The raw results of the survey are contained in Appendix 4.

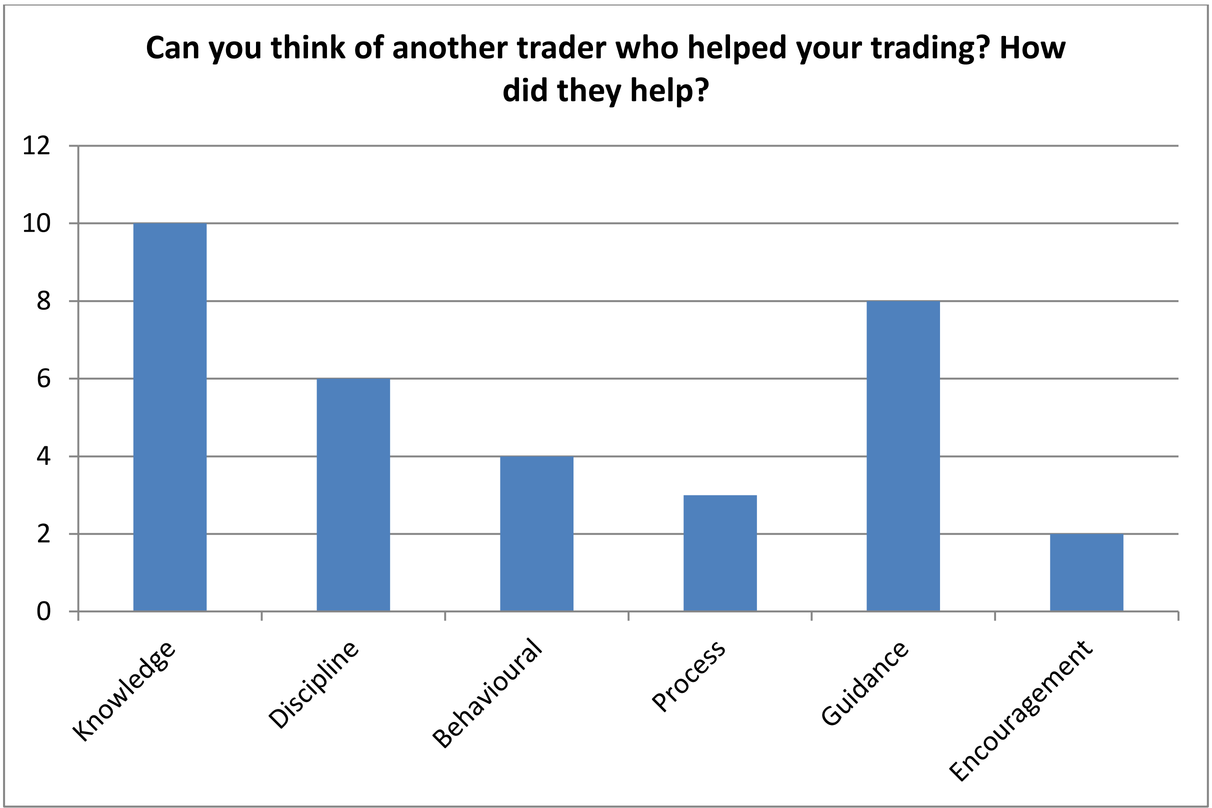
The motivation behind asking the trader type questions (table 2) was to see if there were any broad relationships between the type of trader and how they had learned trading (column 1, table 1). It was found that the 'targeted' traders; the ones who were more structured in how they invest, reported the greatest learning from other traders (Appendix 3, table 3). We also looked at whether factors that affect learning of trading (column 2, table 1) tended to be from the traders themselves or their environments and found that when learning from others traders reported positive scores for factors that related to themselves and how they worked (Appendix 3, table 4). To see if particular trader learning types corresponded to those traders reporting that particular aspects of how they work are essential to performance, we fit the learning type scores against the trading performance factors (table 1, column 3), but did not find any strong relationships (Appendix 3, table 5). This may mean that while there are groups of traders reporting that they have learned trading either from others or by themselves, those methods of learning do not relate to specific ways of trading being drivers of performance; for example those who learn from others do not strongly attribute performance to any one set of trading skills.

Having found that learning trading from others seems to go along with being a structured trader, and that factors that support this learning seem to predominantly relate to the traders themselves, I looked at how the method of learning trading (column 1, table 1) relates to factors that could affect learning (column 2, table 1). Learning from others corresponded strong process and an environment that helped traders to manage stresses (Appendix 3, table 6). Interestingly traders who had learned predominantly by self-directed activity had experienced a lower level of collaboration in their environments. It emerged that self-learning was related to environments that did not aid trading process and a lack of tools to analyse trader performance (Appendix 3, table 7). So this would imply that self-learners have not chosen, or been less able, to learn from others and that this goes along with firms that have not supported process.

Finally we looked how the learning type related to what factors the survey respondents had stated as being important for trading development. This suggested that those groups who have learned less from others, state more strongly that coachable skills are beneficial to trader development (Appendix 3, table 8).

As well as the multiple choice questions there were two ‘free text’ opportunities for traders to respond to questions. The first of these questions asked what respondents had learned from trading mentors (figure 1) and got short responses from 35 respondents that were easily placed in to categories. From this data, the main experience of mentoring between traders is to pass on specific knowledge and techniques, such as money management, sizing, specific strategies and how to adapt to and read the market. Second to this, an extremely important factor is the ability for dialog with other traders and to talk about trades and the markets. It is worthy of note that the techniques and knowledge that traders mentioned as having been learned from others tended to be ‘procedural’ in nature; i.e. not facts that can be learned, but experiential learning about interactions with the market.

Figure 1: Thematic analysis of free text question regarding trader mentoring.



Appendix 4 contains quoted responses to the final question of the trader survey: ‘Please provide any other comments about your experiences around teaching or being taught trading and how trading talent development could be improved’.

These quotes predominantly talk about the requirement that traders ‘know thyself’. In addition a prominent theme was how important the support of other traders is. This is collaboration; but it is more subtle than simply sharing information, tools and talking to one another. In the quotes a great degree of importance was placed on the shared experience amongst traders; of encouragement and repeated guidance from mentor to mentee.

Thematic analysis of interviews

Over the past six months, I have had the privilege of interviewing a number of senior and successful people who have had hands on experience in either trading and/or managing teams of traders (in most cases, it was actually both). I was acutely aware of the existing difficulties in the financial markets, and the structural challenges in the industry itself, yet nonetheless I was greatly encouraged by the readiness and openness to discuss the topic of developing and harnessing trading talent. The interviews were analysed by theme using a process of qualitative clustering; i.e. the content of the interview was divided up into topics and the content of the topics summarised. There were 20 interviews with trader managers.

The key findings of the management interviews undertaken can be broken down into the following core areas which have largely been categorised by a number of recurring themes.

Management

There was a general consensus that management of traders has historically been very poor. Most of the people I interviewed were quite open and forthcoming in this regard. Several expressed sentiments such as, "as long as traders were making money, we would pretty much leave them to it." The more profitable the trader, the more power they seemed to garner, so much so that management would sometimes turn a blind eye to things such as behaviour or even breaches in position limits. Furthermore, in some instances, aggressive increases in capital were permitted, which ordinarily would never have happened. "We were all drinking the cool-aid but just creating the inevitable accident to happen." There was a sheep mentality – managers would usually give traders more money if they were making money, without fully understanding why they may have been making it, and conversely, withdrawing capital from others without fully understanding why they were losing it.

Apart from poorly managing capital and risk allocations depending on performance, management seemed to have the wrong skillsets and abilities with which to manage traders. They were often of a closed mind-set, with firm views of how things were traditionally done (Dweck, 2012). And managers often found it difficult to straddle the competing interests and needs of the firm and the traders (Bradberry, 2009, and Book

& Stein, 2011). As one of my interviewees expressed, “management would only appear when it was raining (i.e. when the trader was losing money) which eventually strained our relationship with the traders and made them view myself and the firm with trepidation.” There was also a common perception amongst those that I interviewed that the only people properly capable of managing other traders and gaining their respect were fellow proven traders. In the cases where the manager was not an ex-trader, it appeared very easy to breed contempt and disdain from the traders and they would often project their frustrations in challenging times to someone they did not respect.

It should come as no surprise that some of the managers I spoke to often felt inadequate and poorly trained to undertake the responsibility of managing other traders. Some others spoke of being in awe of the traders they managed, others were intimidated, whilst a surprisingly few number of others actually admitted to feelings of resentment. In the cases of successful hedge funds with star managers at the helm, the ones I spoke to said that their focus quite simply was not necessarily developing and harnessing talent within their firm, it was beating the markets themselves. This is not altogether surprising given the intensity and commitment involved with trading, although what was interesting was the regret that most of these individuals expressed: “In hindsight, we could have done a much better job at this.”

Culture

Whilst there is a certain degree of overlap with some of the management points outlined above, the culture of the firm is not simply set by the managers of traders. By culture, we mean what the firm itself stands for, especially in relation to things such as its appetite to risk and reward, collaboration and facilitation of traders, or the way they treated staff etc.

