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Introduction

Welcome to the third edition of the ifs University College’s Journal of Professional Scholarship in Banking and Finance. I am delighted to be able to share the good practice, reflection and ideas emerging from those participating in Cohort Three of our Postgraduate Certificate in Higher Education (PGCHE). Each student, as part of studying for Module Three of the programme, has to produce an individual educational study relating to banking and finance education. This journal showcases the work of the participants and highlights the many projects relevant to our day-to-day business.

The range of projects produced by this cohort covers such thought-provoking pieces from “How Can Financial Literacy and Capability Education Benefit the Economy”, “An examination into the disruptive nature of MOOCs and a consideration of how this may affect ifs University College’s provision” to “Conduct Costs, Governance and Returns: Evidence of Large Banks”. I hope you enjoy reading the journal – the articles at minimum create an opportunity for reflection on your own practice either as an academic or as a practitioner or indeed as both! If you have been inspired by the articles and would like to study for the PGCHE then please get in touch. If you are interested in learning more about the PGCHE or the new Postgraduate Certificate in Teaching Financial Capability (PGCTFC) then please contact Ms Samantha Godden, Programme Manager on 01227 818654 or by email: sgodden@ifslearning.ac.uk.

I am pleased to highlight the additional paper this year by Karen Taylor “Independent learning at a distance: a collaborative experience for part-time professionals” which was published in the Compendium of effective practice in directed independent learning, QAA and The Higher Education Academy, March 2015.

If you have any feedback on the journal or would like to submit a paper for the next edition, I should be delighted to hear from you.

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Returns: Evidence of Large Banks

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Abstract

Studies correlating corporate governance and market values of publicly-listed banks yield varied results, depending on geography, cycles and other factors. Few have examined banks in mature (yet volatile) markets, specifically around conduct costs as a corporate governance indicator – the purpose of this preliminary study. Theory suggests negative relation between costs and returns (high conduct costs reduce returns), borne out by this initial test of ten banks over the last six years. Lower costs, reflecting stronger governance, correlate with better returns. High conduct costs have a negative impact, albeit small, on returns and value. This reinforces the benefits of good governance to shareholders, managers, regulators and all stakeholders in banks.

Introduction

Internal determinants of bank equity value have been examined in numerous studies, giving useful insights into factors such as profitability, solvency and asset quality (Staikouras and Wood, 2003; Gandhi and Lustig, 2013). Internal determinants are influenced by bank management. While good-quality management is seen to lead to good performance, it is difficult, if not impossible, to assess management quality directly. It is explicitly assumed that such quality is reflected in operating performance. It is thus not uncommon to examine bank performance relative to variables in the financial statements (Vong and Chan, 2009).

Features of corporate governance, another internal determinant, also influence firm value. Prior studies have examined indicators such as board composition, executive compensation, and internal audit quality, largely indicating that good corporate governance positively affects firm value, including banks.

Another primary governance indicator, not yet examined in detail, is that of conduct costs, the money banks and other firms pay out as fines or redress levied by regulators and legislators. These costs may also include other payments, such as sums paid to settle regulatory proceedings or litigation based on allegations of a firm’s misconduct. Amounts paid to repurchase securities from the market at the behest of regulators, for example because they were mis-sold, are also included. Practices such as mis-selling of payment protection insurance, benchmark manipulation and breaching of money laundering rules all fall under the definition of conduct costs (McCormick, 2014). Many large banks have set aside meaningful provisions for these costs in recent years.

Given existing empirical evidence for positive effects of good governance on bank performance (Bebchuk et al., 2009; Johnson et al., 2009), another indicator of corporate governance strength, measured by relative conduct costs, ought to be reflected in bank market performance. Theory suggests that better-governed banks incurring lower relative conduct costs have higher (or less negative) stock returns over a given period. It could also be possible that the link between governance and bank performance noted in previous literature is related to higher levels of risk-taking, in which case strong governance may lead to poor performance during periods of market turmoil (Peni and Valhamaa, 2012). In considering main drivers of bank returns, evidence shows that investors focus on risk and profitability (European Central Bank, 2010); therefore another parameter is a risk metric such as impaired loans to gross loans. Based on prior research, returns ought to be negatively correlated with risk, as captured by impaired gross loans.

This paper investigates how conduct costs, effectively a failure of corporate governance, affected market returns of ten large banks over the past six years (2008–2013), for which data exist. Conduct costs as a percentage of pre-tax income gauge the strength of a bank’s governance mechanisms, and the effects of this mechanism are analysed against stock returns. Costs are measured by reported annual penalties paid by banks from 2008 up to the end of 2013, as well as provisions made at the end of 2012 and 2013 (McCormick, 2014; Plato-Shinar, 2012). Data before this period are sketchy, hence the focus on the last six years, which also coincides with the financial crisis. External determinants, not included in this study, no doubt also played a significant role over this period. The relation of costs to income is chosen given prior studies on correlations between costs, income and returns. Conduct costs by their scale and uncertainty pose additional risk, which ought to result in value erosion (Peni and Valhamaa, 2012). If, on the other hand, higher costs correlate with higher returns, or have no discernible impact, another explanation is to be sought.

Literature Review

Extensive empirical literature has documented that firms with strong corporate governance mechanisms are generally associated with better financial performance, higher firm valuation and higher stock returns (Cremers and Ferrell, 2010; Renders et al., 2010). The role of corporate governance in banking has also been examined. Consistent with literature on non-financial firms, these studies show that strong corporate governance has a positive impact on bank financial performance and stock market valuation. More generally, prior studies suggest that the same corporate governance attributes affecting non-financial firms also apply to bank governance. Corporate governance encompasses a wide range of mechanisms intended to mitigate agency problems, by limiting opportunistic behaviour of management, and reducing information risk imposed on shareholders (Smith, 2010).

The relationship between governance indicators of publicly-listed companies and their returns and value has been investigated extensively over the last decade. A landmark study was made by Gompers et al. (2003), who looked at a wide
sample of European companies over a multi-year period, using a large number of governance criteria. This concluded that good governance in fact resulted in higher value, a finding further reinforced by Bauer, Gunster and Otten (2003), although the latter found that this did not always hold in the short term.

Looking specifically at the UK, Shaukat and Padgett (2008) determined that an index of non-compliance with the UK Code of Corporate Governance for a panel of FTSE350 companies over a four-year period was negatively related to total shareholder return, implying that more compliant firms have higher returns. On a wider basis, McMurrian and Matulich (2011) concluded that demonstration of business ethics added value for customers and heightened firm performance and profitability. Marsat and Williams (2011) actually observed strong evidence of a negative impact of responsible behaviour on corporate market value. Giroud and Mueller (2011), however, found positive correlations between good governance and good market performance, particularly in non-competitive industries, while Lewellen (2012) saw no compelling industry-specific governance factors to explain differences in returns. Mousselli et al. (2014) pointed to audit quality as an important governance determinant, recently echoed by CFA Institute (2014). Most recently, scholars associated with the London School of Economics (LSE: McCormick, 2014) have compiled total conduct costs for ten large US, UK and European banks, in terms of total costs incurred 2008–2013 (also along with provisions made for the same as of Dec. 31, 2012 and Dec. 31, 2013, as reported on their balance sheets). While this study did not draw any relationships with equity performance, this is seen as a useful next step.

Empirical literature indicates that firms with strong corporate governance mechanisms tend to be associated with better financial performance, higher valuation and higher stock returns (Amman et al., 2011; Bhagat and Bolton, 2008; Brown and Caylor, 2009). Corporate governance in banking has also been studied, by Caprio et al. (2007), Cornett et al. (2009), Laeven and Levine (2009) and Webb Cooper (2009). Consistent with results for non-financial firms, these studies show that strong corporate governance has a positive impact on bank financial performance and stock market valuation. More generally, prior studies suggest that similar corporate governance traits affecting non-financial firms are also relevant in bank governance.

The relation between governance and risk-taking has been examined by Akhigbe and Martin (2008), Fortin et al. (2010) and Pathan (2009). While Akhigbe and Martin determine that risk measures of financial firms vary inversely with corporate governance strength, Pathan and Fortin et al. suggest that banks with strong governance attributes may take more risk.

Previous research has also examined bank performance during the financial crisis. Beltratti and Stulz (2010) focused on bank stock returns in 31 countries over the period July 2007 to December 2008, reporting that large banks with lower leverage ratios had less negative stock returns during the crisis. As regards corporate governance, they found that banks with strong, shareholder-friendly boards performed worse during the market turmoil. Erkens et al. (2010) examined influence of board independence and institutional ownership on bank stock returns in 30 countries from January 2007 to September 2008. Their results indicate that banks with more independent boards and larger institutional ownership had lower stock returns during the crisis. They also showed a positive relationship between institutional ownership and bank risk-taking at the onset of the crisis.

Peni and Valhamaa (2012) recently looked at a set of 62 US banks, over the period March 2007 to December 2009. Using the Gov-Score of Brown and Caylor (2009), they found significantly higher profitability among banks with strong corporate governance, but strong governance appeared to have a negative effect on valuation during the crisis. However, strong governance contributed to superior returns in the aftermath of the crisis.

Casson (2013) finds that explicit reference to proper conduct principles is largely absent from governance guidance and regulation in the EU. It seems that solid links are yet to be made that what constitutes proper conduct, reflected in good governance, is good for business and hence returns, or that what is improper is negative for returns and value.

Some have observed a drag on asset value associated with conduct risk (Worship et al., 2013), based on shorter-term market movements. There is often a price decline associated with a large liability, but sometimes also a price increase due to greater investor certainty going forward. Other analysts have noted a “multiplier effect” of conduct costs on bank valuations greater than that associated with “normal” trading losses (Moynihan et al., 2013). Decreases in market capitalisation relating to conduct losses have been observed to be typically two to eight times greater than the size of the underlying loss event. Of greater interest perhaps are longer-term effects of elevated conduct costs on profit and market value.

Why is this preliminary study important? Surveys in the UK (Which, 2012) and US (Edelman, 2014) continue to show that banking is one of the professions least trusted by the general public, a view which regulators and other participants are striving to address (Lambert, 2014). There is evidence that, while the first priority of stakeholders in a company is the quality of the company’s products or services, the second priority is the trust and confidence that stakeholders have in the company (Phillips, 2004).

The purpose of finance is to help people save, manage and raise money. Economic globalisation has raised the magnitude of finance to systemic importance, counterbalanced by conduct costs for ten banks alone exceeding £150 billion over five years, well above the UK National Health Service annual budget, for example (McCormick, 2014). It is therefore critical to re-build trust in the industry, which involves reinforcing with all stakeholders the importance of governance. Institutions pay a price for misconduct, not only in quantifiable monetary terms, but also in less tangible costs to reputation and franchise.
Research Methodology

Data and approach

Conduct costs relate to money that banks have paid out in the form of regulatory fines or redress demanded by regulators. They may also include other forms of payments, such as:

- a) Sums paid in settlement of regulatory proceedings (whether or not there is any admission of wrongdoing)
- b) Sums paid in settlement, or at the conclusion, of litigation that is based on an allegation of a bank’s misconduct or that of its officers (although it is not intended to cover all litigation costs, whatever the nature of the claim)
- c) Sums paid for the repurchase of securities from the market (because they were mis-sold) at the behest of regulators
- d) Egregious losses caused by a bank employee’s serious misconduct and/or attributable to poor risk management.

Therefore, practices such as mis-selling of payment protection insurance, benchmark manipulation and breaching money laundering rules fall under the definition of conduct costs (all as defined by McCormick, 2014).

Following prior bank performance literature (Peni and Valhamaa, 2012), stock market returns are used to measure bank equity performance. These are calculated annually for each of the years 2008 through 2013.

A control variable is employed to account for potentially confounding effects of bank-specific characteristics such as risk on market valuation. The control variable used in the regression is impaired loans to gross loans (following Staikouras and Wood, 2003). Panel data are used because of advantages of more informative data, as it consists of both cross-sectional information, which captures individual variability, and time series information, which captures dynamic adjustment (Vong and Chan, 2009).

The consensus from literature is that the appropriate functional form of analysis is linear. Thus in this study a linear model is used to analyse the cross-sectional time series data to isolate the equity performance determinants of the banks.

The basic regression equation is as follows:

\[
\text{Returns} = +1 \frac{\text{conduct_cost}}{\text{pretax_income}} + 2 \frac{\text{impaired_loans}}{\text{gross_loans}} + \text{other variables}
\]

Equity market return (annual stock returns, excluding dividends – also as examined by Caprio et al., 2007) is the dependent variable, the independent ones being relative level of conduct costs (to pre-tax income), and impaired loans to gross loans.

Panel data models are usually estimated using either fixed effect or random effect techniques. If the number of time series data \(T\) is large and the number of cross-sectional units \(N\) is small, there is likely to be little difference in values of parameters estimated by the two models. Since there are only ten cross-sectional units involving six years of data in this study, the regression is estimated by the fixed effect model (Vong and Chan, 2009).

The hypothesis is that good governance (measured by relative level of conduct costs) correlates positively with long-term investment performance (measured by annual equity returns over six years), given that a firm's culture and ultimately value is strongly influenced by the nature and quality of leadership shown by the board and executive management.

Conduct costs are publicly available from the reports of these banks over the period, as well as from further external analysis. Data from the study of McCormick (2014) are used (the list of banks is given in appendix 1). Metrics focus on actual conduct costs incurred and paid per year, as a percentage of pre-tax income earned in that year. These data are compiled with asset quality of the firms (using Bankscope as an information source), in order to correlate conduct costs with historical returns, following methodology of previous related studies (notably Peni and Valhamaa, 2012, who examined returns and valuation relative to a corporate governance index). Such an investigation ultimately lends itself to wider samples and longer time periods, but intuition may suggest that equity investors are rewarded by good governance, as manifested in lower relative conduct costs, which aids positive investment decision-making based on transparency, robust risk management and service to stakeholders.

Hypothesis

This study considers whether the following deductive hypothesis, constructed based on the literature review, can be applied to banks, and thus result in recommendations for future research.

**H1**: that banks incurring lower conduct costs as a percentage of their pre-tax income exhibit higher (or less negative) market returns on average, due to the consequences of stronger governance.

Methodology

By restricting this study to ten large banks, all of which have a meaningful presence in the UK, controlled analysis is performed on available data since all the banks exhibit similar features, and all are listed on the London Stock Exchange.

The author has conducted a quantitative approach of deductive reasoning to the hypothesis, employing a secondary quantitative statistical analysis of data following prior research methods (Peni and Valhamaa, 2012).

Bank features

The sample of ten banks include four based in the UK, four in the US, one in Switzerland, and one in Spain. These are listed in appendix 1. All have had meaningful operations in the UK over the period of the observation. All rank among the world's thirty largest banks by market capitalisation, and among the top fifteen in the US and Europe by the same measure. The sum of total assets of these banks totalled about $11 trillion at the end of 2013, and therefore the sample covers a meaningful
The empirical analysis uses data on the banks’ (i) conduct costs and provisions therefor made for them, (ii) financial statements, and (iii) stock prices. The conduct cost data used in the analysis are obtained from the LSE Conduct Cost Project, while the income statement and balance sheet items are collected from Bankscope. Data on stock prices and market capitalisation of banks are obtained from Datastream.

**Data analysis**

The empirical evidence on determinants of bank’s equity returns is based on balanced panel data, where all the variables are observed for each cross-section and each time period. In this study, a single econometric specification is estimated, including only the bank-specific variables. The estimations are performed by the generalized least squares (GLS) technique, which is especially suitable for data sets where serial correlation and/or heteroscedasticity might be present (Vong and Chan, 2009).

Table 1 presents the regression results for the effects of conduct costs on stock returns. As can be noted, banks with lower conduct costs experience better (or less negative) stock market returns, and this relationship has statistical significance.

**Table 1: Determinants of Equity Returns – regression**

<table>
<thead>
<tr>
<th>Bank characteristics</th>
<th>Predicted sign</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>?</td>
<td>0.060177</td>
</tr>
<tr>
<td>Conduct costs</td>
<td>-</td>
<td>-0.02515**</td>
</tr>
<tr>
<td>Asset quality</td>
<td>-</td>
<td>-10.7881***</td>
</tr>
<tr>
<td>R square</td>
<td></td>
<td>0.12</td>
</tr>
<tr>
<td>No. of observations</td>
<td></td>
<td>60</td>
</tr>
</tbody>
</table>

Notes:
(i) The regression is based on fixed effect estimation and is estimated using GLS estimation pooling bank level data across ten banks for the 2008–2013 period.
(ii) Standard errors are given in parentheses. ** indicates significance at the 0.10 level. *** indicates significance at the 0.05 level.

**Results and analysis**

**H1:** that banks incurring lower conduct costs as a percentage of their pre-tax income exhibit higher (or less negative) market returns on average, due to the consequences of stronger governance.

The R2 shows how well this combination of variables can predict market returns, and in this sample the R2 of 0.12 shows that 12% of the variation in returns can be attributed to the variables of conduct costs to pre-tax income as well as asset quality, thus suggesting that other elements may play a larger part in predicting overall returns and value. Particularly of note are likely to be external determinants, such as GDP growth and interest rates, which previous studies have also indicated (Beirene et al., 2009). However, the F test of the regression shows it is significant at the 5% level.

As displayed in table 1, the negative coefficient of conduct costs suggests better returns and values for well-governed banks, which result in lower costs of conduct. This is significant at the 10% level, as indicated by its p value.

The negative relationship also between returns and lower asset quality supports the intuitive conclusion that negative returns correlate with a high risk profile. Thus the statistical significance of the analysis permits rejection of the null hypothesis, that is, that conduct costs have no effect on equity returns. The level of explanatory power achieved, while low, exceeds that of other studies focusing on selected geographies (Tarazi and Gallato, 2012). The F statistic of the regression is 3.734, showing F significance of 0.02993, and the t statistic of the conduct cost coefficient is -1.846, thus statistically significant at the 10% level. The associated p value is 0.0702. For the asset quality coefficient, the t statistic is -2.136, with p value of 0.0370, thus significant at the 5% level. The regression shows strong evidence to support the hypothesis.