Most of those I interviewed expressed the desire to have “culture adapters” in their own firms and how important it was to hire people who may fit in to this. Yet, when pressed on hiring policies around traders, most confessed that there was little or no emphasis placed on large scale pre-screening of new trading employees to fit the firm’s culture (nor, as we see below, was there a focus in hiring to identify traders who themselves had the attributes required to be successful traders) There were some interesting comments about leadership,. Those that I spoke to agreed that the culture was heavily influenced by management and that it should have been the management's place to agitate that culture. In principle, their role was to be instrumental in helping to produce a "perverse" culture, challenging the firm's dynamic and the way in which traders were nurtured (Long, 2006) (although in practice, as alluded to in this paper, this did not seem to happen). As one CEO of a multi-manager credit hedge fund said: "The culture starts with me. They back me to keep my word, and to set a clear core competence of the firm." Another spoke of setting out a clear strategy: "It is very hard for macro firms or credit firms to create successful equities businesses because they will always be known externally as credit or macro funds, and not equities. We have tried this and never really succeeded." Another CEO passed on comment about their firm's attitude to risk and drawdowns: "I have learnt more recently, but historically, I know I made things worse by overtrading people, cutting them too quickly, and being too involved in their P&L". This clearly resonates with Greg McKeown's observations in his book, "Essentialism; the disciplined pursuit of less" (McKeown, 2014).

Some spoke of a culture within hedge funds of "an outlying star trader". Many significant hedge funds were often built around one particular manager. The firm's culture would hence be based around that individual and that, in of itself, would breed a lack of proper focus on others in the firm. As one previous manager of a Tier 1 investment bank said: "We have been covering and servicing large hedge funds for a number of years. Most of the successes were usually down to individual genius. But as they grew, I have seldom ever seen a successful transition of focus from the star manager to developing others." Says another: "There is a presumption that if you institutionalise the business, you may actually end up wrecking it. Perhaps in order to beat the market you have to have the maverick in charge, to look at things differently, and genius cannot be institutionalised."

There was no question that at some banks and hedge funds some trading cultures could breed hubris. Some of this has vanished in a post-Lehman Brothers world, prior to which recollections such as these were not uncommon: "I remember the head of derivatives trading putting up a chart that said: 99% of all revenue comes from traders, and 1% comes from sales. It was kind of a mini joke, but it was true nonetheless" Hubris has an uncanny knack of predicting the future, and sure enough, so it was in the case of this bank.

The importance of hiring traders that fitted the mold of the firm was mentioned on a number of occasions, especially in relation to their risk appetite: “Our traders must be aligned with our culture. If not, you get tension, and then blow ups….”

Incentivisation / Short Termism

A by-product of the first two points of management and culture, alignment and incentives was often referred to by management as a key problem and a point of friction between the firm and their traders.

Firstly, shareholders of banks rely on quarterly results, whilst hedge fund investors usually receive monthly Net Asset Values. The fixation on short term trading and results is usually counterproductive and makes it a lot harder to allow sufficient time and resources to be dedicated to developing talent in the medium to longer term. A point was raised on more than one occasion about how successful the old Goldman Sachs style partnership was and how its structure enabled it to invest more for the long term.

Secondly, in respect to alignment: Compensation structures were based on short term time frames. There was little appetite for large investment by the firms in terms of capital expenditure in this area, and / or investment in terms of tolerating losses by traders. Firms would become intolerant fairly quickly of individuals losing money. As one commentator put it: “Value creation is a self-generating, self-governing, self-preserving planetary imperative based on nature itself: and if you don’t respond to it, the planet will shut you down (Kaiser & Young, 2014).

There was unanimous feedback that developing and nurturing trading talent would be the right thing to do, but this could easily take 3-5 years to bear fruit, and quite frankly it was extremely unlikely that management or shareholders would want to commit to this. There was no incentive to focus on training. “I suppose we should have looked at this more as a firm, but the commitment involved and the challenge we would be required to overcome was simply too big a burden for us.”

Lastly, and as has been extremely well documented over recent years, the risk reward payoff has significantly benefited the traders at the expense of the firm, and this asymmetrical relationship and lack of financial alignment has caused significant fissures between these two sides (Augar, 2006).

The Relationship between the Trader and the Firm

Further study of the relationship between the trader and the firm was perhaps one of the most insightful and surprising elements of this exercise. I did not fully appreciate how each side saw the other, and I certainly underestimated the suspicions and the strength and depth of feelings of both.

Traders usually viewed themselves as entrepreneurs, effectively running their own companies within the auspices of the firm. They would often resent the firm's involvement, particularly after a winning run. As one manager of a large asset management company said: "It would *always* be that the trader would think of themselves first, and if the firm was fortunate, the team second, the division third, and the overall firm fourth." Or, as another manager pointed out: "They have the skill, and the talent, and they can walk out the door with it. And they think they can hold you ransom because of it."

Not only was mutual resentment prevalent, but on probing further both sides would often feel that this was justified. The traders would feel that they were making the firm too much money, and the firm would feel that the traders were at times *prima donnas* who were difficult to manage. The term *Schaeudenfraude* was referenced in a case whereby the manager was not unhappy to see a trader lose a lot of money and leave the firm, even though it would affect his and everyone's bonus: a "psychological quagmire" of hidden commitments, which were ultimately obstructive to change (Kegan & Lahey, 2001).

The firm would feel they were providing the capital and taking the risks. Traders would see them as only being present when the trader was either losing money, breaching risks, or having a compliance input. Much like 'Pavlov's dog', after a while the trader didn't want to have a lot of connection with the firm. As traders have a tendency to overestimate their own abilities and their control on situations (Biais, Hilton & Mazurier, 2005, and Fenton-O'Creevy et al, 2003), it is not surprising that the lens with which they view the firm can be blurred at best, and cracked at worst.

This lack of understanding towards the other's approach seemed to contribute to an environment of mutual suspicion, risking "withdrawal, withholding and even sabotage" (Limberg & van der Heyden, 2007).

Hiring

Despite talk of a need and desire to create a certain culture, it was quite striking how most firms (except perhaps for Goldman Sachs) spent little time at the recruitment stage thinking about this. When asked about whether a trader is born a trader, or made (nature *versus* nurture) most people believed that nurturing was imperative to trading development and success (the average response by those interviewed was that 60% of trading talent was through nature, and the remaining 40% through nurture). The obvious follow up question to that was then what kind of person is most likely to be able to be nurtured, and how can you identify them early?

There were two ways that most organisations approached this. Either, they brought in someone who had existing pedigree, and a proven successful track record, or, they identified people with potential to become successful traders. But their approach to each seemed somewhat flawed. In the first instance, there were many times where a firm glossed over cultural fits in attempts to bring in traders. The competing interests of short term pressure on management and the firm to perform, meant that decisions would be calibrated through an accommodating lens, when what was needed was objectivity. There are many firms littered across the City of London and Wall Street with successful traders at one firm who have never successfully transitioned to another. As one of my interview subjects put it: “We were singularly unsuccessful every time when we went in to the market to recruit external traders. We had no history of good vetting and no history of particularly good outcomes, except a random walk percentage search.”

The second reason that the hiring approach seemed flawed is that, whilst where there were efforts to identify and develop latent potential talent, there did not seem to be a concerted effort to link the skillsets and attributes of what they were looking for with human resources or senior management. In addition, some I interviewed were sceptical that there was indeed a link between personality traits and performance: “When I was at Goldmans in the mid 90’s they did a survey of their top traders to find out if there was a common denominator amongst us. In the end, we found no interesting character traits that linked us.”

And finally, some managers said that in spite of years of doing this, they needed to have worked with someone for a number of years before they could possibly tell if they are good, regardless of hiring process: “Only after time, I can start to get a sense of it, only after a couple of years under the bonnet. So no, I cannot pinpoint any specific attribute to ascertain if they are effective.” This echoes observations in Rose Sweet’s book, “Big five personality traits” (Sweet, 2014).

Identifying Successful Trading Attributes

Whilst a few people (as highlighted above) struggled to articulate the personal traits that might lead to a good trader, most people I spoke to were able to describe accurately and passionately the attributes that would lead to someone being successful or unsuccessful (Schwager, 1989, and Lefevre 2008).

Many people spoke of what they felt were key attributes of a successful trader: “someone who was streetwise”, “possessed a growth mind-set”, had a low ego, humble, flexible, and someone who was curious and constantly challenging. In addition, many were quoted as saying they need to have a “fixation on trading”, or a kind of compulsion for the sport. As one experienced manager of traders said: “Successful traders ask different questions and they challenge every single thing. Everything is an issue for them. They have the same sparkly restless look in the eye, and they have an ability to distance themselves from the market when needed. And above all, they work exceptionally hard at it.”

Unsuccessful traders on the other hand, and people that were hard to manage, were often lazy and ill-disciplined (with some actually suggesting that overweight people were unlikely to be successful). Above all, however, they were too stubborn and at times, “too-intelligent for their own good”. Note, however, that a clear distinction was made here. The consensus belief was that some “super-traders” had something unique about them. A kind of competitive DNA in their genes, combined with a degree of intellect. This was contrasted with stubborn traders or analysts who went to lengths to explain their rationales and theories behind their trades. “Trading is all about discipline and ego. The person who cannot admit easily to being wrong, for whatever reason, is destined for the scrap heap”. This resonates with the observations of James Montier in his Little Book of Behavioural Investing (Montier, 2010).

Scepticism of Coaches

There were differing opinions of the success of trading coaches (either first hand, or anecdotally) but the average of these opinions landed much more towards the sceptical side. There is a lot of cynicism in the world of trading and finance as it stands, and this comes across quite readily: "If they were that good they would be doing it themselves," and, "What can they possibly tell me that will make a difference?" Indeed, one may have some sympathy for this approach: two trading coaches I questioned themselves said they had had extremely limited success in developing trading talent. It was clear therefore that trading coaching, in isolation, is a very hard thing to master, and there is little evidence to suggest that it is helping the traders make marginal gains in their performance (Syed, 2015).

Trading is Tacit

A number of people raised the fact that trading itself is extremely hard to convey to someone else. It is even more difficult for a trader to pass on his wisdom and experience, than say a world class athlete, because they can't always see or articulate what they are doing, to copy or learn from given the amount of complex decision variables a trader must process.