The analysis has thus yielded a couple of key findings. First, a significant negative association is observed between conduct costs as a proportion of pre-tax income and the equity market performance of the sample banks. Second, it is documented that conduct costs relative to pre-tax profit have some limited explanatory power for the equity returns of banks after controlling for the risk proxy of asset quality, as measured by impaired loans to gross loans. The observation that banks with relatively low conduct costs have superior equity returns adds to the literature on the financial information characteristics that are valued by the market. This result also provides further insight into how governance is priced in that it is observed that conduct costs and asset risk are partial determinants of firm value. These findings lend support to Garmaise and Liu (2005), who model firms’ exposure to risks as a function of the quality of firms’ governance.

High conduct costs ultimately affect profitability and capital positions of banks (the UK regulator warned of this recently: Finch, 2014), but the actual extent of this has polarised opinion. There are admittedly limitations to use of conduct cost data. For one thing, they are based on figures solely in the public domain which in some cases include “incomplete information”. Hence all data must be regarded as approximate. Initiatives to establish more consistent approaches to disclosure of material information in this respect are welcome.

Some have also argued for a political agenda behind the scale of reported conduct costs, not solely driven by bank managements. JPMorgan, for instance, stated that 80% of misconduct covered by its $13 billion settlement for toxic mortgage-backed securities stemmed from Bear Stearns and Washington Mutual, both acquired by Morgan in 2008. Given the bank’s strong market position, some claim it was pressured by the US government to buy troubled banks to stabilise the US economy (Benedict, 2014). In this regard, greater transparency is also to be expected of governments and regulators in their actions.
Conduct cost analysis further highlights varied reporting and regulatory standards across different jurisdictions, which potentially emphasise deficiencies in national corporate accountability and transparency (though this is not fully supported by Beltratti and Stulz, 2010). A purpose of this study is analysis of firm-specific, rather than jurisdictional, failings where the ultimate goal is to encourage healthy competition among banks from a stakeholder perspective. For instance, the study excludes banks domiciled in the Asia-Pacific region, and Canada, where conduct costs are either not reported or not incurred. Extension of the LSE project to more banks around the world, currently under way, is a welcome initiative.

To help rebuild trust in the financial system, it is important to better align the interests of managers and stakeholders, a primary group being shareholders in financial institutions. The observation that well-governed companies provide superior value, by not incurring excessive conduct costs, can send a strong message to boards and management that good governance contributes to enhanced wealth creation, providing further incentive to strengthen and maintain good governance and conduct. This should drive greater transparency, management accountability and responsibility, and ultimately greater trust in institutions from investors and the general public, who are customers of these institutions. This research identifies a link between measures of corporate governance and misconduct in large banks and their returns over a multi-year period. The research plan involved examination of market returns of a sample of large banks over the past six years (2008–2013), contrasting that with conduct costs paid as publicly reported by these banks.

**Limitations of the study/future research**

The scope of this short paper limits consideration of the many variables that can contribute to differing outcomes, but the author has statistically considered the variable of asset quality in addition to conduct costs to deepen results.

Literature review is limited to post-2003, and has not considered external determinants, which during the sample period could have significant impact. The author has moreover presupposed that the banks considered have similar characteristics.

Prior literature indicates that variation of results may depend on study size. Due to paper length and data availability considerations, basic regression analysis was performed, but more complex statistical analysis may have produced different results.

Further research is warranted on how conduct costs are arrived at, and how they are reported systematically. The investigation of value and returns lends itself to a wider scope of both internal and external determinants of performance, which could include measures of profitability, size and solvency, as well as GDP growth and interest rates.

Several potential directions of research are suggested by this study. One is the effect of conduct costs on other measures, such as cost of debt capital. Another would be use of more refined measures of conduct costs and their effect on overall capital cost. This would help develop a clearer picture of relative benefits of lower conduct costs, since ultimately a primary reason for effective governance is reduced capital cost.

**Summary and Conclusions**

In this paper, the association between corporate governance as reflected in conduct costs and bank performance in the years during and after the financial crisis was examined. Using data on large publicly traded banks, the effects of conduct costs on stock returns were examined. The level of conduct costs to pre-tax income was applied to measure the strength of corporate governance. Given previous literature on the positive influence of good corporate governance on firm performance, the hypothesis is that banks with lower conduct costs and stronger corporate governance mechanisms correlate with better stock market performance.

The empirical findings on the effects of conduct costs and corporate governance on bank performance from 2008 to 2013 are robust. Consistent with the research hypothesis, it is found that banks with stronger corporate governance mechanisms and lower relative conduct costs had less negative stock returns, as banks with lower conduct costs are associated with higher returns. The result around market performance indicates that, in the period from 2008 to 2013, good corporate governance practices may have mitigated adverse effects of the financial crisis and its aftermath on bank credibility among market participants.

It should be recognised that conduct costs recorded up to now for ten big banks, even cumulatively since 2008, still account for a small proportion of the banks’ total assets (from 0.3% to over 5%), but a growing percentage of their book equity and market capitalisation (from 4% up to 36% of market capitalization for the ten banks, including year-end 2013 provisions). Conduct costs could become more meaningful over time, given current trends.

In considering events since 2009, when the UK Walker Report was published, followed by the UK Combined Code and Corporate Governance Code (updated in 2012), it is appropriate and timely to re-visit this dynamic for this small but very prominent group of banks. The question is asked: do mature markets now generally assume a level of adequate governance and conduct, implicitly reflected in returns, or do differences still exist, after the financial crisis, in which large banks played a significant role?

Promoting high standards and reducing conduct costs enhance profitability and capital, providing management with transparent long-term planning horizons. All these can be perceived positively by shareholders, resulting in enhanced equity performance.

A contribution is made to existing literature on determinants of value and return by identifying another factor that explains value and return beyond factors traditionally used to explain them. Consistent with prior research, it is documented that the level of conduct costs, a function of corporate governance, is negatively related to banks’ equity performance.
Appendix 1 – List of banks

1. Bank of America
2. Barclays Bank
3. Citigroup
4. Goldman Sachs
5. HSBC Holdings
6. JPMorgan
7. Lloyds Banking Group
8. Royal Bank of Scotland
9. Banco Santander S.A.
10. UBS AG

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Should standard assessment tests (SATs) be added to the application process for UK students to apply for undergraduate study and how might they impact applications to UK universities?

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Abstract

This study considers the question “Should standard assessment tests (SATs) be added to the application process for UK students to apply for undergraduate study and how might they impact applications to UK universities?”.

By reviewing current literature investigating general admission tests outside the UK as well as course specific tests in the UK it is possible to form an opinion as to the value of such tests as a basis of an HE offer to undergraduates. Comparing these findings with the trends in undergraduate applications from the UK to study at home alongside UK demographics, this study considers whether a standard test might level the playing field for applicants or whether it would merely repeat the mistakes of such systems overseas. It concludes that the nature of undergraduate courses in the UK means that duplication of existing systems may not be relevant but that a rigorous set of tests could aid inclusion, improve the skills of undergraduates and increase the confidence of institutions that students would succeed in their selected course.

Introduction

School leaving qualifications in the UK are continually under review. Level 2 qualifications taken at age 16 qualify students to take Level 3 qualifications which are the basis for entry into Higher Education for UK students in the UK. Whilst qualifications in Scotland and Northern Ireland are designated differently to those in England and Wales, they are recognised by universities as being of equivalent academic merit in selecting undergraduates. Continual review of the delivery and assessment of qualifications, alongside the ranking of schools by results, means that not only may the academic outcomes vary with each review, but also those outcomes may demonstrate a candidate’s ability to pass an examination rather than undertake academic study at a higher level. In an attempt to standardise individual candidates from schools with different specialisms, to provide greater access to new immigrants or those from marginalised communities (Edwards et al 2012) many countries operate a standard admission test as part of application to university. Perhaps the most enduring and best known are the Scholastic Assessment Test (since 1926) and American College Testing (since 1959). Indeed Astin (1993) maintains that standardised testing alongside results at high school graduation, in whatever form, remain the most reliable indicator of success as an undergraduate. This exploratory study will consider whether the experiences of other countries which use standardised tests mean that the UK universities should consider including test achievement as part of their undergraduate offer, and if they did what the likely impact might be on applications from the UK population.

Research into the effectiveness of SATs in other countries will be used to consider how testing may impact different genders, those from minority ethnic backgrounds and those for whom English is a second language. The objective would be to explore whether such testing would increase or decrease applications, and whether it would improve or hinder access to Higher Education from underrepresented groups, and thus whether it should be considered as a constant in university application against a constant changing background in qualifications at school.

The research question/proposition

“Should standard assessment tests (SATs) be added to the application process for UK students to apply for undergraduate study and how might they impact applications to UK universities?”

Higher Education (HE) is increasingly international: 6.6% of applications in 2013 were from other EU countries and 10% from outside the EU. Acceptances were 4.95% and 7.6% respectively (UCAS 2013). There are around 3 million students in tertiary education worldwide, including 1.6% from the UK (Findley et al 2010). Standard admissions tests (SATs) are used in both developed and developing nations as a means to determine eligibility for tertiary study in isolation or in conjunction with school leaving qualifications. In addition some countries including the UK use admissions tests for specialist areas of study. The SAT varies in composition between countries, but generally consists of separate tests of mathematical skill, verbal reasoning or comprehension and written essay-type skills. Undergraduate study is usually offered in the UK to UK applicants on the basis of Level 3 qualifications, usually A Level and BTEC. The outcomes of both these qualifications are under review, with new assessment being reflected in candidates completing courses in 2017 and 2016 respectively. With these two factors in mind the author was interested to consider whether this may be an appropriate time for universities to consider a general SAT for all applicants. Such a proposal would undoubtedly receive resistance from teachers and parents even if the universities were united in using it as a supplementary tool for selection. Testing the validity of such a test is beyond the scope of this paper; what it will do is consider how a SAT may impact on applications to HE from UK applicants to UK universities, and therefore whether it should be considered as a viable addition to the application process.

Literature Review

Standardised testing for university places is common in most developed countries, either as a standalone selection tool or in conjunction with high school results, often referred to as grade point average or GPA (Edwards et al 2012). Astin (1993) asserts that the combination of both is the best predictor of success in Higher Education. The purpose of standardised testing is to attempt to get a balanced understanding of a candidate’s aptitude against their existing achievement (Cliffordson 2008). Edwards et al (2012) identify that some nations have a general test, some a subject or course specific test and in some cases
both. Currently the UK only requires standard test score results in order to offer places for limited specific Higher Education courses, at some institutions, such as Medicine, Veterinary Medicine, Law and History.

Countries that have adopted a standard in some cases have GPA awarded by school staff, and some including the UK have national standard subject tests. The SweSAT test was introduced in Sweden to smooth out variations between, and generous marking from schools, and has continued even though core subjects are now subject to national normalised testing (Carlstedt and Gustafsson 2005). Edwards (2012) suggests that the value of standardised testing is to be able to compare applicants from different backgrounds, including overseas students and recent immigrants. However it is also recognised that testing can create additional administration costs and, unless carefully constructed, can in fact marginalise the very candidates it is intended to include due to unintended social or gender bias.

Research from countries that use standardised testing has identified some of the unintended bias identified by Edwards. Everson and Milsap (2004) identify that the US SAT scores are influenced by the socio economic and ethnic makeup of the school population where schools with a high proportion of poorer students and/or a wide ethnic mix perform less well. In addition the SAT scores show that females score less well than males. Whilst the difference is slight in the verbal reasoning test it is more marked in the numeracy test. This difference is obscured in Sweden’s SweSAT as there is one overall score rather than two (Aberg-Bengtsson 2005), although the different sections provide better predictions of success for different courses. Whilst comparing the SweSAT with the military service aptitude test Carlstedt and Gustafsson (2005) identified that the “DS” (numeracy) and “DTM” (diagrams, tables and maps) tests showed better predictive correlation for Engineering courses, whereas the “WORD” (vocabulary) test was a better predictor for Law school.

Locay et al (2013) identified that the 14% of the US population that are Hispanics perform less well in the SAT, as measured by A Level scores. In Sweden to smooth out variations between, and generous marking from schools, and has continued even though core subjects are now subject to national normalised testing (Carlstedt and Gustafsson 2005). Edwards (2012) suggests that the value of standardised testing is to be able to compare applicants from different backgrounds, including overseas students and recent immigrants. However it is also recognised that testing can create additional administration costs and, unless carefully constructed, can in fact marginalise the very candidates it is intended to include due to unintended social or gender bias.

Epstein (2009) recognised that the original aim of the SAT was to find “talent and intellect”, in other words its ability to promote inclusion as identified by Edwards (2012). Epstein documents an increasing number of American universities which claim to no longer consider a SAT score as a measure for offering places. These institutions, whilst still quoting SAT scores as an indication of the calibre of undergraduates in publicity materials, suggest that they select students on the basis of current achievement. Trimble (1986) identifies that scores and therefore academic standards are falling in the US. In Sweden, Cliffordon (2008) asserts that standardised grades show a measure of actual achievement rather than standardised tests which merely rank students rather than accurately measure their ability to improve, and yet Konecny Konecný et al (2012) suggest that in a competitive stratified education system in the Czech Republic aptitude testing better identifies talent in lower socio economic groups.

Despite mixed results of the usefulness of standardised testing worldwide, the course specific testing currently in place in the UK shows a more positive correlation between test scores and academic success. The Clinical Aptitude Test (UKCAT) has proved to predict Year 1 and Year 2 exam success, and negate the advantage that applicants from private schools have in preparation of personal statements on application (Wright and Bradley 2010). In addition applicants with good scores were those who were selected for interview, although they do not predict successful interviews (Turner and Nicholson 2011). When comparing UKCAT scores with previous selection methods for candidates Fernando et al (2009) discovered a correlation, albeit weak. In addition the BioMedical Admissions test (BMAT) was found by Emery and Bell (2009) to be a good predictor of exam success. All these studies do however include the caveat that whilst there may be a relationship between admission testing and exam success it is less likely to be a predictor of success in clinical practice.

Based on the Oxford University admissions test, Ogg et al (2009) proposed that an unseen un-coached assessment test negates the distortion of the effect of higher quality teaching in private schools and thus widens access.

Whilst the study proposal is concerned with admissions testing for undergraduate study, the findings from Dobson et al (1999) further demonstrate that the content of an admission test needs to be appropriate for it to be successful as a predictor. The Graduate Management Admissions test (GMAT) had strong correlation as a predictor of success in an MBA course, although the verbal reasoning score was a stronger predictor as the content was more directly related to the demands of the course, whereas the numeracy element included algebraic skills testing which is broadly unrelated to an MBA (Dobson et al 1999).

Only a small and falling proportion of the UK student body studies abroad: around 22,400 in 2005 from around 3 million students from OECD countries studying abroad (Findlay et al 2010). The most popular destinations for UK students are USA, Ireland, Australia, Germany and France, all of which have some level of standardised testing in place. Candidates abroad tend to be those of the highest calibre, as measured by A Level scores. As these cannot be directly compared with a standard system it may be that both the institutions and potential candidates are discouraged from application or acceptance as peer comparison is less transparent.

Whilst it is clear from the literature review that there is incomplete confidence in SATs, there are benefits that can identify or confirm candidate ability. It is this author’s experience that many commentators (including some university admissions officers) consider some A Level subjects of lesser value regardless of the grade achieved. Those critics would have less ammunition with a standard test, and a more comparative international system may encourage more candidates to consider HE at home and abroad.

Methodology

This is an exploratory study that attempts to apply the findings from the literature review to secondary data identifying the demographics of the UK. From there it identifies whether the profile or numbers of university applicants might change should applicants be subject to an assessment test similar to those reviewed in literature.
Research studies have identified strengths in SATs but the concerns raised identified common themes, namely lack of inclusion for non English speakers, greater success for candidates from “better” schools and/or as second generation HE candidates, and gender variations, especially for numeracy. The methodology was therefore to attempt to identify, using reputable secondary sources, whether such concerns would be replicated in the UK to a greater or lesser degree. Primary data collection would have been cost and time prohibitive and the quantitative secondary data available is already used in the ranking of educational establishments, and thus entirely relevant.

Data collection

UCAS Data

Numbers of applicants and acceptances of applications for the period investigated were as follows: (UCAS 2013)

<table>
<thead>
<tr>
<th>Year</th>
<th>Applications</th>
<th>Acceptances</th>
<th>Acceptance Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>588689</td>
<td>456627</td>
<td>77.6%</td>
</tr>
<tr>
<td>2009</td>
<td>639860</td>
<td>481854</td>
<td>75.3%</td>
</tr>
<tr>
<td>2010</td>
<td>697351</td>
<td>487329</td>
<td>69.9%</td>
</tr>
<tr>
<td>2011</td>
<td>700161</td>
<td>492030</td>
<td>70.2%</td>
</tr>
<tr>
<td>2012</td>
<td>653637</td>
<td>464910</td>
<td>71.1%</td>
</tr>
<tr>
<td>2013</td>
<td>677375</td>
<td>495595</td>
<td>73.1%</td>
</tr>
</tbody>
</table>

The UCAS statistics (2013) show:
UCAS statistics (2013) show:

Census Data

The census data is compiled separately for England and Wales, Scotland, and Northern Ireland. Households in each nation were questioned on the languages spoken there. Census data shows that in England and Wales, 7.7% of the population speaks a language other than English or Welsh (ONS 2013). In Scotland and Northern Ireland, the percentage of the population was 7.38% (Scotland’s Census 2012) and 3.14% (NISRA 2012) respectively. This was used to consider whether a lack of access to English at home may restrict opportunities for application or acceptance to university.

Data Analysis

The study uses secondary data to explore the current profile of UK applicants to university from within the UK. Applications are centralised through the University and Colleges Admissions Service (UCAS) where applications are made by residents of the UK and EU. Although the school leavers qualifications and university fees structure are different in Scotland, applications for and from all the home nations are through UCAS. During the period covered by the data student applications to conservatoires were not through UCAS and a small number of candidates applied directly to a university; however, the numbers were considered to be statistically insignificant in view of the numbers that did apply through UCAS. UCAS provides reports annually on applications and acceptances in terms of gender, ethnic background and occupational background of the principal wage earner in the household of the applicant. The data from 2008 to 2013 will be examined in each category. This study is considering the viability of a standard assessment test for UK applicants to UK institutions. Although UCAS statistics include applicants domiciled in the EU, acceptances from the home nations constitute more than 95% (UCAS 2013) and therefore no adjustment to the overall totals was deemed necessary.