So if traders themselves cannot always explain what it is they are actually doing to make money, or elaborate on their methods, how could anyone reasonably expect management to do otherwise? As one ex-trader who has since become a trading coach put: "So much of this is just nature. It's about being street smart and having your skills and developing your skills on top of that. And it's not so easy to teach someone who is not street smart, how to be street smart."

Hard Work

Most acknowledged that as much as they would have liked to have had a better structure in place that would have enabled them to hire the right individuals, and put them on some kind of performance enhancement programme, the reality is that this would take a huge commitment in terms of time and resources, and end up being "extremely hard work". To do this right, you have to care where people may be in five years' time and firms can't and don't often think with this time horizon. As one of my interview subjects noted: “We simply couldn’t operate in this way even if we wanted to. Although I actually think it’s what we should have been doing.”

Many individuals were able to spell out an overall framework of the kind of things they might like to do, or perhaps to have done differently if they had had their time again: Instigate a hiring process, an induction process, an alignment of behaviour and people, the right support from the firm (including technology, mentoring, and appropriate risk management and man-management, which means having the right attitude in bad times and supporting the trader’s process), and compensation for the long term. Whilst these sound good in theory, when you consider the reality of operating in markets that are trading 24/7 and how much human physical and emotional capital this entails, it is not hard to see why the idea of developing and nurturing trading talent will usually just end up in the “too hard basket”." It is as though, even with the best endeavours of people who believe in and want to embrace the concept of developing talent, the project will almost never get off the ground. As Professor Huy notes: “Mobilization during radical change requires significant emotional energy” and that radical change “often involves major uncertainty”, (Huy, 1999). My research seemed to suggest that there was often simply not sufficient energy to affect these types of changes.

Findings and discussion

How do traders learn?

The objective of the survey was to establish a basic agreement on what factors might be barriers to developing trading. One of the strongest relationships I observed in the survey was a negative relationship between collaborative environments and traders who mainly learned on their own; implying that those who have learnt most about trading from solitary or formal study have also encountered the least collaborative environments. Cause and effect here is at question. Do self-learners target non-collaborative environments? Or is self-learning the result of working in non-collaborative environments? There are two clues about this from the survey results. Firstly, the self-learners had experienced specific negative influences from environmental process and performance measurement factors. These factors show a failing of the environment to equip traders, rather than trader preference for that environment. Secondly the self-learners and the experiential learners strongly suggested factors that could be coached as being essential to trading. Both of these pieces of evidence point to self-learning being the result of necessity rather than preference.

Learning from others was associated most strongly with the level of process of trading and was most strongly related to factors relating to the traders themselves; but not to any specific performance factor. So learning from others may be enabled by how individual traders work but is not important for any one factor in terms of performance drivers. This finding is at first somewhat puzzling. Might we not expect learning from others to depend on straightforward collaboration? The free text responses of traders confirm that learning trading rests on a combination of properties of the individual; such as the willingness to work hard on process and discipline, resilience and the ability to control feelings and impulses (Douglas, 2000). However the right kind of relationship to others is also deemed important; shared experience of trading in the markets and consistent coaching, encouragement and patience as competency is gradually acquired. This is consistent with the processes of collecting experiences and overcoming natural biases that were described in the literature review. Much was transferred in these relationships. Some of it is knowledge and technique but equally important was the ability to discuss ideas and encouragement when markets were tough. So the learning relationships between traders seem to be channels for much beside market knowledge. This could explain the apparent importance of process to learning from others in this sample. When knowledge transfer is partly tacit rather than purely fact based, process might help to structure experience so that it can be cross-referenced and shared between individuals. Sharing procedural knowledge is difficult in the absence of process. Perhaps this paints a picture of collaboration that is not straightforward in terms of 'working on trade ideas together'. Rather it is a constant process of support, practice, ongoing reference to shared experience and mutual respect.

Respondents to the survey with the highest dyadic scores rated factors such as 'intrinsic talent' and 'educational level' as least important to trading development. Respondents with higher experiential and didactic scores tended to rate factors that could be coached such as 'emotional regulation', 'trading reviews' and 'mentoring' as important to trader development. Could it suggest that those traders who have not had productive dyadic learning relationships with others, feel that this would be most beneficial to their development?

At the bare minimum then, organisations that seek to develop traders should ensure that the traders are correctly incentivised to reward the process and long term success of their trading as well as its immediate profitability. This incentivisation should be matched to the personality of the traders and the type of risk taking that the firm wishes to encourage. To do this the firm should use tools to gain an understanding of trader attitudes to risk (Nicholson, Soane, Fenton-O'Creevy & Willman 2005). The culture of the firm is key here too. Firstly, if traders are expected to objectify and share trading experiences, the firm must provide adequate tools and support to do this, whilst avoiding employment of any personalities that may undermine it. Secondly, the firm should have its own objectification processes; useful and honest trading reviews that are themselves open to criticism from the traders and an error culture that does not encourage the hiding of errors but rather learning from them (van Dyck et al, 2005).

The unexpected

The conversations I had with managers were engaging and I was most taken with a sense of interest and intrigue by almost everyone I interviewed to learn more about this topic of how they may consider harnessing talent. I had expected significantly more cynicism and in truth, I expected hints of defensive mechanisms in both the content of, and behaviour in, the interviews (Long & Harding, 2013). But that was not forthcoming at all.

I had also anticipated a number of these managers to have put in place some degree of resources towards this endeavour. I had not expected anyone to have had complete focus on this area, but given the vast sums of monies that their firms were controlling, I had assumed that would be enough to compel them to have looked in to this before. At the same time, a part of me had expected them to have been somewhat dismissive for the need to put in place a comprehensive performance monitoring evaluation and improvement mechanism. I also had concerns that perhaps they may have seen these questions as too qualitative for a world that often lives in the quantitative. And finally, I expected a number of them to have some real life examples of top traders they had seen developed, even to a minor extent, in-house.

The actual output I received was vastly different on most fronts to what I had expected. The interviewees were warm and engaging and seemed eager and keen to share their own examples of being in the front line on trading desks, or their experience of managing those who themselves managed the trading desks. There was also limited contrition with regard to the past, both in terms of what may have happened to the institutions they worked for, and for the fact that some of the processes that they may have overseen were at times inadequate. There was an implicit understanding that this was either simply how the businesses were run in those days (in the case of investment banks), or that harnessing talent was such a difficult task to embrace and get right, and it was hard enough as it was to just ensure that the firms they were running were trading profitably without having to really worry on added distractions. However, what was very striking to me was that the more I continued on with my interview the more that everyone I spoke to began to express the regret that this was actually an area they had probably missed. In fact, it is safe to say that all 20 respondents reminisced this way.

It was also very revealing collecting in the survey results from the traders. By virtue of the nature of their responses, they actually seem to believe that they are aware of what is needed to make them successful at what they do (whether this is true or not is a different matter). In essence, they are able to “talk a good game” in terms of what they need to do. In agreement with the survey results they almost all refer to the need to be disciplined, and to have some kind of process (or investment screening mechanism) that to some degree can be repeatable. They are often free-spirited self-styled entrepreneurs who think they have most of the answers. And to a large extent, to be a successful trader, one needs to have an inner confidence. However, it is when this manifests externally, there is a danger of both hubris, and of alienating the very entity that is encapsulating it by repelling management. Again there is a correspondence here with the survey results where traders with low dyadic learning score tended to answer negatively to the questions around firm level process and performance measurement tools. This may be completely valid, or it could be the signature of the more independent-learning group of traders identifying short comings in their environment (i.e. the firm).

Whilst it should seem somewhat intuitive that traders and firms could and should be easily aligned to one another, the reality painted a very different picture. This is much easier said than done. It is surprising that a firm should not be investing as much time and effort as it possibly can be to ensure that its traders are as profitable and successful over as long as possible time horizon. However, when one starts to realise the nature of traders, and their inherent resistance and scepticism, and one couples that with the challenges outlined above that the firm itself is dealing with, it becomes apparent that there are a number of hidden (and sometimes not so hidden) competing commitments which are keeping both parties apart. So, even as they hold a sincere commitment to change, “many are unwittingly applying productive energy toward a hidden competing commitment” (Kegan & Lahey, 2001).

Traders seem blissfully aware of what they need to do to make them a good trader, but then don’t seem to have much accountability or drivers to force them to do so. What is more, traders largely seem to be unaware of their own personality traits and drivers. So they study the theory of trading almost as an observer would do looking in, but it is much harder to make the leap and bring it back to themselves. There is almost a blind spot here. The idea of “night vision” springs to mind: the need to look at situations (and review oneself) on a more holistic basis, understanding our own “hidden desires, fears, feelings and motivations”, which in turn provides “an entry point for a deeper understanding of others and fundamental aspects of organizational reality” (Lehman & van der Loo, 2015).

Traders see themselves as entrepreneurs without actually putting in any risk capital of their own to justify this. This is a highly unusual situation. They often act and feel like independent business people.

Firms, on the other hand, are so much more complex than one would think, and it is inherently challenging for management to execute in an effective way when it comes to traders.

Trading seems to work against the laws of human nature and our responses to this do not feel as though they have evolved sufficiently over time. When we are holding a losing position we are hopeful that it will recover, when in actual fact we should be fearing that it goes lower. And when we are holding a winning position we are fearful it might fall when we should actually be hoping it keeps going higher. The “itch we want to scratch” is to cash in a winning trade and feel clever. And conversely, we put off taking a loss because it makes us feel inadequate (Montier, 2010).

For these reasons, a particular blend of individual features are required for trading success; and these features perhaps overlap with a high degree of self-sufficiency and self-assuredness. However we have also seen from the survey that for effective knowledge transfer between traders, there must also be the ‘right kind’ of collaboration based on the sharing of structured experiences. In so far as there is something unique about trading that makes it hard to coach, perhaps it is that it requires a fragile blend of individual focus along with ongoing exposure of behaviour to the scrutiny of the mentor.

This is, however, is only part of the problem. Trading is extremely complex – there are a variety of factors which need to be processed prior to putting on a trade. As this takes place in the brain, a manager’s perception is often that it’s a) very hard to understand, and potentially b) futile to try and investigate further, so that all they can effectively do is c) examine the output. Whilst there may be some truth to this, I think this may very well go to the crux of some of the problem we keep coming back to: “this is difficult, its hard work, and you absolutely have to commit to doing it…” The line of least resistance is often to leave it, to put it in the “too hard category.” As John Kotter points out in his paper, “Leading Change”, “in many cases, executives become paralyzed by the downside possibilities. They worry that employees with seniority will become defensive, that morale will drop, that events will spin out of control, that short-term business results will be jeopardized, that the stock will sink, and that they will be blamed for creating a crisis” (Kotter, 2005).

The ability for either the manager or the trader to overcome problems is limited. It is a little bit like a horse going over the first hurdle in a long race, and pulling out as soon as it realises the first hurdle is a little higher in this long race. In addition, firms and traders are very likely to default to studying the output (i.e., the profit and loss) rather than examining the process, the traders themselves and how they work together.

There are a lot of psychodynamic concepts and hidden agendas on both sides that work against making a successful outcome of this. As Tuckett and Taffler point out “at the heart of the psychoanalytic understanding of reality is the assumption that individuals are always in some degree of unconscious conflict” (Tuckett & Taffler, 2008). To some extent, it is like trading itself. The odds on trading success are low. You have to work hard, you have to almost re-programme and fine tune yourself. To enable firms to comprehensively help and develop their traders there needs to be a buy in from both sides, and a sea-change in mentality. This needs to be done as early as possible.

Trading is hard work. There are no short cuts. Most of the people interviewed felt that there was a compromise and sacrifice on their life. Hard work should not simply stop at following the markets (which itself is hard work, and time consuming). The really hard work, which will make the difference in success, is the work that is done *outside* of the markets. But there is no question that this is one of the most demanding careers in the world and you have to have the resolve and fortitude to want to push yourself outside of markets, when you may well be fatigued and exhausted. This can often be something that may be beyond the realm of many traders.

For whatever reason, trading and finance seems to be an area where outstanding leadership seems rare. Even in hedge funds, where some of the world's most successful traders reside, there is a stark contrast between trading acumen and business acumen and leadership. In much the same way above as traders "can't step off the treadmill" to focus on understanding more about themselves, managers also struggle to cope with the intensity (albeit they have other competing factors as well) of dealing with managers and markets. In the words of John Bazalgette, "all human structures wrestle with the reality that life in organisations, however large or small, carries on at the verge of chaos" (Bazalgette, 2009). Furthermore, it is clear that "middle- and upper-level executives…may be sceptical about change that involves "soft skills" because throughout their careers they have been conditioned to value technical skills and problem-solving as the primary ingredients of success" (Harakas, 2013).

In theory the concept outlined should make sense, and be evident. Surely it would be in the interest of the firm and the trader to combine together and give the trader the best possible chance of success? And education and a structured way of doing this would seem rather obvious". The concept of "motivational interviewing", of traders being nurtured through interactions with management that enhance intrinsic or internal motivation towards behavioural change (Passmore, 2007) would seem to be highly accretive within this type of environment, especially given the types of personalities involved. The reality appears to be completely different.

Trading coaches provided no evidence or examples of how they had transformed a trader. Similarly, managers of firms had never seen examples of their own firm, or in other firms, whereby a dedicated effort had been undertaken to develop and enhance trading performance in any significant way. They themselves could offer *no* example of witnessing a trader being developed by the firm.

But there are instances where firms do seem to produce good traders. So there is definitely an “intangible” benefit that some people get from being around others, and it morphs and seeps in to their own process. But this is much unstructured, and plays in to the tacit point raised earlier in this paper.

Traders live in worlds of significant blind spots. Managers of traders do not focus on the right objectives. The firms are seen as obstacles.

Think of it like a negotiation, a deal, in many respects. For the deal to happen, both parties have to want it to happen, and have to trust in one another, and have clear and set out agendas of what is at stake and what the objectives are. These have to be agreed by both sides, and be in both parties interest in order to sign up. Furthermore, when reasons to change are articulated, together with limitations of the status quo, people often go back and forth, revisiting the status quo position (Westra & Aviram, 2013). And once the slightest barrier gets raised in these scenarios, “the deal is off”. The commitment wanes, and the parties move on. But in some ways, this can be worse, because often the parties do not move on. They are stuck. Unsure and untrusting of what each is necessarily doing. Stuck in an “impasse, an intrapsychic conflict and/or interpersonal roadblock” (Petriheifglieri, 2007).

Applying these insights in a practical sense

To change management is a broad undertaking. Adaptive leadership is key, mobilising people to tackle tough challenges and thrive in today’s fast-moving environment (Heifetz, Grashow, & Linsky, 2009). It is a big project and expectations must be set out early.

John Kotter makes the following observations in respect of efforts to implement organizational change: “the most general lesson to be learned from the more successful cases is that the change process goes through a series of phases that, in total, usually require a considerable length of time. Skipping steps creates only the illusion of speed and never produces a satisfying result" (Kotter, 2005).

With this in mind, and with a view to identifying recommendations to effect the necessary change, the steps we might look to implement could be formulated along the following lines:

- Set out clearly, and up front, the culture of the firm. This should include the expectations the firm will have on its people, together with what the firm intends to do for its traders
- Agree a hiring policy of only identifying certain kinds of individuals
- Establish psychometric tests to filter individuals
- Ensure that the firm fully understands (as much as is possible) the traders investment strategy and process
- Break down the strategy into sub-components of trading buckets, and ensure that each new position initiated gets allocated to the appropriate strategy
- The firm should ensure that the strategy and process corresponds with the personality profile of the individual (for example, extremely analytical, research driven investors are not necessarily optimal at very short term trading etc.)
- The Firm should also commit to:
    - Matching compensation with alignment
    - Providing management that is respected and admired by traders
    - Providing systems and an ability to review the traders performance and provide a feedback loop in order to structure experience
    - Not simply appearing "when it is raining" and when traders are having a hard time
    - Establishing a culture where the risk/reward that they are seeking and comfortable with is readily understood by all
    - Specifically setting out long term objectives and goals. What is the drawdown the firm will tolerate in terms of both performance and time?
    - Establishing a culture where an open mind-set prevails and one where mistakes and losses are always seen as learning opportunities and a natural part of the business

  - Establishing a safe environment, and a place to go to in the event of external / environmental changes to the trader (divorce, health etc)
  - Being a partner, not a policeman (albeit recognising that regulatory requirements are needed)
  - Maximising the collaboration and sharing of resources of the firm for the benefit of all. Ensuring that traders have the ability to have private space for deep reflection and analysis, but also an ability to interact and gain from their trading environment and their colleagues
- A trader should commit to:
  - First and foremost, developing their Trading Plan and money managing techniques
  - Working hard, both in relation to the markets, and in to developing further their understanding about themselves
  - Having a regular feedback loop on their trading with the firm and to approach this with an open, growth mind-set. (Note, the firm has an obligation to do this in a collegiate and constructive way)
  - To notify the firm (without fear of repercussions) of any material changes to their environment
  - Agreeing to and signing up to the culture of the firm, which includes the risk tolerances and general attitude to risk
  - Putting capital where possible in their own fund so they are as aligned as they can be with the firm

When this works, ideally the trader should feel empowered, as though they are actually developing something for themselves (a fund, a trading book, a track-record, a revenue stream) but they should also be viewing the firm as a partner and an enabler of their business and their performance.

It can take a period of time to change the mind-set of the trader, so the firm should concentrate on initially earning its stripes in terms of developing them and supporting them. If this is done to the best of the firm’s ability the trader should only be viewing the firm in a positive light instead of a resentful one. And eventually, over time, the trader is far more likely to flourish.

Richard Dennis was right. Trading can be taught. And with the right approach, commitment, and an awful lot of hard work, it seems that there is hope for the firm to play its role in developing and harnessing trading talent for the mutual benefit of both.

Keep asking the hard questions. And be demanding…

Limitations

Research setting and targets

Most of the traders targeted were contacted through my professional network. This was both a strength and a drawback. It was a strength because it meant that a higher rate of replies was obtained. It was a drawback because it biases the sample toward the type of trader known to me; moreover some of the traders who took the survey were trained by me. Similarly the targets of the interviews were obtained through my professional network.

Generally speaking people are not willing to spend long tracts of time responding to surveys. For this reason the coverage of the teaching barrier factors was not as comprehensive as it might have been. Furthermore the quantitative format of the survey may have prevented more qualitative aspects of trader experience from coming to the surface.

Limitations to the analysis

To some degree, the result obtained from the quantitative analysis will be a because of how the underlying model is structured. Different results may be obtained by changing the structure of the model a little or by altering which questions match to which factors. Also, the analysis depends upon the clarity of the underlying trends in the data. To be more confident still in the results of the analysis it would be beneficial to have a larger sample of survey respondents.