Although the UK census is taken every 10 years, the most recent 2011 census was the first to ask citizens to identify their level of spoken English, and this data was used to consider if children in such families may be more disadvantaged by a standard test.

The Joint Council for Qualifications publishes results data from all exam boards, and all subjects. The data for A Level Maths from 2008–2013 was used to identify trends in the proportion of A Level candidates who sat a Maths qualification, and also the success rates of males versus females. The data covers all Maths qualifications, but the distinction between Statistics, Mechanics and Pure Mathematics was not considered relevant in the consideration of the proficiency of applicants in Level 3 numeracy.

Numbers of applicants naturally vary with demographics of the population as in the vast majority of cases applicants will be 18 at the start of their HE course. Numbers have also varied due to amendments to the university fee structure, the economy and job market and the willingness of universities to make offers to candidates; for example, the increased number in 2011 was due to increased costs of HE commencing in 2012 and so applicants who may otherwise have taken a gap year or been undecided were encouraged to apply to ensure lower fees.

Numeracy

JCQ data (2013) shows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Male candidates</th>
<th>Female candidates</th>
<th>Total candidates</th>
<th>Male candidates</th>
<th>Female candidates</th>
<th>Total candidates</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>380096</td>
<td>447641</td>
<td>827737</td>
<td>38719</td>
<td>25874</td>
<td>64593</td>
</tr>
<tr>
<td>2009</td>
<td>390061</td>
<td>456916</td>
<td>846977</td>
<td>43055</td>
<td>29420</td>
<td>72475</td>
</tr>
<tr>
<td>2010</td>
<td>393642</td>
<td>460291</td>
<td>853933</td>
<td>45737</td>
<td>31264</td>
<td>77001</td>
</tr>
<tr>
<td>2011</td>
<td>401676</td>
<td>465641</td>
<td>867317</td>
<td>49828</td>
<td>33167</td>
<td>82995</td>
</tr>
<tr>
<td>2012</td>
<td>395914</td>
<td>465905</td>
<td>861819</td>
<td>51413</td>
<td>34301</td>
<td>85714</td>
</tr>
<tr>
<td>2013</td>
<td>389550</td>
<td>461202</td>
<td>850752</td>
<td>53435</td>
<td>34625</td>
<td>88060</td>
</tr>
</tbody>
</table>
The balance between male and female applicants remains fairly constant at around 44% male and 56% female. This then translates to similarly consistent acceptance rates although male applicants are marginally more successful in gaining an offer with total acceptances split with 45% male and 55% female (UCAS 2013). The 2011 census reveals that the population as a whole consists of 49% male and 51% female although 17–19 year olds from that census were 51% male and 49% female (ONS 2012). This information was used to consider whether current applicants represent the population as a whole, and whether the gender split for applicants and those accepted may change with the introduction of a standard test.

UCAS data on ethnicity is provided by applicants on a voluntary basis; however, the small number of unknowns in the data for accepted candidates is small enough not to skew the data. Ethnic background does not, however, reveal language ability. For example, although the vast majority of applicants describe themselves as “white”, this could include students who speak any number of languages other than English at home; however, it could be argued that if a candidate is successful in applying for university and passing A Levels this demonstrates proficiency in English.

Candidates are also asked for the occupation of the highest earning member of their household. Whilst this data is no doubt given in good faith, in some cases in the author's experience applicants are unsure how to correctly select the classification. The data suggests that this is increasingly the case as the numbers of unknown or unclassified have increased over time making conclusions from this data harder to draw. Applicants are not asked whether parents/guardians studied at university and so the occupation data can only be used as a general conclusion regarding the educational background of applicants’ parents/guardians. This information was used to consider whether the academic background of parents influenced the application to HE and thus would encourage success at a common aptitude test, although only broad and generally unsubstantiated conclusions can be drawn.

Standard HE tests typically consist of written/comprehension testing as well as numeracy testing. To endeavour to consider whether rigorous numeracy testing would influence the number or gender of applicants, the JCQ data for A Level Maths was compared by gender and as a proportion of total Level 3 qualifications taken.

Total data from JCQ (2014 for A Level Maths considers all disciplines of Statistics, Mechanics and Pure Maths, as the qualification consists of those elements in varying proportions. From 2008–2013 candidates were consistently 60% male and 40% female, with 3% of males and 2% of females failing to achieve the qualification. It is this author's understanding that the awarding of A Levels is made using a Uniform Marking Score (UMS) which allows results each year to follow a normal distribution with around 5% of candidates failing to achieve and 5% achieving the top grade. This is a general understanding amongst FE institutions which cannot be unequivocally verified; however, the data used does not disprove the understanding. If this is in fact the case, then the standard of numeracy skill cannot be accurately judged.

The number of Mathematics candidates at A Level has been increasing as a proportion of the total number of candidates from 7.8% in 2008 to 10.3% in 2013 (JCQ 2014. This suggests an increasing level of numeracy; however, it is still a small percentage of the whole cohort that is currently electing to study Maths.

The secondary data used was all available as a matter of public record. UCAS provides applicant data annually at the end of the admissions cycle as well as interim data on applicants and their characteristics. The end of cycle data and commentary were used and applied to findings from the literature review. JCQ publishes combined data from all examination boards, giving total numbers sitting each subject broken down by grade and gender. This is available annually after the results in August, and Maths data was extracted for the most recent six years, which also corresponds to the UCAS data. Whilst the whole of the 2011 census is not yet available, early statistics released by the home nations governments included ethnicity, language and gender which was the data needed for this investigation. The information is either produced by the government or by organisations that are subject to scrutiny by the government via quality control from the Department of Education. The information published is therefore judged to be reliable as provided although there may be inherent inaccuracies in the underlying census data. As the census is completed by householders it could be suggested that the extent of native language limitations is understated simply due to the fact that a non English speaker would have difficulty accessing a relatively complicated form written in English.

Limitations of the research

The very nature of standardised tests is to offer transparency to both universities and applicants in the offer of a place. This study was conceived as a response to both a changing landscape of school leaver qualifications in the UK, and the increasingly global migration of undergraduates. The principal limitation is that the usefulness and outcomes of testing in the UK are against a background of differing tests throughout countries that use them. They are in fact not standard worldwide. Although the research considered in the literature review has produced similar findings in different countries, those findings may not manifest with UK applicants who have a differing school experience.

There has been limited research in the UK into the correlation between specialist admissions testing and graduate success upon which to base a hypothesis for a wider programme. In addition, had such research existed, it would be skewed in favour of higher academic achievers, as they are candidates who apply for courses that require testing as a basis of discrimination between those achieving top grades.

Where research into existing testing has been used, its validity is limited by the assumption that the demographics, values and beliefs of the UK exactly mirror those in the country where the research is based, and that in particular the data on language and ethnicity collected in the UK is accurate as it is information provided to UCAS on a voluntary basis.

In addition the tests are for undergraduate study. In many countries students study general arts or science courses and specialise later in their course, whereas courses in the UK are subject specific from inception and therefore a genuine enthusiasm for a subject from day one may overcome some perceived academic shortcomings identified by an academic test.
Time and word count restrictions mean that there was not an opportunity to canvas the feelings of educators, students or admissions tutors as to whether they would support the trialling or introduction of such testing, and whether they consider such tests as a tool for greater inclusion; this identifies an area for future primary research. Similarly primary research into the numeracy skills of potential undergraduates was time prohibitive.

Conclusions

The combination of falling numbers of overseas students from the UK (Findlay 2010) and the existence of standardised testing in some form in most developed nations (Edwards 2012) would seem to suggest that such a test is useful to institutions and students as a measure of potential. However unless testing is devised with care it may cause changes to the demographic of undergraduate applications.

Testing numeracy appears to discriminate against females (Everson and Millsap 2004). Currently numbers of female undergraduate applications are in small majority (UCAS 2013) – testing may reduce that majority, although it may bring the proportion more in line with the gender split of the population (ONS 2012).

Studies that suggest non English speakers are disadvantaged in both numeracy and verbal reasoning (more so in the latter) (Locay et al 2013) are based on a US population which is 14% Hispanic, which would suggest a greater likelihood of marginalisation than in the UK where only around 7% speak another main language (ONS 2012). This would suggest that there is less likelihood of disadvantage. In addition, currently HE institutions only ask for IELTS tests to be taken by overseas students – a UK student who speaks another language at home could demonstrate sufficient language proficiency to study in English via IELTS, which would allow the institution to adjust their view of a test score.

Currently only 10% of students study Maths at A Level (JCQ 2014) – whilst there may be many perfectly numerate candidates who choose other subjects at Level 3, such a small proportion may suggest that the mathematical element of standardised testing may put off applicants from all backgrounds.

Currently candidates from private and highly regarded state schools are advantaged by coaching for personal statements on UCAS forms (Ogg et al 2009). A test such as the US SAT where practice tests and books are available to purchase may further favour these students and thus not discover potential from disadvantaged schools or areas. This could be overcome by unique tests each year.

UK undergraduates effectively choose their major as freshmen, whereas in other countries this is elected in sophomore or junior year after following a general course. This would suggest that testing in subject areas may be a better method in the UK which is effectively choosing and succeeding at appropriate Level 3 courses i.e. the current system. Although the new A Level courses are believed to better prepare students for HE (Department for Education 2012) which should be further improved by the 2015 syllabus, it is still a measure of achievement, rather than independent thought and critical reasoning. Standard tests have better success at predicting success when they are specialised for particular courses and least useful when the outcome is one score for all disciplines. This would suggest that if a standard test were to be introduced and scored under different disciplines, HE institutions could base offers on a particular part(s) of the test. Verbal reasoning could have greater weighting for Arts and Humanities courses and numeracy for Science courses etc.

It is suggested that better test scores are achieved where candidates’ parents are university educated. The socio-economic UCAS data (2013) is flawed due to the increasing numbers of unclassified responses, but the spread of occupations is currently relatively broad. A test may favour those from higher socio economic groups; however, the proportion of first generation undergraduates is decreasing (ONS 2014).

It is clear that there is mixed support for standard testing for applicants to undergraduate study. The reasons behind its introduction remain valid, in that it is important that all talented individuals should have the opportunity to use that academic talent at Higher Education.

The Department of Education review of new A Levels and GCSEs (2012) shows that the changes have been welcomed, suggesting that the changed A Level syllabi are better preparation for Higher Education and that the inclusion of stretch and challenge and the discriminatory A* grade should make selection easier for HE institutions. If the new A Level syllabi to be introduced in 2015 take this a stage further, then arguably candidates can prove they have the achievement to succeed at Higher Education.

However the need for additional selection for specialised courses and elite institutions suggests that demonstration of achievement is not enough. In addition the need to identify candidates who may not have demonstrated their maximum ability due to the demographic of their school may support the view that supports an alternative or additional testing system would be valuable. Additionally in view of increased student mobility (Findlay et al 2010) and changing ethnicity within the UK (ONS 2013) a mechanism to ensure the widest participation would seem to have merit.

Increasing industrial globalisation and greater international contact through the digital media would suggest that potential undergraduates from the UK should be best equipped to study both within the UK and overseas. Findlay et al further suggest that the UK’s future economic strength depends both on overseas students studying here and on some of our talented students studying abroad. A robust, internationally recognised standard test may open the door not just to places but also to scholarships.

Recommendations

The author therefore suggests that a standard test is developed through collaboration between HE institutions, that tests potential in a number of disciplines. Individual institutions and courses could then award places on a mixture of A Level results and the part(s) of the standard test that most suit their course programme. If it is designed as far as practicable to avoid bias and be accessible without coaching from schools, then it may
be robust enough to either be accepted in its own right by overseas institutions or at least be adequate preparation for their own version. To reduce the administration and other costs if the collaboration includes, as Botstein (2014) suggests, software designers then testing can be via electronic access. This could then allow for a levelling factor to be added to the results to adjust for poorly performing schools, as suggested by Epstein (2009).

Areas for future research

Before standard testing could be seriously considered in the UK, it would be useful to have a background of greater research upon which to propose and design a testing strategy.

i) What is the current correlation between Level 3 results and undergraduate success? Ideally this would encompass the changes of curriculum 2000 to see whether the correlation varied when the A Level process was subject to considerable review, as it will be in 2017 and no doubt again in the future.

ii) Why do candidates from disadvantaged backgrounds, ethnic minorities and other marginalised groups really decide against application to university? In order to hypothesise whether an alternative test would encourage them to apply to HE.

iii) Could a rigorous test be devised that would equate to those currently used elsewhere, that tests academic ability and that limits inherent discrimination?

References


Abstract
The purpose of this paper is to discover how financial literacy and capability (FLC) education can have a positive and lasting effect on the UK economy. A major cause of the 2008 financial crisis, and its ongoing impact on the economy, has been attributed to the lack of FLC education from financial product providers, schools and businesses. From primary and secondary research, this paper analyses what FLC education is being delivered to learners and consumers and, if so, its effectiveness. The results, although not conclusive, show that the learning methods used are dated, pedagogic and inadequate; for today's fast moving digital society in an increasingly complex financial world. However, some entrepreneurs, educators and charities are testing alternative methods of learning and delivery which are proving to be highly effective. The findings are that if FLC education is to have any significant impact on the economy it will require the innovation of new digital toolsets for learning providers and to be used within the context of behavioural psychology learning.

Introduction
FLC education is not a subject that is widely discussed by the public since it means different things to different people. Also, it is not an appealing subject like art, music or sport. But financial development, which is based on FLC, is widely recognised as an important determinant of economic growth (Levine, 2005). Therefore, it is important to first define what is meant by financial ‘literacy’ and ‘capability’ since there is no universally accepted definition of these terms. Appendix 1 shows widely varying definitions over the past 25 years. The US favours the word ‘literacy’ (PACFL, 2008 p.4), while in the UK ‘capability’ was adopted by the Financial Services Authority (FSA, 2008a, p.55). The author has chosen to use the expression FLC which covers both terms in order to conduct a more qualitative form of research.

With such a wide variation in definitions it is very difficult to develop a coherent form of FLC education (Mason and Wilson, 2000). Most research has been based on the lack of FLC and how to improve it rather than investigating what constitutes it (Lee, 2010). Literature on this subject is extensive but studies tend to go straight to assessing the problem (Lee, 2010). This research will focus on the UK context of FLC but will use some of the findings of other countries that relate to the topic.

Literature Review
This secondary research literature review is grouped under a series of key questions:

What exactly is FLC in the UK context?
“Financial capability is a relatively new concept lacking a strong established consensus about what it means” (FSA, 2006, p.10).

Nevertheless, it has become an important educational add-on in schools in the US and UK (where it is now a compulsory subject for 11–16 years-olds) (Lewis, 2013). However, beyond its academic scope, it impacts on the behaviour and lives of all sectors across society (FSA, 2006, p.134). It is also seen as a necessary skillset for success in today’s financially complex world. (PACFL, 2008 pp.5, 9, 15).

Is the UK definition of FLC appropriate long term?
The Financial Services Authority (FSA) definition of financial ‘capability’ (Appendix 1) focuses on both academic learning and motivation into action (behaviour). According to FSA, 2008b, gaining knowledge without applying it does not make a person financially capable; actual performance is where FLC knowledge comes to the test (Lee, 2010).

A useful chart from the FSA, 2008b report, in Figure 1, shows the inter-relationship between a person’s various FLC attributes (FSA, 2006) leading to their behaviour. Previous FLC definitions have varied considerably since 1992 (Appendix 1) because advances in technology, and the increasing complexity of financial products and services, have outpaced the consumer’s previously comfortable level of FLC understanding.

Figure 1. Personal FLC attributes (Source: FSA, 2005, p.5)

In addition, a major development in FLC learning, recognised by FSA, 2008b, has been the increasing importance of behavioural psychology as an essential component of FLC education. The FSA commissioned a team led by Professor de Meza (Herbst et al, 2008) to conduct a review of behavioural economics...
The majority of UK adults do not understand finances.”

concluded that:

“The people’s financial behaviour may primarily depend on their intrinsic psychological attributes rather than information or skills or how they choose to deploy them.” (FSA, 2008b, p. 2).

The FSA changed its name to the Financial Conduct Authority (FCA) in May 2013 and is a regulator, not an educational body. But it recognises that raising FLC standards of consumers through education should lead to their greater self-reliance and ultimately the need for less regulation (FSA, 2008a).

HM Treasury supports the many FSA initiatives (FSA, 2005; FSA, 2006; FSA, 2008a, b) to improve FLC over time thereby strengthening the economy against potential financial crises. In 2006 the FSA wisely took it a step further in suggesting there is no ‘one-size-fits-all’ since FLC is a relative term which applies differently to everyone (FSA, 2005, p.38). For example, a child’s FLC would be different from that of its parents. All of this suggests that the current FCA definition (Appendix 1) and meaning will have to be adapted over time.

Why is FLC education important to national economic stability and growth?

Every national economy is based on its productivity; expressed as GNP (Gross National Product). This in turn is based on trade which is based on money, financial products and systems. So it is obvious that the more financially competent consumers and businesses are the more productive the economy will be. Conversely, the lack of FLC can adversely affect economic stability and growth.

Furthermore, financial illiteracy can be an ‘accident waiting to happen’. An opinion from the US Council for Economic Education (CEE, 2014) said:

“Financial illiteracy can result in poor saving, poor spending, excessive credit card use, and bad investment decisions. The stress of financial insecurity in families can lead to divorce, suicide, domestic violence and other crimes. The recent economic crisis and the increasing complexity of our financial system make it clear that strengthening the financial knowledge and skills of our young people is critical to the future success and financial stability of our country.” Neil Johanning, Treasurer for New York State PTA.

Even US Federal Reserve Chairman, Ben Bernake, connected financial literacy and the 2008 financial crisis (Bernake, 2013). A consequence of that crisis was a marked increase of 10,000 extra suicides (mainly men) in Europe and the US (Innes, 2014). Therefore, FLC education is a very important process for personal as well as national economic survival.

Who needs FLC education and how are they being educated?

A UK survey by the Open University Business School in 2002 concluded that:

“The majority of UK adults do not understand finances.”

If the economy is dependent on good FLC levels within its population then as many as possible need to be educated.

In the US, Annamaria Lusardi devised a simple 5-point test for adult financial literacy (Lusardi, 2008) which was adopted by the Financial Industry Regulatory Authority (FINRA). FINRA is the largest independent (self) regulator for all securities firms doing business in the United States. Their mission is to protect investors by making sure the United States securities industry operates fairly and honestly (FINRA, 2003). They conducted national FLC surveys in 2009 and 2012 (FINRA, 2009; FINRA, 2012). Both surveys showed below average FLC across the US (see Appendix 5).

UK teachers are delivering FLC classes but “many teachers were not confident about their own ability to support personal finance education” (FSA, 2008a, p.20). This was particularly the case when innovative delivery was seen as being more effective than traditional methods in the US (Mandell and Klein, 2009).

In the UK there are some excellent (voluntary) courses delivered by leading charities and public bodies, the most prominent being the Personal Finance Education Group (PFEG, 2014). The Money Advice Service (MAS, 2014) and MyBnk (MyBnk, 2014) also offer a wide range of courses and learning methods online.

Who teaches FLC and are they suitably qualified to do so?

Teachers in England deliver FLC education under the PSHE curriculum. Banks also supply staff who are well qualified technically to deliver specific topics, but it is doubtful that they include the necessary behavioural finance education which teachers need for delivering FLC as noted by Professor David de Meza (FSA, 2008b, p.4).

A recent Ofsted inspection of schools noted that “Students taking accredited courses often had the most comprehensive understanding of personal finance” (Ofsted, 2008). A good example of an accredited course provider is ifs School of Finance which delivers a level 2 course, Certificate in Financial Capability and Careers Development. This course has been highly successful and is a pathway to many other financial courses (IFS, 2014) but more colleges need to follow to remove this deficit in learning nationally.

When is it best to provide FLC education?

Educational psychologists debate over whether pedagogy is better than andragogy in education and this useful chart summarises the differences (see Figure 2). For FLC education it is difficult to choose since it is an educational hybrid of knowledge and behavioural psychology. Traditionally, English pre-school and primary-school education is quite pedagogic. Contrary to this, the highly successful Montessori schools focus on that age group with an androcentric style of learning to deliver early cognitive and social development for children. This experiential, constructivist approach (Hein, 1991) seems to be more suitable for FLC behavioural learning from the earliest age (Montessori, 2014). Studies have shown that FLC education begins in the home at a very early age when children adopt their parents’ values and attitudes, within the limits of their own personality (FSA, 2008a, p.20). This suggests that the best time to begin FLC education is pre-school, with focused collaboration between parents and teachers.
At a higher educational level a radical educational reformer has gained a large following, Sir Ken Robinson (Robinson, 2006). His focus is on encouraging and developing the learner’s creativity in learning.

Where is FLC education being delivered in the UK?

FLC education has been delivered in only a few secondary schools throughout the UK up to now. Although there are many financial courses delivered up to postgraduate level, ifs University College is the only university that offers a specific qualification in financial capability which is wisely combined with career development (since FLC has been shown to be ineffective unless it can be applied). In this case FLC can be applied more effectively with a better understanding of career choice (IFS, 2014).

In addition to schools, a few charities and government bodies have risen to prominence such as the Personal Financial Education Group, the UK’s leading financial education charity (PFEG, 2014), MyBnk, 2014, The Money Charity (Money Charity, 2014) and the Money Advice Service (MAS, 2014).

How is FLC education being delivered and is it successful?

In UK schools, FLC is being incorporated into maths and citizenship (PHSE) classes but this is not seen as a good idea by the financially-oriented university, ifs University College (IFS, 2014), which has often warned that limiting financial literacy to maths and citizenship would not help as many pupils as it should, and might cause some school children to disengage with it. Alison Pask, Vice Principal of ifs University College, said: “We remain deeply concerned that the new curriculum will be little more than a box-ticking exercise that will create good headlines, but little else.” (Kryiakou, 2014). ifs is arguably the most experienced academic organisation that delivers FLC education at the secondary and post-secondary levels in the UK (IFS, 2014).

How can behavioural economics make a difference?

Behavioural economics and the related field, behavioural finance, study the effects of psychological, social, cognitive, and emotional factors on the economic decisions of individuals and institutions and the consequences for market prices, returns,
and the resource allocation (Behaviour, 2014). It plays an important part in FLC education since David de Meza has identified a collection of deep-seated cognitive biases that influence overall decision making (FSA, 2008b, p.2). Although basic FLC training would increase an individual’s understanding and knowledge it is debatable if this would equip them with the judgement and ability required to make sound financial decisions. Ideally, courses should be suited to the individual’s background, previous learning, culture, religion, etc (Braunstein and Welch, 2002). This suggests that dealing with the learner from a psychological, as opposed to technical, perspective would prepare the student much better for later financial life decisions than being assessed on short-term knowledge testing. FLC education involves numerous complex factors like awareness, action, critical reflection and experiential learning that lead to more effective financial performance and experiences (Lee, 2010).

How can success be achieved nationally for such an ambitious goal?

Studies in the UK have shown that FLC education is a long-term project which does not end with a certificate. The FSA study (FSA, 2008a, p.74) repeated its remarks from 2007:

“We agree with the National Audit Office’s finding that measuring outcomes and changes in behaviour is inherently difficult. But we will continue to develop how we measure the effects of our programme to ensure that money is put to best use. In doing so, we will take into account the NAO’s helpful suggestions for additional ways to measure progress.” (Financial Services Authority, 2007)

This endorsed the conclusion of an earlier study they had reported:

“While financial literacy programs have proliferated, research measuring the effectiveness of the programs has not kept pace.” (Braunstein and Welch, 2002)

As the economy and changes in consumer lifestyles develop over the years, FLC education will need to be constantly updated to stay abreast. But more important is the way in which progress can be made to close the FLC gap. Research has shown that the best results can be achieved not just by raising the quality of teaching and methodologies in engaging learners but by involving a wider circle of participants, particularly parents and schools as shown by the successful PFEG initiative (My Money Week, 2014).

Research Methodology

Background

The author has taken a qualitative approach due to the behavioural economics dimensions of FLC (Behaviour, 2014). Secondary research was undertaken mainly online augmented by primary research surveys and a focus group meeting.

Prior to this project the author had conducted preliminary research through his business-turnaround consultancy in early 2013 to try to find a solution to educating business owners about FLC to prevent business failure. To accelerate the process, he set up a research team by engaging part-time postgraduate students from University College London (UCL). Under their Higher Education London Outreach (HELO, 2013) they offered students to SMEs for 12 week research assignments in return for practical experience.

Market Research Systems Chart

The author designed a Market Research Systems Chart (see Figure 3 below) as the blueprint for research in the four main areas of Demand, Supply, Influencers and Providers. The students used the chart to gain an overall perspective and reference framework for their research. They worked remotely and independently but attended regular discussion tutorials at UCL led by the author with his team of three until July 2013.

The author also used Google Alert, 2014 to capture any new daily sightings of ‘financial literacy or capability’. About 25 references per month were captured. From these emails, about 25% were studied closely.
Figure 3. Copy of Market Research Systems Chart for UCL student team (Source: Author)
Survey Monkey Survey

During the ongoing secondary research, the author put together a primary research project using Survey Monkey, 2013. Questions were designed for different UK target groups (See Appendix 2). Also 10 one-page websites were customised for each group (see Figure 4).

Figure 4. One of ten (one-page) websites for respondents to visit and take the survey

Source: Author (via his company, Liability Management Ltd)

The target sample size consisted of contacting 75 FLC education and training providers (schools, charities, gaming companies, etc), from which a 30% response rate resulted. In general, approximately 36% response rates are expected from organisations in such surveys (Baruch and Holtom, 2008).

A sample page of the Survey Monkey questionnaire is shown in Figure 5 for Group 2a – Financial Guidance Charities. At the end of the three-week survey period the final reports were downloaded.
*1. HM Treasury defined Financial Capability in 2007 as:
“...a broad concept, encompassing people’s knowledge and skills to understand their own financial circumstances, along with the motivation to take action. Financially capable consumers plan ahead, find and use information, know when to seek advice and can understand and act on this advice, leading to greater participation in the financial services market.”

Using that definition: How would you rate the average business employee’s or manager’s financial capability?
- [ ] Very good
- [ ] Average
- [ ] Below Average
- [ ] Don’t Know

Additional Comments (Optional - Only if you have time)

*2. Do you think that any form of financial capability training is better than none and will improve the year-end results of a charity or social enterprise?
- [ ] Yes
- [ ] Maybe
- [ ] No
- [ ] Don’t Know

Additional comments (Optional)

*3. Financial capability training is not common among charities and social enterprises. Why do you think that is so?
- [ ] Most charities and social enterprises are not subject to independent audits
- [ ] Managers typically find it to be a boring subject
- [ ] It is only common among financially-related charities and social enterprises
- [ ] Don’t know

Additional Comments (Optional)
The UCL students confirmed the author's 2013 findings that FLC training was not widely available to the UK small business sector, and his belief that a new form of digital, animated and interactive training could be the breakthrough for business owners to understand and run their businesses better.

The author also invited Dr Nirmala Lee, Senior Lecturer in Banking and Finance at London Metropolitan University, to one of the UCL sessions to meet the team and to share her views on FLC. He had previously circulated a copy of her PhD thesis on financial literacy to the team, the best of its kind in his opinion (Lee, 2010). Dr Lee showed much interest in the project and guided the students in their understanding and research during the session for which they were very appreciative.

Focus Group

The author later conducted some primary research in May 2014 which he combined with his PGCHE Teaching Observation session. For this he invited a small group of six UK professionals to a workshop in London (Appendix 4).

Onward to Further Education

Finally, the initial objective of the author's research in 2013, to try to find a solution to educating business owners about FLC to prevent business failure, took on a new, expanded dimension when he decided to enrol on the PGCHE course at ifs University College (PGCHE, 2013). For this he gives credit to the four outstanding UCL students who stimulated his interest in further education which led him to study higher education.

From this course he learned there was much more to delivering FLC education to SMEs than selling them financial models. The art and science of educating adults about financial matters, especially entrepreneurs, was a teaching and learning skill that required advanced training in higher education. Fortunately, ifs University College was the leading university offering this course with a specific focus on financial services (PGCHE, 2013).
The Research Undertaken

Data Collected

The primary research for the project was conducted online using Survey Monkey. As indicated above, the author designed a 10-question survey for different respondent groups, from charities to banks. Team members were given a list of potential respondents to telephone and direct to the specific web page for their group (Appendix 2).

Survey and Focus Group

The online survey asked respondents to share their preferred methods of learning about FLC and what tools they would expect to be most suitable to use. Separately, a small focus group was conducted in London. The format used was an interactive workshop style using questionnaires and feedback forms completed (anonymously). The Lusardi 5-point questionnaire (Lusardi, 2008) was given to establish the FLC level of the group. General financial discussions followed as well as discussions about behavioural finance.

Data Analysis

The online survey results (see Appendix 3) showed that the FLC rating of their students/employees/managers was considered below average by 54% of the respondents. Most (72%) felt that FLC training would help improve their year-end results. Respondents had mixed views (maximum 33%) on why FLC training was not commonly provided in their organisations. Over 58% felt that the lack of FLC had led to costly mistakes in the past. 42% believed that lenders would be accommodating if they knew their borrowers had good FLC habits. Half (50%) said that they used external trainers for in-house training.

The learning methods they favoured the most were interactive presentations (22%) and models and simulation (16%) with a balanced liking for other tools such as gaming, webinars and videos. Whiteboards and Powerpoint were least favoured at 7% each. The learning tools they favoured using the most were models and simulation (12%) and interactive presentations (10%). Finally, 41% said they would favour low-cost, rapid-learning, e-learning methods and tools rather than their current methods and tools. The focus group was asked what they understood FLC to be, which showed a balanced view of the component choices (see Figure 7 below).

![Figure 7. Focus group’s understanding of what FLC means.](image)

![Figure 8. Personality types of focus group members.](image)

As expected, from the previous paragraph reference (De Meza et al, 2008), the focus group scored well in the FINRA, 2009, 2012 test (an average score of 80% compared with the 66% average) shown in Figure 9 below. The main difference was in understanding the effect interest rates have on bond prices where only half the UK group got it right.

![Figure 9. Focus group responses to the FINRA test.](image)

Research Findings and Conclusions

What do these findings actually mean?

The UK government has taken the first major step to improve FLC education from 2014 by making it a mandatory subject under the PSHE curriculum. It is too early to tell how effective the current teaching methods and tools will be, but it is a major step in the right direction.
The findings confirm that FLC education is not a familiar or appealing subject for schools or people in general. It is widely misunderstood, although intuitively most adults think it has merit in the school system. Why? Because the population’s FLC is below par and most adults including teachers are aware of this. FLC education has become compulsory in all schools but it is too early to tell how those schools which did not offer it before will cope. Hopefully, they should improve since Ofsted has been suitably impressed by the schools they inspected which do offer FLC teaching (Ofsted, 2008).

The study shows that parents were happy for their children to be taught new skills and behaviours at school which they themselves could not deliver or were just too busy to provide. But this study has also found that the strongest influence which determines how financially literate and capable their children will become, as they get older, is actually the parents’ own financial behaviour, habits and attitudes which rub off on them consciously and unconsciously (De Meza et al, 2008).

Positive outcomes

As this study has found, FLC is not a subject about only gaining knowledge, like history or English literature, or just becoming more financially literate. Unless that knowledge can be applied in a positive way to make informed decisions for the benefit of the user, or others, it does not transform into financial capability and action. This positive enhancement is based on a parallel learning dimension called behavioural finance, which is the key to good FLC and should generate a greater sense of personal responsibility.

Another positive aspect is the new awareness and motivation stimulated within government departments. In particular, the FCA, Money Advice Service and CFEB have become very active in trying to understand what is best for consumers, including the disadvantaged, and to share their findings publicly for free. They now offer online courses and activities with considerable reach.

An opportunity to improve best practice?

As a result of this combined new awareness and greater accessibility to FLC learning there is an opportunity to develop new and more effective methods of teaching FLC. In particular, the development of constructivist self-learning through a more androgogical method of teaching can be tested. This change is arguably unavoidable since the young tech-savvy generation of today is more accustomed to being in control of their lives and interests through technology toys and gadgets. This provides an excellent opportunity for parents to engage with their children by helping them choose or use suitable apps, videos or tools which are compatible with enhancing their education. FLC can then be tailored into the mix by close collaboration of parents with teachers and other parents.

What do these findings mean to different stakeholder groups?

Children
These findings suggest that FLC education, suitably delivered, can be enjoyable for children of all ages. As mentioned above, the Montessori method of teaching very young children is an excellent, well-proven success story. Androgy is their hallmark and a constructivist learning style is encouraged. Children learn by doing and trial and error is a most important aspect of human development from the earliest age. These methods can be adopted for older students since FLC education is both academic and behavioural, the same as many primary subjects.

Teachers
This new focus on FLC education for children is likely to be a challenge for teachers. Perhaps the biggest obstacle for them is their lack of financial knowledge and experience and being suddenly thrown into the ring with their students. In time they will adapt, learn and be taught how to deliver FLC education but in the early years is it likely to be trial and error since there are not many proven examples from which to learn.

Parents
These findings can be of particular interest and benefit to parents who must be aware of the need for their children to be FLC in order to survive and thrive in today’s financially complex and technologically expanding world. Indeed, parents themselves must be aware of their own FLC shortcomings (as surveys have shown) and their inability to make financial life decisions without third party advice. So how then can they educate their children? FLC education should be seen as a blessing for parents who ironically could learn from their children what they are taught at school which could help the family finances!

Employees
This paper has concentrated on student FLC education but with constant reference to the need for FLC education at all levels of society. Space does not permit a proper treatment of these other segments but it goes without saying that students are employees in later life. The main difference is that adults have a greater need for FLC education, having to make financial decisions on a regular basis. Regrettably, the FLC education gap begins here because adult FLC education is very limited at present.

Some professional financial bodies and institutions run seminars or short courses in specific financial topics but they tend to be sponsored by firms who have a vested interest in selling related products or services to the attendees. A few UK charities such as PFEG and MyBnk do an excellent job offering many free and online courses to adults as well as children.

Government
The government is a major stakeholder in this exercise and arguably the most important in promoting the continuing need for FLC education at all levels. But it can and should launch more initiatives like the current ones under the FCA, MAS and CFEB. In particular, it can offer tax incentives or grants to the private sector to develop better methods and tools to make it easier for students to self-learn the knowledge-based aspect of FLC and for teachers to focus more on behavioural education.
**Conclusion**

This paper concludes that improving financial literacy should be a high priority for policy-makers, and that gains could accrue not only to the affected individuals, but also to their family members and society at large. This would arguably have a positive effect on the economy.

From this small research project it has become clear that FLC education cannot simply be delegated to the schools with the hope that this would eventually lift the FLC standards across the country. FLC has been found to be a very individual and personal form of competence which needs nurturing and motivation to grow and to be sustained. Its development, therefore, extends beyond the educational system into relationships and human psychology but always at the mercy of life events. This rather holistic view is a personal one of the author’s based on his own experience but greatly influenced by the findings of great scholars behind this research.

In conclusion, the way ahead seems to have already been mapped in May 2013 during the warm up to this PGCHE course and research paper at UCL. The systems chart laid out then (see Figure 3) is still very much valid now. The only difference is that this *ifs* research has animated the chart from knowledge into action decisions which are shown by the arrows and comments on Figure 10. It is clear to the author that the FLC buck starts with the Influencers who have to collaborate on a strategy which could be delivered by the Providers to both the Supply and Demand sides of the educational landscape. This must be an all or nothing project if it is to succeed. Otherwise the sterling efforts of PFEG, the Money Charity, MyBnk, the FCA, Martin Lewis and others would have been in vain.
Limitations

The secondary research was insufficient in finding providers of methods and tools that could be used to deliver FLC education more efficiently and effectively. Also, the survey was deficient in not getting views from students whom FLC education is supposed to benefit. These two areas should be researched next to get a more complete understanding of FLC education and how it might help the economy. Reports like this can be developed much further to stimulate public understanding and action.

The primary research tested only 20 education providers. This sample was too small to give enough depth. Also, interviews could have been carried out with the respondents to get deeper analysis. Both limitations were due to time constraints.