Future research

There is little research that deals specifically with how organisations that seek to harness traders can do so. At a more basic level, there is also little work as to how traders can work together effectively as a team. Perhaps this is because groups of traders working cooperatively is not the same as conventional team work; the traders cannot take the same trades as each other and the success of the group requires the preservation of the independence of the individual. Further research building on this study could tackle these topics. For example this study leaves one wondering several things: What does the best environment for trading look like? Further to this, what can organisations do to provide the right kind of mentoring, to foster a culture that promotes collaboration but prevents groupthink, to support the traders but not elevate them to a pedestal?

Conclusion

Trading does appear to offer a unique challenge to learn and to teach. Firstly, the complexity of trading in terms of the quantity of information and how it inter-relates and affects instrument prices is huge. Part of learning to trade is getting a feel for how to filter this; what to look at and when? How to turn this into a repeatable strategy? But this is made so much harder because the laws of human nature are often working against you. From all of the work reviewed in the literature review and from the comments of the traders, one of the hardest things about learning to trade is a) understanding your own reactions to market situations and b) managing those reactions. This is hard because our natural reactions are often not the correct actions when dealing with the markets. The work in the thesis supports the idea that learning trading can be helped by i) structuring trading experience (through explicit process) because in this way you can measure your reactions and their consequences and ii) sharing that experience with a mentor for ongoing procedural learning; i.e. feedback about and correction of your reactions. This requires a continuous feedback loop: performance, review, targeting, performance and so on. It also needs specific commitment from firms and traders which was found to often be lacking; rather, much of it was simply left to fortune. But it can be done. Traders can commit to direct, deliberate and open practice of their art. Firms can provide the supporting processes, constructive and informative reviews and the culture in which this (and not just raw profit and loss) is the objective of trading.

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Appendices

Appendix 1 – invitation e-mail to survey participants

Hi [name]

You may or may not be aware, but I am currently studying at INSEAD for an Executive Masters in "Consulting and Coaching for Change".

As the final part of the course, I am required to write a thesis and I have selected my chosen topic which is as follows:

"Trading: What are the psychological factors that makes this practice so unique? Why is it difficult to harness talent? And what can firms do to overcome this?"

I am conducting a short online survey of traders to understand more about this, and I would be extremely grateful if you would be prepared to spend some time (10-15 mins) completing the survey, which can be accessed on the link below:

Link: https://www.surveymonkey.co.uk/r/27X98XF

Password: xxxxxxxxx

It goes without saying that your responses will be kept entirely confidential and not directly attributed to you in any analysis. I have tried to keep the survey as short and easy to complete as possible, and I have endeavoured to select people who I felt had significant insight and experience in trading.

Thank you in advance for your help (I very much realise your time is short and precious!) – it is greatly appreciated.

Kind regards

Hilton

Appendix 2 – invitation to interview subjects

Hi [name]

As you may or may not know, I am currently studying at INSEAD for an Executive Masters in "Consulting and Coaching for Change". As the final part of the course, I am required to write a thesis and I have selected my chosen topic which is as follows:

"Trading: What are the psychological factors that makes this practice so unique? Why is it difficult to harness talent? And what can firms do to overcome this?"

There are two elements to researching this: the first is a survey which we have developed and sent out to a number of traders, exploring their trading habits and their relationship with their firms. The second is understanding this area from a management perspective, and I'm endeavouring to speak to a number of key people in the industry, who are likely to have first-hand knowledge of how traders may have been managed in the past (direct management of traders is not a prerequisite, just an understanding of how this process is done).

I was wondering whether you might be prepared to spare just 10-15 minutes of your time talking through a few of your experiences in this area, I think your insights would be really valuable.

It goes without saying that our conversations would be kept entirely confidential and nothing you say would be directly attributed to you in my analysis (unless you express otherwise).

If you are happy to speak, I will ask my PA to put some time in the diary for a quick call.

Thank you in advance for your help – it really is much appreciated.

Kind regards

Hilton

Appendix 3 – Analysis of the survey responses

The replies to the five point questions were converted to scores using a scale from 2 to -2: 2,1,0,-1,-2. Factors were built from these scores with the scheme in table 2 for the trading development factors and table 3 for the trader type factors. Where more than one question was used the scores were averaged. The development factors in table 2 could also be aggregated into 'environment' groups (where the average score was taken across questions relating to the firm) or into trader groups (where the average score was taken for each development factor across only the questions relating to the trader).

Most questions contributed positively to a factor, for example question 16, 'People would say that I have an iron self-discipline' contributes positively to the discipline factor i.e. 'Strongly agree' would score 2, however question 20, 'I often ignore my pre-defined rules of processes' contributes negatively. Negatively contributing questions had their scores reversed before being averaged, so that for a negatively contributing question 'Strongly agree' would contribute -2 to the score and not 2.

To determine the relationship between the self-reported dominant learning style of respondents (see table 1) and the various factors under investigation, the scores for each learning type were fitted against the scores for each test factor, by extracting data from the survey monkey system and feeding the data into the 'R' statistical analysis package. This gave a coefficient describing the degree of linear relation between the test factors and the learning type within the group. The significance of these coefficients was also determined and p values lower than 5% considered statistically significant (i.e. we would expect to see the result by chance in only 1 in 20 tests). There were 48 respondents to the trader survey.

Firstly, learning type scores were fitted to the trader type factors (table 2). There was no significant relationship between the trader type factors and the didactic learning type (table 3). But there were significant effects for the dyadic and experiential learning types. The dyadic type showed a positive relationship to the ‘targeted’ trader type factor, while the experiential learning type showed a negative relationship to the ‘hesitant’ trader type factor. At a lower level of significance (90% confidence) the experiential type is positively related to the ‘targeted’ factor. This implies that organised and deliberate traders described greater learning from others.

Table 3: Fit of learning type scores on trader profile factor (results in bold border are statistically significant). Trailing ‘*’ indicates 95% confidence, while trailing ‘.’ indicates 90% confidence.

Trader factor	Dyadic		Experiential		Didactic	
	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)
Analytical	0.61	0.87	0.07	0.7	0.10	0.66
Hesitant	0.03	0.97	-0.44	0.02 *	0.04	0.87
Gambler	0.01	0.17	-0.24	0.17	-0.1	0.67
Impulsive	0.30	0.14	0.02	0.89	-0.05	0.78
Validation	0.14	0.48	-0.21	0.22	-0.17	0.49
Targeted	0.52	0.01 *	0.31	0.06 .	0.36	0.12

Relationship between factors effecting the environment or factors affecting the trader and learning type

To show if there was a relationship between the learning type of the respondents and the origin of the learning factor, the total factor scores for environment and trader were regressed against the learning type scores (table 4). There was one significant effect at 95% confidence; a positive relation between the dyadic type and the ‘trader’ origin.

This suggests that factors that are related to how the individual trader works are positively related to learning from other traders.

Table 4: Fit of learning type scores against the origin of trading development factor.

Factor origin	Dyadic		Experiential		Didactic	
	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)
Trader	1.11	0.04 *	0.36	0.46	0.70	0.26
Environment	0.07	0.85	0.46	0.19	0.62	0.19

Relationship between trader performance factor and learning type

To provide evidence as to whether particular learning types are related to trader performance factors (i.e. things that the trader reported as being crucial to performance), the learning type scores were fitted to the overall performance factor scores (table 5). For the dyadic and experiential learning types there were no significant relationships to the performance factors. But for the didactic learning type there was a positive low significance relationship with the education performance factor. This indicates that those traders who reported a higher degree of individual learning found that it is beneficial to trading performance.

Table 5: Fit of learning type scores against trading performance factors.

Trader factor	Dyadic		Experiential		Didactic	
	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)
Commitment	-0.04	0.92	-0.38	0.37	0.19	0.69
Discipline	0.45	0.21	0.012	0.97	-0.03	0.92
Context	0.02	0.87	-0.14	0.33	-0.12	0.44
Market	0.01	0.97	-0.13	0.68	-0.48	0.17
Collaboration	0.51	0.22	0.39	0.28	0.15	0.71
Process	-0.21	0.45	0.28	0.26	0.17	0.54
Behavioural	0.08	0.87	0.03	0.95	0.33	0.50
Education	0.03	0.93	0.33	0.26	0.62	0.07 .
Emotion	-0.24	0.21	0.00	1.00	-0.17	0.37
Explicitness	0.24	0.34	0.08	0.72	-0.11	0.65
Measurement	-0.25	0.35	0.20	0.39	0.12	0.64

Relationship between learning type and trader development factors.

The relationship between the trader development factors and the learning type was tested by fitting the type scores against the development factor scores (table 6). There were significant positive relationships (at 95% confidence) between the dyadic type and the ‘process’ and ‘emotion’ factors and between the didactic type and the ‘education’ factor. The fit also picked out a significant and strong inverse relationship between the didactic type and the ‘collaboration’ factor. This may show that learning from others is supported by positive process factors and an environment that is sensitive to trading stresses, while traders with a higher didactic type score tended to have experienced a lower level of collaboration in their trading environments.

Table 6: Fit of trader learning type scores against trader development factors.

Development factor	Dyadic		Experiential		Didactic	
	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)
Commitment	0.03	0.90	0.13	0.57	-0.21	0.37
Discipline	-0.21	0.56	0.34	0.33	0.49	0.16
Context	-0.49	0.14	-0.16	0.62	0.44	0.17
Market	0.04	0.89	0.18	0.57	-0.26	0.42
Collaboration	0.17	0.61	-0.12	0.76	-1.00	0.02 *
Process	0.54	0.04 *	-0.19	0.44	0.07	0.76
Behavioural	0.17	0.61	0.09	0.78	-0.47	0.16
Education	-0.27	0.40	0.02	0.95	0.65	0.04 *
Emotion	0.81	0.04 *	0.17	0.62	0.50	0.16
Explicitness	-0.38	0.25	0.56	0.08 .	0.47	0.14
Measurement	0.30	0.36	-0.03	0.93	0.16	0.63

To examine the relationship between the development factors and the learning type in more detail, the fully expanded learning factors (i.e. question groups split by both trader and environment origins in table 1) were fitted to the type scores (table 7). Process factors for both the trader and environment origin were significantly positively related to learning from others. However self-learners showed negative relationships to environment process and investment performance measurement factors.