Another limitation arose from the definition of FLC. Although a definition was provided in the surveys most people have a different understanding of what FLC actually is. The definition is quite subjective since it involves the ability of individuals to make appropriate financial decisions in their lives, and this could be interpreted in different ways (Mason and Wilson, 2000). Questions may have been misinterpreted depending on one’s view on FLC causing biases in the results.

The focus group was too small to give a fair representation. It would also have been better to conduct at least three focus groups to get a more balanced result.

APPENDIX 1

Financial Literacy and Capability – Definition Variations

This Appendix shows that the definition of FLC is a work-in-progress with widely varying interpretations of FLC which began at least 22 years ago.

<table>
<thead>
<tr>
<th>Source</th>
<th>Conceptual Definition of Financial Literacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilgert, Hogarth, &amp; Beverley (2003)</td>
<td>&quot;The understanding ordinary investors have of market principles, instruments, organizations and regulations&quot; (p. 2).</td>
</tr>
<tr>
<td>FINRA (2003)</td>
<td>&quot;Individuals are considered financially literate if they are competent and can demonstrate they have used knowledge they have learned. Financial literacy cannot be measured directly so proxies must be used. Literacy is obtained through practical experience and active integration of knowledge. As people become more literate they become increasingly more financially sophisticated and it is conjectured that this may also mean that an individual may be more competent&quot; (p. 29).</td>
</tr>
<tr>
<td>Moore (2003)</td>
<td>&quot;Familiarity with basic economic principles, knowledge about the U.S. economy, and understanding of some key economic terms&quot; (p. 3).</td>
</tr>
<tr>
<td>National Council on Economic Education (NCEE) (2005)</td>
<td>&quot;The ability to evaluate the new and complex financial instruments and make informed judgments in both choice of instruments and extent of use that would be in their own best long-run interests&quot; (pp. 163-164).</td>
</tr>
<tr>
<td>Mandell (2007)</td>
<td>&quot;[Familiarity] with ‘the most basic economic concepts needed to make sensible saving and investment decisions’ (p. 36).”</td>
</tr>
<tr>
<td>Lusardi and Mitchell (2007c)</td>
<td>Focus on debt literacy, a component of financial literacy, defining it as “the ability to make simple decisions regarding debt contracts, in particular how one applies basic knowledge about interest compounding, measured in the context of everyday financial choices” (p. 1).</td>
</tr>
<tr>
<td>Lusardi and Tufano (2008)</td>
<td>“The ability to make informed judgements and to take effective decisions regarding the use and management of money” (p. 1).</td>
</tr>
<tr>
<td>ANZ Bank (2008), drawn from Schagen (2007)</td>
<td>“Knowledge of basic financial concepts, such as the working of interest compounding, the difference between nominal and real rates, and the basics of risk diversification” (p. 2).</td>
</tr>
</tbody>
</table>

The chart above from a report by Hung et al, 2009, starts with a 2003 reference but the expression ‘financial literacy’ was first adopted formally in 1992 by the National Foundation for Education Research in London as:

“the ability to make informed judgments and to take effective decisions regarding the use and management of money”


This definition focused on one’s ability and decision making. But a later study at Loughborough University concluded that financial literacy was a process leading to desired outcomes:

“Financial literacy could therefore be defined as an individual’s ability to obtain, understand and evaluate the relevant information necessary to make decisions with an awareness of the likely financial consequences” (Mason and Wilson, 2000).

But in 2001 the National Association of Citizens Advice Bureaux study, NACAB, 2001, broadened the scope of this definition to include activities based on life change events. This has become their main focus today in dealing with clients. Following their Financial Skills for Life (FSfL, 2004) courses they make it clear that Citizens Advice Bureau (renamed NACAB) client expectations can be captioned as:

“I came here to have my immediate problem solved and not to join a training course, I’m too busy” (FSfL, 2004).

Hence, for FLC advice (as opposed to education) to be effective, it needs to take into account the wider context within which the individual is operating especially their particular circumstances and needs. This leads on to useful work on information literacy and citizenship, by Anna Maria Correia on behalf of UNESCO (Correia, 2003). In order to assess someone’s information literacy she highlighted the need to take account of both the context and the role of information providers:

“If the citizen stays within his or her sphere of expertise, then there should be no problem with [basic information literacy skills]. Once outside that sphere, the average citizen should not be expected to have the knowledge required to understand the information … unless the information is given in a form which is designed for general consumption. Here it is the responsibility of the information provider to ensure that the information provided is suitable for the average citizen, whatever his or her calling” (Correia, 2002).

In 2003 the Adult Financial Capability Framework (AFCF, 2003) was developed by the Basic Skills Agency and the Financial Services Authority (NIACE, 2006). They reflected the process model outlined by Mason and Wilson and the NACAB in 2001 which defined financial capability as having 3 components, namely:

- Financial knowledge and understanding
- Financial skills and competence
- Financial responsibility

This was a much more pragmatic approach to the theoretical concept of FLC which was no longer a classroom subject and beginning to have a widening impact up to government level. The FSA has since taken a leading role in FLC in the UK. It supplied the following definition to HM Treasury in 2007 which has now become the industry standard definition but specifies ‘financial capability’:

“… a broad concept, encompassing people’s knowledge and skills to understand their own financial circumstances, along with the motivation to take action. Financially capable consumers plan ahead, find and use information, know when to seek advice and can understand and act on this advice, leading to greater participation in the financial services market.”

The word ‘literacy’ was used by the President’s Advisory Council on Financial Literacy (PACFL, 2008) which was convened to ‘improve financial literacy among all Americans’. Their definition combines financial literacy and financial education (a ‘consensus definition’) as follows:

“Financial literacy: the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being.

Financial education: the process by which people improve their understanding of

financial products, services and concepts, so they are empowered to make informed choices, avoid pitfalls, know where to go for help and take other actions to improve their present and long-term financial well-being.”

In summary, there is still a great lack of simplicity and universal clarity of what FLC is and how FLC education can be effectively implanted into society for the wellbeing of the nation. This challenge stubbornly persists in both the US and UK and, by extension most likely, in most other countries.
APPENDIX 2
Survey Monkey Results – Respondent Categories

Of the 75 target respondents, only 24 responded but 4 did not fulfil the survey requirements so had to be discarded. The remaining 20 fell into 5 major category groups within a total of 10 subgroups. For example there were two types of school (private and state). The weightings do not mean anything vis-à-vis one another except that the researchers managed to get a fairly balanced spread of the market.

Source: Author, (using Survey Monkey online program).

<table>
<thead>
<tr>
<th>No</th>
<th>Group Category</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Public Sector</td>
</tr>
<tr>
<td>2a</td>
<td>Charity – Financial Guidance</td>
</tr>
<tr>
<td>2b</td>
<td>Charities – Other</td>
</tr>
<tr>
<td>3</td>
<td>SMEs</td>
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<td>4</td>
<td>Professional Bodies</td>
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<td>5</td>
<td>Financial Institutions</td>
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<td>6</td>
<td>Training Organisations</td>
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<tr>
<td>7</td>
<td>Gaming Companies</td>
</tr>
<tr>
<td>8</td>
<td>Colleges/Universities</td>
</tr>
<tr>
<td>9</td>
<td>Private Schools</td>
</tr>
<tr>
<td>10</td>
<td>State Schools</td>
</tr>
</tbody>
</table>

Source: Author, (using Survey Monkey online program).
APPENDIX 3

Survey Monkey Results – Respondents’ Opinions (summary chart)

The chart below summarises the results of 10 groups of 20 respondents.

Source: Author, (using Survey Monkey online program)
APPENDIX 4
Focus Group Responses (summary chart)

The focus group sessions was hosted in London by the author. He chose a small, select group of six professional adults known to him so that more could be achieved in less time. In addition to the 10 questions below, the group was also asked to answer the 5 FINRA questions (the results of which are shown in Appendix 5). The chart below gives a summary of the results of the first of two FLC surveys carried out in the session among the six participants.

Source: Author, (using Survey Monkey online program).
APPENDIX 5
Financial Industry Regulatory Authority (FINRA) Surveys (summary chart)
This chart shows the results of three FINRA surveys which asked 5 standard questions regarding day-to-day financial matters. The questions were designed by Lusardi and Mitchell (2006) originally for the 2004 Health and Retirement Study and are supposed to show the financial literacy level of each target group.

- The FINRA 2009 and FINRA 2012 surveys were taken from 25,000 respondents in each of the 52 states in America under identical conditions.
- The UK Focus Group (6 participants) took the same test on 14 May 2014 in London.

Comparison of responses to FINRA survey (5 basic questions)
Sources: FINRA, 2009; FINRA 2012; Author.
References


What is the relationship between MBTI personality type and postgraduate learners’ reflective practice?

Nick Holyoake FCII DMS PGCHE

Abstract

Over the last ten years the HEI sector has seen a growth in the use of reflective practice across many postgraduate programmes. However, it is not clear that reflective practice benefits all individuals undertaking postgraduate study, particularly those with a personality type less inclined to self-consciousness and internal review.

Using a literature review and an anonymous questionnaire of postgraduate students this study intends to assess how an individual’s Myers Briggs Personality Type Indicator (MBTI) relates to their reflective practice experience, and whether any negative impacts can be mitigated.

The literature review suggests that there are personality types more inclined to benefit from reflective practice and personality types that may have difficulties understanding the concept and then using reflective practice effectively. However, the study results were less conclusive and all of the respondents reported a benefit from the reflective practice they undertook during their programme of study and the majority intend to use reflective practice on an ongoing basis. The most widely used reflective practice was written learning journals, with other more innovative activities having no reported use in the research group.

The study concludes that whilst all personality types can benefit from reflective practice, extra consideration should be given when introducing the concept of reflective practice and designing associated assessment methodologies for people with an ESTJ personality type. This information may be of benefit in engaging postgraduate students of all personality types. These findings can be applied by HEIs to help take into account the personality type of postgraduate learners when including reflective practice in postgraduate programmes.

Introduction

The growth of the HE sector and the democratisation of HE study have seen an increase in the number of postgraduate students, many of whom are new to higher education. Many postgraduate programmes now include a reflective practice component, which can also be an assessed module.

The overall aim of the study is to determine the relationship of MBTI personality type to the andragogy, the art and science of helping adults learn (Knowles, 1980) of reflective practice in contrast to pedagogy.

The differentiation between pedagogy, the art and science of teaching children, and andragogy is an important one in the context of this study. The use of reflective practice as a learning process in adult education is closely linked to achieving the higher levels of personal development such as self-actualisation that demands intellectual, emotional and psychological, engagement, Maslow (1968). Andragogy is the teaching methodology used to achieve this end and Knowles’ (1980) theory of andragogy is partly based around the personality of the adult learner being a key component in the adult learning process. This view is supported by Piaget (1970) as he describes the cognitive development of an individual learning through infancy into adulthood as a move summarised by Kolb (1984) from, “an active egocentric view to a reflective internalised mode of knowing” (Kolb 1984, p24). Bearing these opinions in mind it is surprising that little research has taken place into the relationship between personality type and the process of an adult learner developing the cognitive skills necessary for reflective practice.

In order to provide context to the study a range of published materials were accessed. Principally, the literature review considered the issues of personality and adult learning, reflective practice, metacognition, learning styles, self-consciousness, self-reflection insight scales, personal development and lifelong learning. The literature review indicates there has been limited research activity with regards to the relationship between personality type and reflective practice, but did reveal that inherent weaknesses in reflective practice are acknowledged by researchers such as, Moon (1999).

The study sought to obtain personal views on the methods of reflective practice used during postgraduate study, its level of use and their intention to continue to use reflective practice once their period of study has finished. Through synthesis of the published material, and by critical assessment of the participants’ responses, it was possible to gain an understanding of postgraduate students’ views on reflective practice and how these were affected by personality type.

The research question

What is the relationship between MBTI personality type and postgraduate learners’ reflective practice?

The question is based on an assumption that some of the sixteen possible MBTI personality types (see appendix A) will adopt and benefit more from reflective practice than other personality types (van Seggelen-Damen 2013) and that those with an introverted personality trait may adapt more readily reflective practice such as journaling, whereas those with an extroverted style may find other more active reflective practice more accessible.

MBTI is not the only personality testing instrument. Van Seggelen-Damen (2013) considered the Big Five personality traits, a grouping of all personality traits found in the majority of personality and psychological tests: Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism¹ as a basis for the personality traits in the research undertaken and adapted survey questions in the Costa and McCrae (1992) NEO personality instrument. This NEO instrument has been reviewed in relation to MBTI by McCrae and Costa (1989) and their data suggests that the MBTI scales

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¹ OCEAN
Methodology

The study considers primary data gathered from post-graduate learners who have been, or are using reflective practice and have an awareness of their MBTI personality type preference.

Bearing in mind the limited nature of an educational study, a short online survey, Robson (2003), was deemed appropriate to collect primary data. The purpose of the survey was to gather data that would enable the researcher to consider, in association with the literature review, whether there may be a relationship between MBTI personality type and postgraduate learners’ reflective practice.

Sixty-six individuals from two different post-graduate programmes, a sports based MA in Personal and Professional Development and a financial services based Post Graduate Certificate in Higher Education, were contacted to take part in the study. In an attempt to mitigate the possible bias, caused by selecting postgraduate students from only two postgraduate programmes of study, a web link was also made available to 350 of the researcher’s public and private sector business contacts. As the possible respondents were all known to the researcher the survey was conducted with a guarantee, Bell (2005), of totally anonymity, Robson (2003).

The main purpose of the survey was to establish the respondents’:

- MBTI profile;
- reflective practice activities used during their period of study;
- perceptions of reflective practice;
- level of reflection undertaken during their period of study;
- commitment to continue using reflective practice.

Bearing in mind the length of this study the development of survey questions has been partly based upon the methodologies of other researchers, detailed below. Reusing the questions from the Peltier et al (2005) ‘Factor Model of Dimensions of Reflective Learning and Interaction’ instrument builds on the existing research base and as such adds additional texture to this developing area. Together with the literature review this approach has the advantage of increasing the validity of the study through triangulation of the results and adding, if only in a minor way, to the body of existing research.

Survey questions were constructed as follows:

- for personality types, the 16 MBTI personality types, Myers and Myers (1980);
- for descriptions of learner perceptions of reflective practice; qualitative perceptions from a group of reflective health practitioners gathered during a reflective workshop reported in Ghaye and Lillyman (2010);
- for the questions about the depth of reflection that took place during the period of study; eight questions focussed on depth of reflection extracted from the ‘Factor Model of Dimensions of Reflective Learning and Interaction’ instrument developed by Peltier et al (2005) and as used by van Seggelen-Damen (2013), confirmed by personal correspondence, during research into reflective personalities;
- for the types of reflective activities that took place during the period of study; ‘learning journals/diaries/logs/notebooks etc’, action learning sets and self and peer assessment, Moon (2004); ‘photo journals, fictional stories, poetry or paintings’, Southampton Solent University (2014).

The twenty two complete responses, when spread across the 16 MBTI types only serves as a useful indication of the relationship between MBTI personality type and reflective practice, it is not a sufficient sample to identify any statistically significant trends. The sample size is a limitation for the analysis of the study which is partly mitigated by grouping the MBTI personality types into Kiersey’s four temperament groups (1998) and used by Hedges (2000) as a method of classification to consider the implication of MBTI personality type on learning in adults.

Kiersey’s temperament group theory, appendix B, makes use of the 16 MBTI personality types and groups them into four dominant trait groupings.

- SJ ‘Guardians’; 50% of the UK general population (Yan et al 2013)
- SP ‘Artisans’; 27% of the UK general population (Yan et al 2013)
- NT ‘Rationals’; 9% of the UK general population (Yan et al 2013)
- NF ‘Idealists’; 14% of the UK general population (Yan et al 2013)

The S/N and T/F MBTI dimensions used in the Kiersey groupings are regarded by Lawrence (1993) as being of particular importance for reflective practice.

It would have been preferential to base the final analysis on all 16 MBTI types, not least because the temperament groups do not take account of the introversion/extroversion dimension. This study analysis seems best served by using the temperament groupings to look for common themes relevant to reflective practice.

A separate analysis will be conducted of the E/I dimension to reflect the literature review findings that people with an introverted personality trait may be more attuned to reflective practice. Whilst people with an extroverted personality type can have problems adopting the cognitive skills required for effective reflection to take place.

Literature review

Personality Type

The MBTI personality type instrument (Myers and McCaulley 1985) is based upon Jungian theory (Jung, 1971) that what appears to be random behaviour is the outcome of how people choose to use their mental capacities. MBTI is a developmental personality instrument, it encourages the individual to discover which one of the MBTI personality types they are most comfortable with. The process of self-discovery that follows completion of a questionnaire is a reflective process and therefore the MBTI instrument and reflective practice seem perfect partners.
MBTI uses self-reported forced choice answers to establish a person's preference across four dimensions:

• How the individual focuses on the world: extrovert (E)/introvert (I)
• How the individual gathers information: sensing (S)/intuition (N)
• How the individual makes decisions: thinking (T)/feeling (F)
• How the individual interacts with an increasingly complicated world: judging (J)/perceiving (P)

There are sixteen possible MBTI personality types (see appendix A), one of which will be the most comfortable for an individual.

It is important to note that some terms within the MBTI instrument may not match the populous understanding. Particularly careful attention should be given to the extroversion/introversion dimension. This is due to the negative connotations (Cain 2012) that can be placed on having an introverted temperament with regard to business, leadership and making social connections.

This is particularly important as part of the study hypothesis is that people with introverted traits, with their preferences for communicating using writing, reflecting before talking and an ability to focus (Williams 2004) are most suited to reflective practice.

‘Reflection comes much more easily to students with an I (introverted) orientation because reflection replicates the kind of activity that seems most natural to them.’

(Callahan 2000, p70)

However, due to the desire for engineered extraversion in the modern world, Cain (2012), these introverted traits may be underdeveloped or even deliberately suppressed in many people, OPP (2011).

MBTI and the closely associated Kiersey (1998) temperament classifications are closely aligned to Kolb’s (1984) theory of experiential learning, which as well as developing the work of Dewey (1933) and Piaget (1970) along with MBTI expands on Jung’s theory of personality which focuses on how individuals prefer to interact and adapt to the world.

A focus purely on learning style does not take into account the impact of personality traits on the use of reflective practice. This study expands on the widely used learning style approach (Coffield 2004) to take into account the implications of an individual’s MBTI personality type. MBTI and Kolb’s experiential learning model have a great deal in common; the MBTI Extraversion/Introversion dimension links to Kolb’s Active/Reflective dimension and the MBTI Feeling/Thinking dimension links to Kolb’s Concrete/Abstract dimension.

Reflective Practice

‘Reflection is a form of mental processing – like a form of thinking – that we may use to fulfil a purpose or to achieve some anticipated outcome. The term “reflection” is applied to relatively complex or ill-structured ideas for which there is not an obvious solution and it largely refers to the further processing of knowledge and understanding that we already possess.’

(HEA 2007, p5)

Reflective Practice in action and on action as discussed by Schon (1983) is based on the research of Dewey (1933) who defined reflection as;

‘the active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it’ (Dewey 1933, p9)

and developed by Flavell (1967) in his seminal paper on metacognition, that he defines as ‘thinking about thinking’.

These definitions also touch upon another element of reflection. It gives reflective practitioners the ability to operate in the area of fuzzy logic (Rolfe 1997), in an attempt to deal with an increasingly complex world. Reflective practitioners embrace the interface between chaos and order as a place for learning, Ghaye and Lillyman (2010), and require the openness to change personality trait that is also the premise of the MBTI Perceiving trait.

Metacognitive and reflective skills are not possessed equally by all and instruments such as the ‘self-reflection insight scale, SRIS’, Grant et al (2002), seek to measure a person’s self-consciousness and their ability to self-reflect. Moon (2004) supports the view that people have varying levels of personal insight but challenges the assumption that some people just cannot reflect, preferring to support Boud and Walker (1998) in their view that some people just have difficulty understanding how to reflect and therefore resist the personal challenge of reflective practices.

Personality Type and Reflective Practice

There has been significant growth in the use of reflective practice in HEI since the publication of the Dearing Report (NCIHE 1997): mainly learning journals, Moon (1999), rather than alternatives such as ‘photo journals, fictional stories, poetry or paintings’, Southampton Solent University (2014).

Callahan (2001) considered the impact of tutor MBTI personality on the setting and assessment of reflective writing. Callahan states that a tutor’s MBTI profile can impact on the student’s reflective writing particularly when it comes to formal assessment of the reflective writing, a view supported by Moon (1999). Callahan (2001) touches briefly on the relationship between personality and reflective practice but does not develop this aspect fully.

In contrast to Callahan’s research, which focussed on reflective task accomplishment, van Seggelen-Damen (2013) considered the impact of personality traits on reflective practice itself. In this study the personality traits – need for cognition, openness to experience, private self-consciousness and cognitive complexity – deemed relevant to reflective practice are established using a bank of questions developed from a range of sources. The level of reflection questions used in the research are from the Pelletier et al (2005) reflective instrument, and the same eight item sub-scale is used in this study. Van Seggelen-Damen (2013) concludes that highly self-conscious people and those with a need for higher cognition are more reflective and that,

‘reflective personalities are driven by the enjoyment of cognitive activity and self examination’ (van Seggelen-Damen 2013, p94).
This conclusion is aligned to MBTI personality type theory: those with introverted (I), intuitive (N) traits are likely to be more attuned to reflective practice, whereas those with extroverted (E), sensing (S) traits may find reflective practice less accessible.

**Results**

The survey (see appendix C) was undertaken by thirty respondents all of whom had undertaken postgraduate study. Eight people did not answer the question with regard to MBTI preference and full responses were received from twenty people, 33% of those directly contacted. A limitation of the respondents’ anonymity is that it is not possible to tell how many responses were received from the people directly invited and the open weblink.

**General Findings**

The distribution of MBTI personality types in the survey results does not reflect that of the UK managerial population identified (Carr et al 2011) in a survey for Ashridge Business School. The most significant difference being that in this survey 26% of the respondents reported an ISTJ preference compared to a 14.6% in the Ashridge data.

Five out of the eight reflective practice activities identified were selected by the respondents with 95.5% of respondents identifying learning journals as a reflective practice they have used. Paintings, photo journals and poetry had not been used by any of the respondents. This high preference for one reflective practice may be a factor of the selected respondents only undertaking their studies at two HEI establishments.

The respondents were positive about the reflective practice experience: 92% often thought of wider implications of what they were learning, 86% often reflected on their actions to see whether they could improve them and 68% intend to continue using reflective practice at least frequently. However, there is a possibility of self-selection bias within the survey. The process of identifying a final MBTI personality type requires a degree of reflection and self-awareness; this means that people who can recall their MBTI profile may not be a representative sample of all people who undertake reflective practice. The survey was anonymous and there was no compulsion or individual benefit to responding to the survey. This means that postgraduate students who had a negative perception of reflective practice may have chosen not to respond.

**INFP personality type**

As a result of the literature review it seems that an individual with an INFP profile is the most likely to be highly accepting of reflective practice. Their internalised focus (I), combined with an ability to identify patterns (N) and acknowledge the power of feelings, (F) combined with a realism that allows them to be comfortable working on the borders of life complexities (P) (Myers and McCaulley 1985) seems the ideal personality type to undertake and benefit from reflective practice. MBTI data (OPP 2011) indicates that this is a personality type only seen in 1.6% of English-speaking professionals and managers. Reflecting this distribution there were no respondents in this category within the survey to enable further analysis.

**ESTJ personality type**

In contrast, it seems that the ESTJ personality may have the most issues with reflective practice due to: their practical, action orientation (E), data rich requirements (S), desire for immediate solutions (T) and control based (J) personality orientation (Myers and McCaulley 1985). MBTI data (OPP 2011) indicates that ESTJ is a personality type seen in 20.2% of English speaking professionals and managers, by far the highest distribution.

Ashridge Business School undertook a survey of 2,050 finance, banking and insurance managers and reported that 22.7% had an ESTJ personality type and only 1.1% an INFP personality type (Carr et al 2011).

There were 13% of respondents in the ESTJ category within the survey and their responses indicate that they were generally positive about the reflective practice experience and intended to continue to use it.

However, the average score of 3.5 with regard to both how often they reflected on actions during their studies and their intention to use reflective practice in the future was below the overall averages of 4.05 and 3.95 respectively. The ESTJ results were also below the overall E averages of 4.0 and 4.1 respectively. This indicates that the E/I personality trait dimension on its own is not the best indicator of an individual’s acceptance of reflective practice. However, it is encouraging for further research that the ESTJ personality type reported a below average score, as this supports the view that some MBTI personality types maybe less accepting of reflective practice.

**Extraversion and Introversion**

The survey distribution for the Extroversion/Introversion dimension is significantly different to the UK general population: MBTI data (OPP 2011) Extroversion 67.1% Introversion 32.9% and the survey Extroversion 43.5% Introversion 56.5%. Forty four of the sample group were employed in the generally introverted (OPP 2011) financial services industry and this is the most likely reason for this discrepancy compared to the general population.

The predominance of introverted personality preferences means that this survey group, based on the literature review, should be more accepting of reflective practice purely based on the E/I personality trait.

However, the survey results do not support the view that an extroverted or introverted personality trait is a significant differentiator for the acceptance of reflective practice. With regard to the respondent’s intention to continue using reflective practice, the average ratings are broadly similar for those with extroverted, 4.11, and introverted, 3.85, personality traits. However, the extraverted group chose none of the four negative perceptions of reflective practice – looking back over your shoulder, going over and over things, justifying what I do and navel gazing – whilst 38.5% of the introverted group chose at least one of these options.
Do all personality types adapt to reflective practice?

When considering the personality types reported in the survey it is important to understand that these are only preferences and as with all MBTI types there is no restriction to an individual undertaking tasks that are regarded as more suitable for other personality types, Myers and Myers (1980) and Cain (2012). People without the INFP personality type, about 98% of the population OPP (2011), to differing degrees may find operating in the areas of reflective practice more challenging, tiring, stressful or less immediately rewarding but could still undertake this effectively. Cain (2012) supports Moon’s (1999) view that everyone can undertake reflective practice but they may need encouragement and tailored support to undertake this.

This view may explain the overall positive results of the survey, as the respondents have adapted to reflective practice through good academic practice and have self-selected to answer the survey. The survey was ad hoc and did not collect any longitudinal data; this would have demonstrated any change in perception over time. It may be that the HEI reflective practice methodologies used have developed the learners’ reflective capacity and acceptance over time.

Kiersey Temperament Groupings

With regard to Kiersey’s temperament groupings the literature review indicates that NF idealists seem to the group most likely to be suited to reflective practice as they are people who: acknowledge feelings, identify patterns and make the connections between items. Bearing in mind the extension of reflective practice from health care to other professions, it is worth noting that 44% of health care students but only 10% of finance and commerce students were identified as being in the NF idealists grouping (Myers and Myers 1980). In the same survey only 4% of accountants and 11% of bank employees reported an NF idealist preference.

In this survey 9% of respondents were in the NF idealists grouping and their commitment to ongoing use of reflective practice was the same as the overall average of 3.95. The NF scores with regard to the depth of reflection they undertook were generally higher, except were the generation of alternative forms of reflective practice was required 2.0 compared to the average of 2.95.

It was the NT rationalist grouping that had the highest average rating of 4.20, with regard to their intention to continue using reflective practice. This does not support the literature review that it is the NF grouping and in particular the INFP profile that will adapt most effectively to reflective practice. The NT results with regard to using reflective practice during their period of study were generally similar to the NF group except they were more willing to generate alternatives, 3.4 compared to 2.00, but less willing to look back over past experiences, 3.6 compared to 4.0.

Whilst the Kiersey groupings are useful for the purpose of analysis they do not differentiate between the judging/ perceiving world complexity dimension or the extroversion/ introversion which the literature review has shown to be possible contributors to learners’ effective application of reflective practice and therefore the groupings may be an over-simplification. The Kiersey temperament groups were considered in this short study to enable data analysis of a small survey population. As initially asserted, and established during the literature review, the 16 MBTI personality profiles remain the more appropriate instrument for determining the relationship between personality type and reflective practice.

Findings conclusion

Whilst the overall findings of the short survey do not fully support the views established and supported by the literature review, this may be due to the limitations of the small survey sample and the disadvantages of an ‘ad-hoc’ survey strategy: ‘data is affected by the characteristics of the respondent … respondents won’t necessarily report their beliefs, attitudes etc accurately’ (Robson 2003, p128).

However, the survey results for the ESTJ respondents do support the view that there is a benefit to identifying personality types and reflective practice. The survey is repeatable by other researchers and a wider ranging longitudinal survey will produce more reliable results, Robson (2003).

Limitations of use

In addition to the small respondent sample size the survey methodology itself has a number of identified weaknesses:

1. Relying on respondents’ existing knowledge of their MBTI personality type rather than requiring them to undertake another personality instrument such as using the five-factor model of the NEO-FFI (Costa and McCrae, 1992) and adapted by (van Seggelen-Damen, 2013) may mean that some people will be unable to complete the survey. The survey collection data reveals that 23% of people who started the online survey stopped when asked to confirm their MBTI personality type.

The issue could have been mitigated if a version of an MBTI instrument had been provided, but it was not felt appropriate in the context of this short educational study.

2. Rather than allowing a free format response to collect data on the perceptions of reflective practice and examples of reflective practice, the researcher chose to provide examples and an “any other” comment box. It is acknowledged that this method can limit the range of responses; however, bearing in mind the time available for data analysis, it was necessary to use a standard form of response.

This approach also had an advantage in that some respondents may not have identified the activities they undertook during their period of study as reflective practice. The survey collection data reveals that nobody added any comments to these categories and some of the pre-populated responses provided received a nil response for both questions.

3. The MBTI personality type does not take into account the Big Five personality trait of neuroticism and this may be a contributing factor to the effectiveness of an individual’s reflective practice.
Conclusions and recommendations

The literature review indicated that there are MBTI types, INFP, and temperament groups, NF, more likely to comprehend reflective practice and to receive more immediate benefit from the process. In contrast the ESTJ personality type may have more difficulty with reflective practice. However, little research had taken place in this area.

The small-scale ad hoc survey sought to add to this growing body of knowledge by repeating some aspects of the research that had been undertaken and making use of MBTI personality type indicators.

The survey results revealed that respondents of all personality types found the reflective practice beneficial whilst acknowledging the possibility of self-selection bias. The overall results did not fully support the conclusions from the literature review although they did support the view that the ESTJ personality type may have more issues with the process of reflective practice. However, these results cannot be wholly relied upon due to the small sample size and the one-off and ad hoc nature of the survey.

This educational study leads to a conclusion that there is a relationship between MBTI personality type and reflective practice. There is a need for further research to establish the extent of the relationship, how acceptance changes over time and whether a person with an MBTI initially less accepting of reflective practice with the right support can make a strong commitment to an ongoing use of reflective practice.

Areas for future research

Further research into the relationship between MBTI personality type and postgraduate learners’ reflective practice would benefit from having access to a larger and more diversified postgraduate population through collaboration with a range of HEIs who would be interested in the outcomes of the research data.

The primary research and associated literature review raises many more questions than have been answered.

- What are the types of reflective practice most suited to each of the MBTI personality types?
- What is the impact of the tutor’s MBTI personality type on the learner’s reflective practice?
- What degree of bias is being introduced into reflective practice assessments due to student/tutor MBTI personality type differences?
- How effective is reflective practice as an assessment methodology especially for the ESTJ personality type regularly found in financial services employees?
- Is there a quantifiable growth in the acceptance of the value of reflective practice over time? This could be established by longitudinal research into how learners’ perceptions of reflective practice change over their period of study dependent on the learning experience and personality type.

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A synthesis and proposal of project management pedagogy for best project finance performance

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Abstract

The challenges of teaching project management remain as evidenced by far too numerous projects that still fail or are troubled, a fact attributed to lack of competent project managers. The continued importance of corporate banking infrastructure and structured project finance schemes is a substantive reason to justify the imperative to critique project management teaching and practices. This research therefore builds on previous work conducted within the area of higher education to explore and review how pedagogical considerations impact on students’ learning and professional practice. This study will attempt to answer the single research question: What is the blend of pedagogy that provides superior student experience and yet helps reduce the current high rate of project failures? To achieve this end, the author takes a critical view of project management pedagogy debates in order to abstract key features to facilitate the creation of new project management pedagogy to assist towards the achievement of best practice.

Introduction

The project is a unique and transient endeavor which is undertaken to achieve planned objectives (Turner, 1999). It is considered as successful if it achieves the set objectives within specification, budget and time. The emerging paradigm is that the successful delivery of the project is supposedly dependent on the project manager’s effective control of time, cost and quality of the project within set project duration. Project finance now constitutes one of the core activities of several banks (See Figure 1). Public and private sectors continue to spend significant amounts of money on various projects (Crawford and Helm, 2009). Hence, demonstrable ability to deliver results is an increasing challenge for both public and private sector organisations.

![Figure 1: Core activities of investment banking. Source: Guide to UK Financial Services Qualifications City of London (2010)](image)

Current project management education is described as too often formulaic, very linear in approach, emphasising on what should be done and not describing in detail as to why those actions are considered important (Wellman, 2011). Thomas and Mengel (2008) further argue that this education fails to prepare the student to deal with unexpected difficulties or different circumstances resulting in fearing change, inability to innovate and adopt new strategies. Carbone and Gholston (2004) concluded that lectures and case studies cannot teach the hard to train soft-skill aspect of project management. The direct consequence is a research imperative to use existing theories and models associated with the adoption of project management best practice principles in the development of new project management pedagogy.

The major limitations of this research are the use of the desk-top study technique which reduces the strength and validity of the research and a lack of follow-up that may provide sufficient time for effects of the new project management pedagogy to appear.

Literature Review

Best practice is displayed when optimum ways of performing work processes are used to achieve high and desirable performance (Zairi, 1996). The basis for many descriptions of project management is an attempt to capture an understanding of best practice. Documenting project management best practice creates the optimal repeatable and standardised method for delivering projects. A repeatable and standardised method has several advantages. In theory, it should be effective and efficient. Standardised approaches can be efficient as they avoid re-learning. In addition, the consistency that a standardised approach brings means it is relatively easy to measure, manage, and control when compared with a unique approach for every initiative. A known and proven way to solve a problem will usually be less risky than an untried approach (Newton, 2009).

What constitutes pedagogy is a matter that is not easily defined. Watkins and Mortimer (1999) defined pedagogy as ‘any conscious activity by one person designed to enhance the learning of another’ (p3). Leach and Moon (1999) described a pedagogical setting as ‘the practice that a teacher, together with a particular group of learners creates, enacts and experiences’ (p267). They suggested that the pedagogy is a joint activity in which the learner has an active role. Leach and Moon’s definition offered a different perspective from earlier ones as it drew in the social interaction dimension between learners and teachers. Other researchers such as Loveless
There already exists a range of established models and theories relating to project management pedagogy. The author’s purpose in presenting these is to provide a conceptual base to explore the project management pedagogy in his study. In addressing a range of models, the author uses the results of a study of the similarities and differences between a range of models as a basis to form a new model. Researchers have explored various pedagogical techniques to effectively achieve the balance between theoretical and practical knowledge, namely:

- project-oriented learning (Qi and Gu, 2011);
- whole-person learning (Hoover et al., 2010);
- active learning (Usry et al. 2009);
- experiential learning (MCarthy and McCarthy, 2006);
- practical wisdom-oriented learning (Gorman, 2011); & sustainability-oriented learning (Shrivastava, 2010).

From a learning theory perspective, most of these techniques derive from inductive learning (Prince and Felder, 2006).

Project-based learning is believed to give students the opportunity to gain deep understanding of concepts and potentially allow them to solve the society’s problems (Moalosi et al., 2012). It has the added advantage that it begins with the end product in mind that requires learning specific concepts and knowledge, thus creating a reason and context to learn and understand the information and concepts. Characteristics of project-based learning include goal setting, critical thinking, problem-solving, collaboration, project consultation and monitoring and effective feedback (Garrison, 1999). Chartier and Gibson (2007) concluded that it was logical to integrate project-based learning alongside traditional, classroom-style coursework.

(Lectures and case studies cannot teach the hard to train soft-skill aspect of project management (Carbone and Gholston, 2004). Recent research work emphasises the induction of soft skills and leadership in project management education, and the development of extra competencies as project managers are drivers of strategic development of their respective organisations (Shah and Janardhanan, 2012; Pollack, 2007).