Table 7: Fit of learning type scores against trader development factors broken down by origin.

Development Factor	Dyadic				Experiential				Didactic			
	Coeff.		p		Coeff.		p		Coeff.		p	
Locus:	Trdr.	Env.	Trdr.	Env.	Trdr.	Env.	Trdr.	Env.	Trdr.	Env.	Trdr.	Env.
Commitment	0.14	-0.12	0.44	0.48	-0.20	-0.06	0.28	0.73	-0.23	-0.12	0.10	0.36
Discipline	-0.41	0.12	0.25	0.39	0.22	0.21	0.55	0.15	0.51	0.19	0.08.	0.09.
Context	0.02	0.26	0.88	0.46	-0.13	0.01	0.43	0.97	-0.02	0.56	0.81	0.06.
Market	0.09	0.22	0.63	0.17	-0.34	0.13	0.1	0.45	0.25	0.17	0.11	0.19
Collaboration	-0.19	0.06	0.56	0.86	-0.20	0.42	0.57	0.31	-0.02	-0.60	0.94	0.06.
Process	0.64	0.38	0.01*	0.02*	-0.13	0.16	0.59	0.36	-0.01	-0.27	0.94	0.04*
Behavioural	0.58	-0.27	0.14	0.29	-0.04	0.12	0.91	0.65	0.23	-0.38	0.44	0.07.
Education	-0.11	-0.17	0.71	0.33	-0.18	0.06	0.55	0.74	0.37	0.15	0.11	0.28
Emotion	0.13	-0.27	0.37	0.52	0.00	-0.01	0.96	0.97	0.02	0.28	0.88	0.40
Explicitness	-0.43	0.25	0.24	0.57	0.26	0.12	0.50	0.80	0.50	0.02	0.09.	0.95
Measurement	0.14	-0.25	0.71	0.15	-0.08	0.11	0.84	0.52	-0.14	-0.28	0.63	0.04*

Relationship between learning type and trader development factors.

Lastly, how survey respondents replied when asked what ingredients are necessary for trading development was tested by fitting the type scores against development factors.

Table 8: Fit of the learning type score against the origin of factors that traders state as helping trading development.

Essential factor origin	Dyadic		Experiential		Didactic	
	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)	Coefficient	Pr(>|t|)
Trader	-0.65	0.02 *	-0.28	0.26	-0.06	0.83
Environment	0.39	0.23	-0.33	0.27	-0.64	0.09 .
Coaching	0.45	0.23	0.71	0.04 *	1.04	0.02 *

There was a significant negative relationship between trader focused essential factors and the dyadic learning type and significant positive relationships between the experiential type and didactic type and coaching.

Appendix 4 – full trader survey and its results

Q1. Your name (Optional)

Answer Options	Response Count
	37
answered question	37
skipped question	14

Q2. Age

Answer Options	Response Count
	49
answered question	49
skipped question	2

Q3. Gender

Answer Options	Response Percent	Response Count
Male	94.0 %	47
Female	6.0 %	3
	answered question	50
	skipped question	1

Q4. Number of years trading

Answer Options	Response Count
	50
answered question	50
skipped question	1

Q5. How much do these statements sound like you?

Answer Options	Just like me	A bit like me	Not sure	Not like me	Nothing like me	Rating Average	Response Count
I feel more comfortable if I have a well-researched idea behind a trade	23	21	2	3	1	1.76	50
I think that you can't make money trading without having a better understanding than average traders	14	15	10	7	4	2.44	50
I often hesitate when putting a trade on	4	16	3	20	6	3.16	49
I think that you can usually find a better price point if you are patient when you enter or exit trades	9	22	10	7	2	2.42	50
I find the changes to my PnL exciting, especially if my trade ideas are confirmed	16	20	4	6	4	2.24	50
I think that rewards to trading are more certain over a longer time horizon	15	22	9	2	2	2.08	50
I can't always say why I chose the exact trade timing that I did	3	20	8	11	7	2.98	49
I think that precise timing of trades is not important	3	13	3	17	13	3.49	49
When I lose money I feel ashamed	5	12	4	17	12	3.38	50
I think that the market is often deluded	5	17	5	17	6	3.04	50
I am very specific about what and when I choose to trade	25	16	2	4	2	1.82	49

I think that trading requires high levels of personal organisation	21	19	5	4	1	1.9	50
						answered question	50
						skipped question	1

Q6. I have learnt most of what I know about trading from others

Answer Options	Response Percent	Response Count
Strongly agree	2.0 %	1
Agree	52.0 %	26
Neither agree or disagree	28.0 %	14
Disagree	16.0 %	8
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q7. I have learnt most of what I know about trading from personal experience

Answer Options	Response Percent	Response Count
Strongly agree	30.0 %	15
Agree	58.0 %	29
Neither agree or disagree	12.0 %	6
Disagree	0.0 %	0
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q8. I have learnt most of what I know about trading from courses/reading

Answer Options	Response Percent	Response Count
Strongly agree	4.0 %	2
Agree	24.0 %	12
Neither agree or disagree	20.0 %	10
Disagree	42.0 %	21
Strongly disagree	10.0 %	5
	answered question	50
	skipped question	1

Q9. Can you think of another trader who helped your trading? How did they help?

Answer Options	Response Count
	35
answered question	35
skipped question	16

Q10. In your experience, how many hours per working day on average do traders on your desk trade in or watch the market?

Answer Options	Response Count
	48
answered question	48
skipped question	3

Q11. In your experience, how many hours per working day on average do traders on your desk spend reviewing and improving their trading?

Answer Options	Response Count
	48
answered question	48
skipped question	3

Q12. Pleasure and fun sometimes keep me from getting work done

Answer Options	Response Percent	Response Count
Strongly agree	4.0 %	2
Agree	30.0 %	15
Neither agree or disagree	22.0 %	11
Disagree	32.0 %	16
Strongly disagree	12.0 %	6
	answered question	50
	skipped question	1

Q13. Trading success is down to how hard you work on improving your trading

Answer Options	Response Percent	Response Count
Strongly agree	20.0 %	10
Agree	56.0 %	28
Neither agree or disagree	16.0 %	8
Disagree	8.0 %	4
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q14. In times that I have invested significant effort in improving trading, my performance has improved

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	54.0 %	27
Neither agree or disagree	24.0 %	12
Disagree	8.0 %	4
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q15. In the past I have been supported in my efforts to improve my trading by the firms I have worked for

Answer Options	Response Percent	Response Count
Strongly agree	10.0 %	5
Agree	46.0 %	23
Neither agree or disagree	22.0 %	11
Disagree	18.0 %	9
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q16. People would say I have an iron self-discipline

Answer Options	Response Percent	Response Count
Strongly agree	10.0 %	5
Agree	48.0 %	24
Neither agree or disagree	40.0 %	20
Disagree	2.0 %	1
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q17. I am able to work effectively toward long term goals

Answer Options	Response Percent	Response Count
Strongly agree	18.0 %	9
Agree	66.0 %	33
Neither agree or disagree	12.0 %	6
Disagree	4.0 %	2
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q18. I write down a justification/thesis for each trade

Answer Options	Response Percent	Response Count
Strongly agree	18.0 %	9
Agree	16.0 %	8
Neither agree or disagree	22.0 %	11
Disagree	34.0 %	17
Strongly disagree	10.0 %	5
	answered question	50
	skipped question	1

Q19. I follow pre-determined plans about how I will manage and exit positions

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	48.0 %	24
Neither agree or disagree	20.0 %	10
Disagree	14.0 %	7
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q20. I often ignore my pre-defined rules or processes

Answer Options	Response Percent	Response Count
Strongly agree	0.0 %	0
Agree	12.0 %	6
Neither agree or disagree	18.0 %	9
Disagree	58.0 %	29
Strongly disagree	12.0 %	6
	answered question	50
	skipped question	1

Q21. Trading success is down to personal discipline

Answer Options	Response Percent	Response Count
Strongly agree	44.0 %	22
Agree	46.0 %	23
Neither agree or disagree	8.0 %	4
Disagree	2.0 %	1
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q22. In times that I have focussed on my trading routines, my performance has improved

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	56.0 %	28
Neither agree or disagree	28.0 %	14
Disagree	2.0 %	1
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q23. In the past I have received help to improve my investment processes from firms employing me (for example; enabling me to customise processes, workflows, technologies or tools)

Answer Options	Response Percent	Response Count
Strongly agree	10.0 %	5
Agree	46.0 %	23
Neither agree or disagree	22.0 %	11
Disagree	14.0 %	7
Strongly disagree	8.0 %	4
	answered question	50
	skipped question	1

Q24. In the past I have experienced events in my personal life that have reduced my ability to improve my trading

Answer Options	Response Percent	Response Count
Strongly agree	12.0 %	6
Agree	50.0 %	25
Neither agree or disagree	18.0 %	9
Disagree	18.0 %	9
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q25. The commitment required to build trading skill can cause personal problems

Answer Options	Response Percent	Response Count
Strongly agree	10.0 %	5
Agree	42.0 %	21
Neither agree or disagree	22.0 %	11
Disagree	20.0 %	10
Strongly disagree	6.0 %	3
	answered question	50
	skipped question	1

Q26. In times that my work environment has been supportive my performance has improved

Answer Options	Response Percent	Response Count
Strongly agree	26.0 %	13
Agree	54.0 %	27
Neither agree or disagree	20.0 %	10
Disagree	0.0 %	0
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q27. In the past, personal circumstances and constraints have been accommodated by firms employing me

Answer Options	Response Percent	Response Count
Strongly agree	8.0 %	4
Agree	28.0 %	14
Neither agree or disagree	50.0 %	25
Disagree	10.0 %	5
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q28. In the past, I would have received help if I had informed my firm about personal problems

Answer Options	Response Percent	Response Count
Strongly agree	8.0 %	4
Agree	36.0 %	18
Neither agree or disagree	42.0 %	21
Disagree	10.0 %	5
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q29. In the past, I would have received help if I had informed my firm about problems at work

Answer Options	Response Percent	Response Count
Strongly agree	6.0 %	3
Agree	44.0 %	22
Neither agree or disagree	38.0 %	19
Disagree	10.0 %	5
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q30. At firms that have employed me, people often thought a lot about how an error could have been avoided

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	54.0 %	27
Neither agree or disagree	26.0 %	13
Disagree	6.0 %	3
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q31. At firms that employed me, people often got upset and irritated if an error occurred

Answer Options	Response Percent	Response Count
Strongly agree	14.6 %	7
Agree	43.8 %	21
Neither agree or disagree	29.2 %	14
Disagree	12.5 %	6
Strongly disagree	0.0 %	0
	answered question	48
	skipped question	3

Q32. Firms where I have worked have been highly collaborative environments

Answer Options	Response Percent	Response Count
Strongly agree	0.0 %	0
Agree	60.0 %	30
Neither agree or disagree	20.0 %	10
Disagree	16.0 %	8
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q33. Firms where I have worked have been highly competitive environments

Answer Options	Response Percent	Response Count
Strongly agree	22.0 %	11
Agree	60.0 %	30
Neither agree or disagree	14.0 %	7
Disagree	4.0 %	2
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q34. Firms I have worked for actively encouraged traders mentoring other traders

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	46.0 %	23
Neither agree or disagree	18.0 %	9
Disagree	20.0 %	10
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q35. I am aware of how changes in market regime will affect my trading edge

Answer Options	Response Percent	Response Count
Strongly agree	28.6 %	14
Agree	63.3 %	31
Neither agree or disagree	8.2 %	4
Disagree	0.0 %	0
Strongly disagree	0.0 %	0
	answered question	49
	skipped question	2

Q36. Trading success is down to reading the market regime

Answer Options	Response Percent	Response Count
Strongly agree	8.0 %	4
Agree	52.0 %	26
Neither agree or disagree	38.0 %	19
Disagree	2.0 %	1
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q37. My trading has greatly improved whenever I have experienced extreme market conditions

Answer Options	Response Percent	Response Count
Strongly agree	30.0 %	15
Agree	40.0 %	20
Neither agree or disagree	16.0 %	8
Disagree	14.0 %	7
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q38. When I lose money my firm is supportive in helping me maintain perspective

Answer Options	Response Percent	Response Count
Strongly agree	6.0 %	3
Agree	44.0 %	22
Neither agree or disagree	36.0 %	18
Disagree	10.0 %	5
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q39. Traders I know take advice from others in pursuit of trading improvement

Answer Options	Response Percent	Response Count
Strongly agree	10.0 %	5
Agree	62.0 %	31
Neither agree or disagree	24.0 %	12
Disagree	4.0 %	2
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q40. Traders I know are reluctant to share skills and techniques

Answer Options	Response Percent	Response Count
Strongly agree	10.0 %	5
Agree	34.0 %	17
Neither agree or disagree	30.0 %	15
Disagree	24.0 %	12
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q41. Trading success is down to what you learn from other traders

Answer Options	Response Percent	Response Count
Strongly agree	0.0 %	0
Agree	34.0 %	17
Neither agree or disagree	48.0 %	24
Disagree	12.0 %	6
Strongly disagree	6.0 %	3
	answered question	50
	skipped question	1

Q42. In the past my trading performance has been improved by learning from others

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	68.0 %	34
Neither agree or disagree	8.0 %	4
Disagree	8.0 %	4
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q43. Firms I have worked for centralised investment knowledge (e.g. firm level signals, common research databases)

Answer Options	Response Percent	Response Count
Strongly agree	4.0 %	2
Agree	46.0 %	23
Neither agree or disagree	26.0 %	13
Disagree	16.0 %	8
Strongly disagree	8.0 %	4
	answered question	50
	skipped question	1

Q44. Good traders record rationales and outcomes for all trades

Answer Options	Response Percent	Response Count
Strongly agree	20.0 %	10
Agree	34.0 %	17
Neither agree nor disagree	28.0 %	14
Disagree	16.0 %	8
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q45. Good traders review the reasons for all trades either working or failing

Answer Options	Response Percent	Response Count
Strongly agree	32.0 %	16
Agree	42.0 %	21
Neither agree nor disagree	12.0 %	6
Disagree	12.0 %	6
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q46. My investment process is highly repeatable

Answer Options	Response Percent	Response Count
Strongly agree	24.5 %	12
Agree	61.2 %	30
Neither agree nor disagree	12.2 %	6
Disagree	2.0 %	1
Strongly disagree	0.0 %	0
	answered question	49
	skipped question	2

Q47. Trading success is down to how repeatable your investment process is

Answer Options	Response Percent	Response Count
Strongly agree	18.0 %	9
Agree	46.0 %	23
Neither agree nor disagree	24.0 %	12
Disagree	8.0 %	4
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q48. In times that I have most strongly defined my trading edge my performance has improved

Answer Options	Response Percent	Response Count
Strongly agree	18.0 %	9
Agree	52.0 %	26
Neither agree nor disagree	26.0 %	13
Disagree	4.0 %	2
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q49. In the past, I have found it easy to set up my personal investment work flows in my workplace (e.g. watch lists/screens, portfolio tools, customized user interfaces etc...)

Answer Options	Response Percent	Response Count
Strongly agree	12.0 %	6
Agree	60.0 %	30
Neither agree nor disagree	20.0 %	10
Disagree	6.0 %	3
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q50. Good traders are aware of the impact that losing money has on their trading behaviours

Answer Options	Response Percent	Response Count
Strongly agree	30.0 %	15
Agree	68.0 %	34
Neither agree or disagree	2.0 %	1
Disagree	0.0 %	0
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q51. Trading success is down to over-coming normal reactions to gain and loss

Answer Options	Response Percent	Response Count
Strongly agree	36.0 %	18
Agree	64.0 %	32
Neither agree or disagree	0.0 %	0
Disagree	0.0 %	0
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q52. When I have worked hard to control my emotional responses my performance has improved

Answer Options	Response Percent	Response Count
Strongly agree	31.3 %	15
Agree	52.1 %	25
Neither agree or disagree	16.7 %	8
Disagree	0.0 %	0
Strongly disagree	0.0 %	0
	answered question	48
	skipped question	3

Q53. I have a goal for the year

Answer Options	Response Percent	Response Count
Strongly agree	22.0 %	11
Agree	62.0 %	31
Neither agree or disagree	12.0 %	6
Disagree	2.0 %	1
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q54. My goal for the year is reasonable and attainable in risk terms

Answer Options	Response Percent	Response Count
Strongly agree	28.0 %	14
Agree	60.0 %	30
Neither agree or disagree	8.0 %	4
Disagree	2.0 %	1
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q55. In the past I have faced trading challenges due to insufficient knowledge or education

Answer Options	Response Percent	Response Count
Strongly agree	16.0 %	8
Agree	46.0 %	23
Neither agree or disagree	20.0 %	10
Disagree	16.0 %	8
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q56. In the past I have sought specialist education in trading or related fields

Answer Options	Response Percent	Response Count
Strongly agree	12.0 %	6
Agree	50.0 %	25
Neither agree or disagree	22.0 %	11
Disagree	12.0 %	6
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q57. Trading requires a long process of learning for success

Answer Options	Response Percent	Response Count
Strongly agree	36.0 %	18
Agree	52.0 %	26
Neither agree or disagree	6.0 %	3
Disagree	6.0 %	3
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q58. In times that I have focussed on learning, my performance has improved

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	48.0 %	24
Neither agree or disagree	26.0 %	13
Disagree	8.0 %	4
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q59. Firms that I have worked at always supported efforts to obtain education and training in trading

Answer Options	Response Percent	Response Count
Strongly agree	2.0 %	1
Agree	42.0 %	21
Neither agree or disagree	32.0 %	16
Disagree	20.0 %	10
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q60. Good traders are aware of when their trading is 'hot' after a run of successes or 'cold' after a run of losses

Answer Options	Response Percent	Response Count
Strongly agree	38.8 %	19
Agree	40.8 %	20
Neither agree or disagree	16.3 %	8
Disagree	2.0 %	1
Strongly disagree	2.0 %	1
	answered question	49
	skipped question	2

Q61. I trade less if I am losing money

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	44.0 %	22
Neither agree or disagree	28.0 %	14
Disagree	12.0 %	6
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q62. I trade more if I am making money

Answer Options	Response Percent	Response Count
Strongly agree	16.3 %	8
Agree	30.6 %	15
Neither agree or disagree	30.6 %	15
Disagree	20.4 %	10
Strongly disagree	2.0 %	1
	answered question	49
	skipped question	2