Given the ever-changing role of the project manager, research work by Ojiako et al. (2011) pointed out that a one-size-fits-all approach to teaching project management would no longer hold true. Hence, current research recommends incorporating the best aspects of active and inductive learning as these enrich student experiences irrespective of their level of work experiences. For instance, the active learning approach through lectures and projects ensures that students can put into practice what they will have learned (Shah and Janardhanan, 2012).

(Figure 3: Costs of failed or troubled projects from around the world. Source: Colleam Consulting Ltd (2014))
It has been suggested that project managers need to be innovative and creative (Ojiako et al. 2008). There is a strong emphasis of transferable skills in project management education. Patanukul et al. (2007) also stressed the importance of interpersonal skills more than technical knowledge. Shah and Janardhanan (2012) concluded that the current focus of project management educators, researchers and practitioners is the development of new and innovative educational techniques with an emphasis on integrating theory and practice (Shah and Janardhanan, 2012). This effort enables project managers to develop transferrable skills and to manage projects under complex and chaotic situations (Ojiako et al., 2011; Thomas and Mengel, 2008).

Hosseini (1993) identified the challenges of teaching IT project management, in particular MIS, as being the abstract nature of concepts surrounding the development and management of IT systems. As a consequence, this makes these concepts hard to teach in class. Hosseini (1993) further stated that often students lack a practical frame of reference so that various nuances of IT issues escape them, especially if these issues are those dealt with at a managerial level. Hosseini (1993) based this statement on conclusions reached by Piaget (1974) when he proposed his model of ‘cognitive information processing’. The assertion made in this model is that in order for a person to understand some new concept or piece of information, this new information must be integrated into a person's schemata of knowledge. Piaget (1974) named this personal view of reality a ‘logico-mathematical structure’ (LMS). This view is also congruent with Biggs’ (1999) concept of ‘constructivism’ in teaching, where this refers to a student’s effective learning; learning that will take place if a student has the support in constructing meaning from the subject content. In Biggs’ (1999) terms, this means providing a learning environment for students to engage in the deep approach to learning. The author’s newly designed project management pedagogy will aim to provide this kind of learning environment.

The emerged factors for the development of new project management pedagogy are:

- The pedagogy must reflect actual project management practice.
- Best practice is when optimum ways of performing work processes are used to achieve high and desirable performance.
- There is a need to establish priorities, and why.
- The pedagogy should have numerous dimensions of performance.

Hence, the author aims to propose project management pedagogy that addresses these key project elements that emerged.

Research Methodology

This secondary research uses the grounded theory methodology due to the exploratory nature of the primary causes of project failure and the "blend of pedagogy" type of research question of this study. The study relied on evidence from multiple sources of journal articles and published case studies for inductive theory building. The study employs a balanced philosophical approach in terms of its research method and data collection techniques. The desk study adopted the positivist and interpretivist philosophical approaches.

The criteria for selecting interpretive journal articles and case studies are threefold. First and foremost, journal articles and case studies do not involve any positivist indicator: that is, no deterministic perspectives were imposed by the researcher. Second, participants’ perspectives were taken as the primary sources of understanding and investigating the phenomena. Third, the phenomena were examined with respect to cultural or contextual circumstances (Walsham, 1995).

The criteria for categorising positivist journal articles and case studies are the indications of hypotheses, model formation, propositions, quantifiable measures of variables and the inferences drawn from samples. Objective data could be collected to predict the relationship among factors and to test hypotheses or theories (Walsham, 1995). This study includes a substantial literature review, the enhancement of earlier proposed project management pedagogy and the development of new project management pedagogy. The deductive method through the positivist approach strips out complicating factors that could be relevant to the teaching of project management and its practice. Thus, it is impossible for this research to adopt a classic positivist approach. The author intends to follow project management teaching and its practice, which lead to the interpretive approach, which provided the means to understand prevailing practice. The author uses the classic interpretive approach to delve further into questions of how and why far too numerous projects are still characterised by delay, overspend, poor performance, high risk and abandonment, despite strict disciplines and an increase in project management skills development through higher education. Hence, a positivist approach would not be able to answer the questions. These features of the positivist research gel very well with the objectives of this research work.

Quantitative data are generated and focused on the hard issues or formal dimensions of project management such as cost of failed or troubled projects. Causes of projects failures or troubles as qualitative data complement quantitative data by providing insights on how problems arise and in some cases resolve. These insights help the softer issues or social dimension associated with project management by allowing an understanding, and at the same time answer the earlier posed questions of how and why. This multi-paradigmatic positioned research study adopted a pragmatic approach.

The design framework consists of a number of phases. The research flow, discovery, and development follow these phases. First, a detailed analysis is done of what, and how, the construction of existing project management pedagogy frameworks. Second, in-depth reviews of the best practice philosophy as a facilitator are done. These reviews are used to extrapolate key features and to ensure that any new project management pedagogy created takes into account all the necessary directions of past development and testing. Third, the first and second objectives are harmonised to form the basis of the creation of new project management pedagogy for use towards achieving best practice.

The next section discusses the findings and identifies the entry point into project management pedagogy design, the juncture from which the research programme associated with the journal articles and case studies reviews evolves.
Findings

A review of journal articles and case studies enabled the author to conclude that the following systematic biases (See Table 1) played a significant part in determining project outcomes (Shore, 2008):

<table>
<thead>
<tr>
<th>No.</th>
<th>Systematic Bias</th>
<th>Definition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Available data</td>
<td>A data collection process that is restricted to data that is readily or conveniently available</td>
<td>Bazerman, 1994</td>
</tr>
<tr>
<td>2</td>
<td>Conservatism</td>
<td>Failure to consider new information or negative feedback</td>
<td>Beach and Connolly, 2005</td>
</tr>
<tr>
<td>3</td>
<td>Escalation of commitment to a failing course of action</td>
<td>Additional resources allocated to a project that is increasingly unlikely to succeed</td>
<td>Keil et al., 2007</td>
</tr>
<tr>
<td>4</td>
<td>Groupthink</td>
<td>Members of a group under pressure to think alike, and to resist evidence that may threaten their view</td>
<td>Haslam et al., 2006</td>
</tr>
<tr>
<td>5</td>
<td>Illusion of control</td>
<td>When decision makers conclude that they have more control over a situation than an objective evaluation of the situation would suggest</td>
<td>Martz, Neil and Biscaccianti, 2003</td>
</tr>
<tr>
<td>6</td>
<td>Over-confidence</td>
<td>Level of expressed confidence that is unsupported by the evidence</td>
<td>Bazerman, 1994</td>
</tr>
<tr>
<td>7</td>
<td>Recency</td>
<td>Disproportionate degree of emphasis placed on the most recent data</td>
<td>Beach and Connolly, 2005</td>
</tr>
<tr>
<td>8</td>
<td>Selective perception</td>
<td>The situation where several people perceive the same circumstances differently; varies with the ambiguity of the problem or task</td>
<td>Russo and Shoemaker, 1989</td>
</tr>
<tr>
<td>9</td>
<td>Sunk cost</td>
<td>The inability to accept that costs incurred earlier can no longer be recovered and should not be considered a factor in future decisions</td>
<td>Beach and Connolly, 2005</td>
</tr>
</tbody>
</table>

Table 1: Summary of systematic biases

A critical analysis of several developmental projects revealed that they were grounded at the cultural level (Butterfield and Pendegraft, 1996, p. 14). Thus, organisational culture was identified as the most influential factor shaping project management practices and determining project outcomes rather than the actual teaching of project management. Newton (2009) identified culture as influencing the negotiation process, through differences in the underlying assumptions upon which participants base decisions, impacting on perceptions of technology, tolerance of uncertainty, approaches to time management, influencing behaviour and the management of projects. From this observation, the author concluded that understanding and adapting to the culture is critical to project success.

For instance, the incidence of projects delivering over budget is found to be partly directly attributable to pressure on senior executives or project managers to give politicians a budget estimate without time for adequate supporting research, and the project being locked into that estimate and falling short in the final budget. Further, while project participants subscribe to the view that performance measurement needs to include elements beyond the iron/golden triangle, there is unwillingness on the part of all parties to commit to the principle in practice, due in part to commercial pressures (Bryde and Wright, 2007). Wang (2001, p. 12) noted that the literature predominately treats project management culture mainly as a culture within an organisation rather than as a professional culture at a profession-wide level. According to Wang (2001), discussion is usually centred on alignment between the project and the organisation, or the degree to which the organisational culture supports project management. The project manager must, therefore, seek to align the project and the project team with the wider set of cultures (Thomas and Mullaly, 2008). Organisational culture and project culture may create an environment within which systematic biases emerge. Since culture is difficult and slow to change, a logical strategy for some organisations would be to change management practices, which in turn may set into motion events that minimise the emergence of systematic biases (Shore, 2008; Hofstede, 1999). An approach is suggested to create a culture that reduces the fear of failure and which makes managers less likely to succumb to the sunk cost trap (Shore, 2008). Cultures that discourage challenge and encourage unquestioning agreement can struggle with some projects (Newton, 2009). This results in risk being hidden and sometimes even obviously wrong estimates being unchallenged (Chapman et al., 2006).

Proposed Project Management Pedagogy

This section introduces new project management pedagogy (See Figure 4). This performance framework is a structured collection of elements that describe characteristics of effective teaching and learning processes. The pedagogy provides a means of critical analysis of an organisation’s current situation and is used to identify incremental steps to increase the likelihood of achieving project success.

The author took into account all the factors considered from extensive literature review and established models to propose an enhanced model for influences on pedagogical change. This
The proposed project management pedagogy is a typical, three-cycle maturity model used to determine the current levels of project management teaching capability and maturity. It uses three distinct Entry Points (EPs) or Maturity Levels (MLs) (i.e. Teaching, Learning and Reflection Principles) as shown in Figure 4.

Limitations and delimitations of the research

This research was subject to several limitations and delimitations (related to the concept of external validity) that need to be acknowledged:

• Small sample sizes (N≤100) of journal articles and case studies reviewed that limit the statistical power and the possibility of detecting results. Gorsuch (1983) recommended that a good sample size for factor analysis should be over 100 and five times greater than the number of survey questions.
• A lack of follow-up that may provide sufficient time for the effects of applying the newly proposed project management pedagogy to appear.
• Journal articles and case studies were from over a wide range of geographical locations, economic backgrounds, races, education levels, and so on. This brought certain difficulties along with it, particularly with regard to the actual administration of the test question.
Conclusions and Recommendations

The author took a critical view of project management pedagogy debates, asking whether or not current project management education provides the acquisition of acceptable knowledge levels with regards to the project management principles and techniques, and how this is achieved. The author started by examining the principles of project management pedagogy in education, and then moved on to critique project management teaching in more depth. As stated earlier, traditional project management studies have tended to focus more on teaching and learning but little on reflection where project managers could be drawing important lessons. Reflective practice is an important attribute to promote, develop and foster in participants of higher education. The understanding of reflection is enhanced by integrating (1) an initial study of major causes of project failures, and (2) a development phase that aims at identifying and structuring pedagogic interventions needed to reduce project failures.

Finally, the author formulated project management pedagogy from consolidating plausible ideas from earlier researchers’ work with his own understanding of the best way forward, and crafted a single-project management pedagogy model for use towards achieving project management best practice. The author’s proposed project management pedagogy uses lectures, group discussions, practical project work, syndicates, case analysis, simulation games and exercises to impart knowledge and to develop conceptual, analytical and decision-making skills. This variety of teaching and learning techniques is thought to prepare students to face the complex business and organisational challenges. The author however recognises that such an understanding, whilst still theoretical, could only be partial. His evolving interests and motivations in project management integrated the works.

As the author identified organisational culture as the most influential factor determining project outcomes, rather than the actual teaching of project management, it is felt that organisations need to empower project team members by transforming from a traditional leadership environment to a shared leadership and collaborative environment. One way of achieving this is for higher education institutions to continue marketing and offering short duration project management courses which target senior executives in order to raise their awareness and to create changes in the leaders’ internal dialogue.

The next section describes the limitations and delimitations and proposes mitigation in future research work.

Areas for future research

• Future research could aim to add more questions in order to increase the level of dissection and so gathering a more in-depth knowledge of project management pedagogy.
• There is a need for further research work to test the validity of this proposed project management pedagogy based on the possible control of factors that may be correlated with experience and which may drive the results, and perfectly reliable covariates.
• Project management practitioners will require regular updates on the progression of the project management discipline and changes to its theory in order to adapt and promote performance improvement.
• Researchers might want to investigate more creative possibilities and solutions for future research methodology and methods which culminate in a well-considered mix which will strengthen and improve the validity of future research.

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Abstract

Massive Open Online Courses (MOOCs) are increasingly being seen as a threat to Higher Education Institutions (HEIs) and the very nature of the programmes that they deliver. Many draw parallels with Christensen’s (1997) theories of disruption, and suggest that MOOCs may fundamentally change the educational environment. This study reviews the literature on the topic, focusing on disruption from three perspectives: the student, the institution, and pedagogical practice. In particular it looks at how a smaller, specialist education provider might adopt or adapt lessons learned so far.

It is evident that MOOCs are still at an early stage of evolution, and further research and observation is needed to ascertain their full impact. However, it is unlikely that they are truly disruptive in the sense that they will completely destroy current practice, replacing traditional face-to-face or distance learning programmes with short, free, uncredited, online courses.

Where possible HEIs should use MOOCs as a chance to consider different pedagogical and business strategies, for example exploiting opportunities to create open learning, market programmes to new groups of students, and introduce new approaches to enhance the learning experience. Nevertheless, institutions should be mindful that quality should remain at the heart of all that they deliver. Smaller HEIs that may not have the resources to experiment with the technology must stay alert to the case studies and literature on the subject and be prepared to adapt their own programmes as technologies change, and students’ expectations evolve.

Introduction

The debate around MOOCs is mounting, alongside an emerging trend for HEIs to participate in, and experiment with, this new channel of educational delivery (Yuan and Powell, 2013). Alongside that, many fear that this technology will overturn tradition for HEIs to participate in, and experiment with, this new channel of educational delivery (Yuan and Powell, 2013).

This study will reflect upon the growth of MOOCs, the debates around the disruptive nature of the technology, and any impact on the traditional educational model. More than 200 universities have launched 1200 MOOCs (Shah, 2013), and most of the HEIs involved are large organisations with the resources to experiment. As well as collating the literature for review and appraisal, this paper will also add to the body of knowledge by considering how a smaller UK-based HEI, like ifs University College, might adopt or adapt MOOCs, or consider lessons learned from their implementation in larger institutions, in order to provide qualifications that remain relevant to their students.

ifs University College

Some would argue that MOOCs are not a new concept. The Open University and other institutions have been offering “open-source educational resources and short courses [for] free for some years” (Boxall, 2012). And many other HEIs, ifs University College included, offer courses that mirror many of the attributes of a MOOC (ie. are online, use multi-media, and exploit collaborative technologies) but which are not ‘open’, either in terms of costs, or in not having entry requirements.

For more than 150 years ifs University College has provided specialist qualifications to financial services professionals. Currently it provides qualifications from level 2 to level 7: teaching financial literacy to school children and providing licences to practice for financial advisers alongside a portfolio of higher education (HE) qualifications. It delivers blended, distance and on-campus learning to students who range from school leavers aspiring to work in the financial services industry, through to established financial services professionals with first degrees wanting to undertake an industry recognised qualification.

Like many others in the sector, ifs University College is aware of the rise of MOOCs and the potential benefits that they might bring to an organisation with a mature and established approach to technology-enhanced learning. ifs has a culture of enhancement and innovation: developing an e-library in 2004, being “the only educational body with a specific focus on finance to be granted Taught Degree-Awarding Powers”, and moving from its traditional market of distance learning education to opening a campus in 2008 (ifs University College, 2014). Alongside this it is committed to continuing to review and enhance the student experience whilst providing “high quality student experiences” (ifs University College, 2014, p2).

Methodology

This study will critique and synthesise the current literature. The size of this project lends itself to this type of research. It is anticipated that this work will provide what Oliver (2012, p132) describes as a “sound bedrock”, gathering all the valuable information into one place and providing ideas for further study.

This is an established approach in the field of educational research, where literature reviews that digest ‘cutting edge’ topics for publication are published in the academic press (Cohen, Manion, and Morrison, 2007).

The nature of this emerging subject area lends itself to a broad literature review encompassing a wide variety of media. Chen (2014) suggests that “systematic, extensively published research on MOOCs is unavailable” and advises that blogs are the main source of up-to-date information in this area. Nevertheless, a range of media will be considered including academic articles, reports, blog postings from relevant professionals and institutions, and items from the press.
Research Findings

What is a disruptive technology?

Christensen first coined the term ‘disruptive technology’ in 1997 acknowledging that even well-managed companies who were achieving notable success could fail when they were unprepared for the innovations ahead. One key attribute he noted was that: “disruptive technologies bring to market a very different value proposition than had been available previously. Generally [they] underperform established products in mainstream markets … [and] have other features that a few fringe (and generally new) customers value” (Christensen, 1997, p.xv).

This pattern of failure to prepare for and embrace new technologies, and to listen to customers and potential customers, has impacted many industries. HiFi manufacturers were unprepared for Sony Walkmans and the new customers they introduced. Reich (2013) explains that an entirely new market was created who cared more about portability than sound quality and who were never going to buy a traditional music system. In 2012 the last printed edition of Encyclopaedia Britannica rolled off the presses after its owners acknowledged that the impact of Wikipedia and other online tools had fundamentally changed the way people access information (Bosman, 2012). And Kodak was unprepared for the changes that digital photography would bring, affecting both its business model and market share. It seems likely that Kodak felt unthreatened by the poor quality of early digital photography but, as Hermida (2012) explains “The history of technology shows how often the initial versions of a product or service are often of low quality but over time shift from being low-end and overtake established products and services … The rise and fall of Kodak is an example of how companies struggle between sustaining innovations that prop up existing markets and customers and disruptive innovations which challenge long-standing ways of doing business and require a radical rethink in corporate strategy.”

The educational environment – ripe for change?

Many would argue that the current educational environment is in flux. Yuan and Powell (2013) describe this transforming environment: globalisation and internationalisation, rising demand for access to higher education, growth of lifelong learning, escalating use of personal technology, and the need for more sustainable economic models for HEIs. This together with the increasing use of learning technologies leads some to conclude that HEIs must embrace new technologies if they are to be assured of a successful and robust future.