Q63. After a really bad day trading I find it hard to think about anything else

Answer Options	Response Percent	Response Count
Strongly agree	18.0 %	9
Agree	42.0 %	21
Neither agree or disagree	16.0 %	8
Disagree	18.0 %	9
Strongly disagree	6.0 %	3
	answered question	50
	skipped question	1

Q64. If I am losing money I take time away from the desk

Answer Options	Response Percent	Response Count
Strongly agree	4.0 %	2
Agree	48.0 %	24
Neither agree or disagree	22.0 %	11
Disagree	20.0 %	10
Strongly disagree	6.0 %	3
	answered question	50
	skipped question	1

Q65. If I am losing money I de-risk and take capital out of the market

Answer Options	Response Percent	Response Count
Strongly agree	18.0 %	9
Agree	52.0 %	26
Neither agree or disagree	16.0 %	8
Disagree	10.0 %	5
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q66. In the past, the environment at work let me manage stress when trading was tough

Answer Options	Response Percent	Response Count
Strongly agree	2.0 %	1
Agree	46.9 %	23
Neither agree or disagree	26.5 %	13
Disagree	16.3 %	8
Strongly disagree	8.2 %	4
	answered question	49
	skipped question	2

Q67. My partner and family know if I have had a bad day and can help me manage stresses

Answer Options	Response Percent	Response Count
Strongly agree	8.0 %	4
Agree	52.0 %	26
Neither agree or disagree	28.0 %	14
Disagree	8.0 %	4
Strongly disagree	4.0 %	2
	answered question	50
	skipped question	1

Q68. I can easily explain exactly how I capture my edge when trading

Answer Options	Response Percent	Response Count
Strongly agree	14.0 %	7
Agree	60.0 %	30
Neither agree or disagree	14.0 %	7
Disagree	10.0 %	5
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q69. I will often use ideas developed by others in trading

Answer Options	Response Percent	Response Count
Strongly agree	12.0 %	6
Agree	44.0 %	22
Neither agree or disagree	18.0 %	9
Disagree	26.0 %	13
Strongly disagree	0.0 %	0
	answered question	50
	skipped question	1

Q70. I will often share ideas about how to improve trading with others

Answer Options	Response Percent	Response Count
Strongly agree	12.2 %	6
Agree	67.3 %	33
Neither agree or disagree	10.2 %	5
Disagree	8.2 %	4
Strongly disagree	2.0 %	1
	answered question	49
	skipped question	2

Q71. Good traders are born not made

Answer Options	Response Percent	Response Count
Strongly agree	2.0 %	1
Agree	14.0 %	7
Neither agree or disagree	32.0 %	16
Disagree	46.0 %	23
Strongly disagree	6.0 %	3
	answered question	50
	skipped question	1

Q72. I enjoy discussing my trades with other traders

Answer Options	Response Percent	Response Count
Strongly agree	20.0 %	10
Agree	44.0 %	22
Neither agree or disagree	22.0 %	11
Disagree	12.0 %	6
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q73. I get advice from other traders about my positions

Answer Options	Response Percent	Response Count
Strongly agree	2.0 %	1
Agree	24.5 %	12
Neither agree or disagree	36.7 %	18
Disagree	30.6 %	15
Strongly disagree	6.1 %	3
	answered question	49
	skipped question	2

Q74. It is essential to subject trade ideas to strong scrutiny from colleagues

Answer Options	Response Percent	Response Count
Strongly agree	12.2 %	6
Agree	32.7 %	16
Neither agree or disagree	22.4 %	11
Disagree	26.5 %	13
Strongly disagree	6.1 %	3
	answered question	49
	skipped question	2

Q75. Firms that I have worked for helped me define and refine my trading style and edge

Answer Options	Response Percent	Response Count
Strongly agree	6.0 %	3
Agree	48.0 %	24
Neither agree or disagree	18.0 %	9
Disagree	26.0 %	13
Strongly disagree	2.0 %	1
	answered question	50
	skipped question	1

Q76. I think carefully about the role played by my trading when I make money

Answer Options	Response Percent	Response Count
Strongly agree	20.4 %	10
Agree	49.0 %	24
Neither agree or disagree	20.4 %	10
Disagree	8.2 %	4
Strongly disagree	2.0 %	1
	answered question	49
	skipped question	2

Q77. Good traders know exactly how they are making or losing money

Answer Options	Response Percent	Response Count
Strongly agree	30.6 %	15
Agree	65.3 %	32
Neither agree or disagree	4.1 %	2
Disagree	0.0 %	0
Strongly disagree	0.0 %	0
	answered question	49
	skipped question	2

Q78. It is hard to tell luck from skill in trading

Answer Options	Response Percent	Response Count
Strongly agree	4.1 %	2
Agree	14.3 %	7
Neither agree or disagree	16.3 %	8
Disagree	55.1 %	27
Strongly disagree	10.2 %	5
	answered question	49
	skipped question	2

Q79. In the past, my trading development been hampered by inadequate tools to tell why I was making or losing money

Answer Options	Response Percent	Response Count
Strongly agree	8.5 %	4
Agree	29.8 %	14
Neither agree or disagree	23.4 %	11
Disagree	34.0 %	16
Strongly disagree	4.3 %	2
	answered question	47
	skipped question	4

Q80. How important are the following to improving trading performance?

Answer Options	Not important at all	Not important	Necessary	Important	Very important	Rating Average	Response Count
Personal talent	0	2	12	18	16	4	48
Talented colleagues and support	0	3	14	22	9	3.77	48
Emotional control	0	0	2	14	32	4.63	48
Having the right strategy for the right market	0	3	6	15	24	4.25	48
Self-directed education	1	7	11	21	8	3.58	48
Trading reviews	2	5	15	13	13	3.63	48
Formal education	3	22	19	3	1	2.52	48
Having a great mentor	0	6	13	20	9	3.67	48
Information sources	0	3	14	18	13	3.85	48
Access to analysis of the market	2	6	16	16	8	3.46	48
Access to technology	0	3	8	24	13	3.98	48
Pleasant physical work environment	1	6	16	17	8	3.52	48
Positive workplace culture	0	4	13	16	15	3.88	48
Strategies for stress management	2	4	16	18	8	3.54	48
Strategies for personal development	2	4	14	22	6	3.54	48
Strategies for personal care (eg. good diet, exercise, sleep)	1	3	19	11	14	3.71	48
						answered question	48
						skipped question	3

Q81. Please provide any other comments about your experiences around teaching or being taught trading and how trading talent development could be improved

Answer Options	Response Count
	17
answered question	17
skipped question	34

Quoted responses to Q81:

“I was fortunate to have a structure that not only controlled risk but created trading strategies so I was able to learn and understand portfolio risk as well as utilise and develop trading strategies. However I think more can be done to understand and develop a trader's mind. The trader's psyche is the most difficult element to unravel in this process as there are so many facets to it. We all think about a trade in different ways even if the same facts are in front of us. Being able to pair different minds that counterbalance and compliment is an art that it seems needs more thought process. I believe the lone wolf trader is ultimately weaker than the above proposition.”

“I have experienced trading both within a larger organisation and as self-employed. I believe it takes a unique individual to be able to trade, mentor and also run a business. Personally I think my trading is more focused and performance is improved where I can solely concentrate on trading without other distractions. It is also helpful to have a mentor or business partner to bring perspective through particularly difficult periods in trading which will no doubt occur. The ability to evolve and refine your trading strategy through an ever changing market environment has become more prevalent than in the past times. The difficulty to maintain your edge especially for a discretionary trader has certainly become more challenging. I firmly believe that giving a trader enough freedom to implement his trade ideas and strategy is key. Micro management around positions can have negative psychology effects and cause the trader to second guess himself. I believe the focus should be more on self-development, discipline and the ability to develop and maintain a trading edge.”

“Granular data analysis of what constitutes good and bad trades would be very meaningful if it encompasses as many inputs as possible in developing traders' talent.”

“To me trading is as much about understanding yourself as it is about understanding fundamentals, the market and risk. I found that when you understand yourself you are aware of the personal traits (positive and negative) that can help/hinder your trading. Getting these in check is the first step to being successful. The rest is all about finding the style and approach that suit you and sticking with it, refining it, and repeating it. The mentors I had taught me this and how to adapt when things change.”

“First hurdle for all traders is to come to terms with the fact that the other side of the trade has carefully concluded that they have chosen the best price to trade. All traders have to establish a trust in their own judgement. Methodically, mechanically, systemically, collaboratively, or any other way.”

“Discipline, discipline, discipline”

“Constructive and consistent support / focus from managers through good and bad patches of trading gives confidence to traders and allows them to grow”

“I think if a system could be developed to take a snapshot of everything going on relating to the trade you are putting on / taking off at that time you would learn a lot from this.”

“Working with highly successful traders and learning from your mistakes is the best form of training.”

“I was fortunate to have a mentor who invested a lot of time teaching me about trading/markets and self-development. And didn’t pressure me about P+L when my trading hit rough patches but instead encouraged me to continue following my strategies. When helping younger traders, remember they don't know what you do. Be patient. And always remember we can always learn more, no matter how successful past trading has been”

“Markets have changed so much over time' there is now a lot less talent in percentage terms and they create a 'herd' like mentality to the market. This along with central banks interventions has created many distortions and dysfunctions in the market-the likes of which I have not seen before. These distortions create huge opportunity but with reference to the herd again, timing and sizing are now more important than ever. The market can remain irrational far longer than I can remain solvent but these opportunities are getting closer. Trying to teach this to young traders is hard as this 'abnormality' is considered the norm to many of these youngsters. The one thing we learn from history is that we don't learn from history. Therefore the study of historical pattern recognition in markets and relating it to today's markets is of huge benefit. Having this type of historical study is a great weapon in your armoury.”