Christensen and Eyring (2011) suggest that change is inevitable for the university sector, that HEIs have traditionally avoided disruption because of the prestige related to their reputation for excellence combined with the absence of any disruptive technology. They cite online learning as the new threat to the industry. Hill (2012, p85–6) argues that the changes brought about by technologies have been developing over several decades, and that any threat is related more to the hype than the innovation. He argues “All too often the public discussion has become stuck in a false dichotomy of traditional vs online – a dichotomy that treats all online models as similar and ignores blended or hybrid approaches.”

It is the MOOC which seems to have caused most of the unease amongst HEIs and Yuan and Powell (2013, p13) suggest that MOOCs encompass the main characteristics of a disruptive technology “offering free courses to a different set of learners or meeting different needs of existing students”. Governments are also excited by the promises of this technology, with former UK Universities Minister David Willetts declaring that MOOCs could “revolutionise conventional models of formal education” (Coughlan, 2012).

MOOCs – an introduction

MOOCs are Massive: each with typically 43,000 students (Jordan, 2014), Open: available for free and open to all regardless of previous educational attainment, Online: delivered via the web and device independent, Courses. The MOOC acronym first appeared in 2011 (Bady, 2013) in relation to a course delivered at Stanford University, and since then more than 10 million students are said to have studied at least one of these courses (Shah, 2013).

Simpler than earlier forms of online learning MOOCs require minimum supervision and lecturer support, alongside a personal computer with access to the internet (Bagnaley, 2013). Interaction with and support from other students is usually encouraged, and assessment is often based on multiple-choice quizzes and short written assignments that are often peer assessed. MOOCs are not credit-bearing, though ‘badges’ and certificates are sometimes given at completion.

Bagnaley (2013, p368) explains that “a typical MOOC is made possible by outsourcing agreements between the educational sector and external providers”. The main provider of MOOC platforms is Coursera (47%) with others like Udacity and edX increasing their market share (Shah, 2013). New entrants, FutureLearn, the UK’s first major venture into MOOC technology, was launched in the UK in 2013, and differentiates itself by having designed its platform to focus the learning on interaction (Wilby, 2014).

Disruption

“The promise of MOOCs is that they will provide free to access, cutting edge courses that could drive down the cost of university-level education and potentially disrupt the existing models of higher education” (Yuan and Powell, 2013, p5)

This section will focus on three themes: will MOOCs offer higher educational opportunities to a new student and affect the way they study; will they impact the underpinning pedagogies in higher education; and will they disrupt the business models of HEIs? Alongside reviewing the literature this paper will reflect upon some examples of recent MOOCs, and consider how any lessons learned might impact ifs University College or similar institutions.
Disruption for students

Reich (2013) suggests that for MOOCs to be truly disruptive in line with Christensen’s theories, they will need to introduce higher education to a new group of students. He suggests that these new students might be those from countries with limited access to HEIs, those who have limited choices in respect of HEIs, or those who already have a degree and are keen to study further.

This global expansion into new markets is fundamentally flawed. One notable barrier suggested by Chimwaza, Chataira and Msengezi (2014) is that rather than bringing HE to students otherwise unable to study at this level, MOOCs create an unequal landscape where “most students in affluent countries will continue to receive face-to-face instruction while many students elsewhere take classes only on the internet”. Additionally, this vision is hindered in the US by regulations that prevent students in certain counties accessing MOOCs (Straumsheim, 2014). These obstacles are further impacted by the fact that 75% of all MOOCs are in English (Shah, 2013). It is hard to imagine that any disruption brought about by MOOCs is going to redress the global inequalities in education that are hoped for.

Evidence also suggests that MOOCs will not reach out to new students who might not, for whatever reason, have been able to access higher education in developed countries. Grainger (2013, p34) describes the general demographic of MOOC users as “employed, well qualified professionals in their 20s–30s who may be more interested in browsing the subject content rather than completing the course”. This pattern is apparent across the board as Laurillard (2014, p29) explains: “evidence from several universities suggests that well over 60 percent of those who register for MOOCs already have degrees”. Indeed, after the first two waves of their MOOCs, FutureLearn recorded that 82% of participants already held HE qualifications (Parr, 20141). Even in developing countries, where access to higher education is more limited, the reality is that most MOOC students already have a degree (Alcorn, Christensen and Emanuel, 2013).

The third group that Reich identified (2013) were those who might use MOOCs to study further. Certainly this seems to be the group who are most frequently subscribing to this innovation. However poor completion rates suggest that these students are not undertaking MOOCs in order to undertake an actual course of study. Jordan (2014) reports that an average of only 6.5% students are actually completing the MOOCs that they undertake. The University of London had a similar experience, with completion rates of 9% (Grainger, 2013) whilst FutureLearn report completion rates of 18% across all of the programmes (Parr, 20141).

Further research needs to be undertaken to understand whether this group of students is being disrupted by MOOCs, for example, whether they might otherwise have undertaken an HE programme, or whether the MOOC is merely a more interactive approach to what might have been reading books about a subject of interest. Grainger (2013) suggests that students become tourists in this type of educational experience accessing the content and then moving on. If this pattern becomes the norm then it really could disrupt the ‘traditional’ experience of an HE student, and whilst it does not achieve the aim of opening up higher education to a new group of students, it certainly contributes to the ‘lifelong learning’ agenda.

On the evidence so far it is hard to conclude that MOOCs will initiate any disruption that will lead to an entirely new student group accessing higher education. However, there is some evidence to suggest that it could support society by facilitating a freely accessible tool that champions lifelong learning.

As a specialist provider of financial services qualifications, ifs University College has a clearly defined market, both at home and abroad, and should not be alarmed by the poorly evidenced threat of disruption to the student cohort. However, they, and organisations with a similar profile, might find a MOOC, or other open learning initiative, attractive to students or other customers as a CPD tool.

Disruption in educational pedagogies

MOOCs can provide HEIs with a “vehicle to think creatively and innovatively and explore new pedagogical practices” (Yuan and Powell, 2013, p18). Indeed, the University of London International Programmes embarked on developing MOOCs in order to trial new pedagogical models that might then have a positive impact on their full-time degree programmes (Grainger, 2013).

One key pedagogic theory is that of the ‘Community of Practice’. This model, developed by Lave and Wenger (1991), suggests that in working together students develop interdependence which enhances the experience and builds greater knowledge. Simon Nelson, Head of FutureLearn, is confident that their MOOC platform, which integrates content with collaboration, supports this approach to learning: “We believe that the learning comes from the discussion. Nearly 40% of our learners are actively contributing” (Wilby, 2014). This has also been the experience at Manchester Metropolitan University where an ‘open collaboration module’ has been designed along the theme of a MOOC with additional workshops. Here feedback from participants suggested that small groups work best, helping them to feel a part of a community and thus supporting an enhanced learning experience (Nerantzis, 2014). If learning is best achieved by being social, and smaller groups facilitate that aspect, then large-scale MOOCs with thousands of students are unlikely to ever achieve the same outcome.

The ‘lecturer’ is a key component of any educational experience, whether you see the role as a participant within a community of learners, or as the sage dispensing their knowledge. This is as true in a distance learning context as it is in the classroom. As Rovai (2007, p79) points out “The online instructor plays a crucial role in maintaining and sustaining students’ motivational levels by planning structures and facilitating interpersonal events”.

Distance learners can find the entire learning experience isolating, so support is critical. In a MOOC, with hundreds of students, it is unlikely that this kind of learning support is possible. Manchester Metropolitan MOOCs averaged 91 students with a tutor for every 32 of them (Nerantzis, 2014), but if courses are truly ‘Massive’ then HEIs won’t be able to provide that tutor to student ratio. This suggests that the amount and...
quality of support may be affected, and as Laurillard (2014), p29) suggests “The simple fact is that a course format that copes with large numbers by relying on peer support and assessment is not an under-graduate education”.

After collaboration and support, a third pedagogic element provides challenge to MOOC providers: assessment. The scale of MOOCs means that traditional instructor-led marking is impractical and so other solutions have been implemented. Downes (2013) explains that assessment usually falls into two areas: automated marking (whether multiple-choice questions (MCQs) or essays), and peer assessment. Computer marking of MCQs is a well-established and easily achieved format, whilst automated essay marking is a little more complex, and not always entirely successful. However, peer assessment comes under criticism for being “the blind leading the blind”, affecting the quality of feedback given to students (Downes, 2013), and open to plagiarism abuse (Cronenweth, 2012).

Whilst there are issues relating to the quality of experiences in MOOC delivery, compared to what is typically delivered in HEIs, there are some clear lessons to be learned. Ifs University College could consider the benefits of enhanced collaboration in its own programmes, designing learning activities, experiences, and support that sustain a more interdependent community of learners. Additionally they might consider analysing the assessment methodologies used in MOOCs to support different delivery channels as well as pedagogic practice.

In looking at these three areas, we can conclude that MOOCs may disrupt the educational experience. Some MOOCs have demonstrated that they can support a more collaborative approach to learning, engender a lecturer/tutor relationship to enhance support, and provide opportunities to consider different assessment methodologies. In each of these areas there are pitfalls, and evidence suggests that it is hard to design good-quality learning experiences on such a massive scale. So whilst MOOCs may provide education to more people, the quality of that education may be poorer for it. Dore (1997) takes this argument further and asks whether it benefits society or the individual to provide a lower-quality experience to many rather than a high-quality education to few. However, regardless of benefit, lessons in disruption have consistently proved that a technology that starts as a poor-quality cousin may become of benefit, lessons in disruption have consistently proved that a technology that starts as a poor-quality cousin may become.

“Teachers are probably recognised as ‘great’ when they are intensely involved in communities of practice in which their identities are changing with respect to (other learners) through their interdependent activities”.

Staff involved in MOOCs at the University of London spent at least 10 hours a week preparing for and managing their courses, although this is likely to reduce in intensity with subsequent sessions (Grainger, 2013). As well as needing time to develop and to run these courses, academics may well need to develop their own knowledge and skills to participate. Even at their simplest level, MOOCs use videos to replace lectures, forum activities to replace workshops, collaboration, and quizzes and peer review to replace traditional assessment methodologies. Good design is essential and academics may need to develop their knowledge of underpinning pedagogies alongside technical competencies.

Once a MOOC has been created there are certain cost-savings in using the content again. This has an obvious attraction to resource-stretched HEIs. Some critics suggest that HEIs are investing in this technology as a route to cost-cutting. Vardi (2012) concludes that “the enormous buzz about MOOCs is not due to the technology’s intrinsic educational value, but to the seductive possibility of lower costs”.

Bady (2013) too is critical of what he sees as an investment in a solution based on budget cuts, where the process of education does not expand and develop to “keep intellectual enquiry moving forward”. However, other evidence suggests that many HEIs are using MOOCs to address changing pedagogic models, student demands, and evolving technologies (Grainger, 2013; Speight, 2014). What seems clear is that different educational institutions have different motivations in their use of MOOCs, and further evidence is needed to ascertain whether those motivations may impact the experience for the students or the disruptive nature of the technology.

MOOCs are losing money according to Dellarocas and Van Alstyne (2013) who are critical of the current business models and suggest that since they are, in the US at least, subsidised by venture capitalists, new pricing structures need to be identified. They suggest that this money could come from state subsidies, students, employers or sponsors. Kim (2014) argues that this may only be true in terms of platform providers, and that R&D departments in HEIs are experimenting to develop sustainable, long-term, open and scaled learning.

It seems clear that with such notable development costs, and minimum income generation, HEIs need to develop sustainable pricing structures. Grainger (2013) reports that each MOOC at the University of London cost £20,000 to develop. No income is reported and any monies received from completers’ certificates (where students pay to receive a certificate) are likely to be negligible. If MOOCs are to achieve any real transformation of the educational landscape they will need to “develop revenue models that will make the concept self-sustaining” (Hill, 2012, p.94).

If MOOCs are going to be expensive to develop and operate, and be free at source, HEIs will need to find other ways to offset their costs. It may be simply part of their charitable aims to provide education to the community, or, as Grainger (2013)
This approach comes with its own uncertainties. Marshall (2014) suggests that when experimenting with new technologies in education, academics need to be conscious of their ethical responsibilities. He holds concerns that HEIs might be developing MOOCs for reasons other than education, perhaps some institutional goal, which would go against their responsibilities in relation to a ‘duty of care’ of individuals, and in enhancing the society we live in. Certainly the industry should be aware that poor implementation of MOOCs could have ethical implications which in turn could damage an individual institution or the industry as a whole.

“MOOCs could redefine education, but if they are conducted unethically… our failures to hold high standards will tarnish any other attempt to do so in the future.”

Recognising the increasing importance of MOOCs on the educational landscape the Quality Assurance Agency (QAA), the UK body responsible for standards in HE, have communicated their interest in observing developments and supporting HEIs as they exploit this technology. That said, they also acknowledge the limitations of their remit and that, since MOOCs are usually non-credit bearing, they will not be scrutinised (QAA, 2014). This inevitably indicates that poor quality experiences could go unnoticed. Parr (2014) suggests that “a lack of quality control by [MOOC providers] is leading to a poor quality experience for students, and leaving universities at risk of reputational damage”.

It seems clear that those HEIs which choose to invest in MOOCs may be disrupted and are likely to need to review their business models. Those that don’t invest may well discover that the MOOC model redefines students’ expectations and leads to them demanding changes in existing pedagogies and methods of delivery. Academic staff will need to be given time to develop and teach these courses, and to enhance their own skills and knowledge. Institutions like ifs University College, who have a mature distance learning proposition, are more likely to have experienced staff to develop the technical content that MOOCs utilise.

If MOOCs are to remain free to students, HEIs will need to use the technology as a cost-saving, market-generating, or charitable initiative, although Laurillard (2014) suggests an alternative. She suggests that given the resourcing needed to provide quality learning experiences, consideration should be given to re-focusing MOOCs as short online courses that have a price attached, halting the myth that online is free. The requirement for some sort of charge to study becomes even more important for the smaller HEI who is less likely to be able to experiment or to swallow the costs. However, this then suggests that the course developed is simply online distance learning, something that ifs University College, and other providers already do quite competently.

Conclusions

“The future of universities in a digital world is a mystery to which nobody can give a confident answer” (Wilby, 2014)

Many educators and observers are convinced that MOOCs will disrupt the higher education landscape, whilst others see them as just part of the trend in online learning and towards more open learning (Kim, 2014). This project has observed that MOOCs do have the potential to disrupt current practice, but that more time is needed to observe how impactful this disruption might be in relation to students, HEIs and learning pedagogies.

Much of the debate around disruption focusses on quality: asking whether a MOOC can offer the high-quality experience that traditional higher education delivers. It seems clear that the size of the average student cohort, and the bearing that has on educational experience, alongside the current business models means that MOOCs cannot deliver a similar experience to that of a traditional HE programme. However, MOOCs do offer interesting insights into new opportunities that HEIs might adapt for their own programmes, and as such could be viewed more as a sustaining, rather than disruptive, innovation. As Mapstone, Buitendijk and Wiberg (2014, p6) explain, the real challenge for HEIs is to provide good-quality blended learning environments for students which may not change pedagogies but could change the way they teach: where “digital is used [to] bring the most added value or enhancement”.

The real question that seems as yet unanswered is whether MOOCs might actually disrupt the entire higher educational environment to the point where a generation of learners, facing the increasing costs of a university education, will reject the traditional delivery methods and educate via MOOCs. In other words, might a situation arise where ‘free’, and the flexibility to dip in and out of courses, becomes a compelling argument, able to triumph over the traditional qualities that HEIs hold so dear.

This study is limited in size and further collation and analysis of the literature is needed to draw any firm conclusions. Deeper research into each of the three areas of potential disruption is also recommended, as is a consideration of other elements which might support the argument that MOOCs are a technology likely to fundamentally change the way people undertake their higher education.

Those limitations aside, it is clear that MOOCs have opened the debate into who should have access to higher education, how that access is delivered, and the effectiveness of the teaching. Even if HEIs don’t themselves experiment with MOOCs, it is essential that they consider the lessons learned and adapt their own programmes accordingly. It is likely that students will increasingly be demanding multi-media learning experiences and flexible programme design.

Smaller HEIs like ifs University College should consider how some of the pedagogies might be applied to their own students, whether an investment in the increased development of multi-media content would be effective, and whether a MOOC-like initiative might support a CPD offering. Critically, all HEIs need reports, an opportunity to trial new pedagogies and to market their other qualifications.
to be able to adapt and use lessons learned from MOOCs, blending traditional methods alongside evolving practice, to springboard the development of more cost-effective and high-quality learning experiences.

Whether MOOCs are the disruptive force that some feel will change the educational landscape, or whether they are an enabling tool, supporting trends towards blended learning, distance learning and open learning, they do seem to have one encouraging characteristic: they have: “got people talking about and focussing on teaching” (Professor Mapstone, pro-vice Chancellor of the University of Oxford, reported by Parr, 2014). 

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Financial Capability

A paper exploring the impact of experiential learning on the teaching of financial capability

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Abstract

This research study considers how experiential learning can give purpose and direction to the teaching of financial capability in secondary schools and examines the challenges of teaching this life skill in a cross-curriculum environment. The research undertaken was primary and qualitative, and involved semi-structured interviews with teachers, and senior figures in education policy and financial education. Among the research themes explored were that financial capability skills involve managing money and making choices, and that the teaching and learning needed to be both exploratory and formative.

Introduction

Financial capability can be defined as developing the skills and confidence to assess financial risks and to be able to make informed financial decisions. Financial capability skills can help to reduce money related stress and its effect on health, relationships and sense of wellbeing (Taking Control, 2013). Recent surveys have shown that young people have limited financial capability skills (ifs University College, 2013 and OECD, 2014).

Children and young adults (16–25 year olds) are likely to be exposed to more financial risks including complex and sophisticated financial products than their parents (OECD, 2014). New technology means young people gain access to and are offered financial services, such as Roosterbank, at a younger age (Goodman, 2014). This has been accompanied by a general trend of shifting risk from governments and employers to the individual. An example in the UK has been changes in pension schemes from final salary to defined contribution schemes and pension reforms granting greater choice to the individual (HM Treasury, 2014).

Financial Capability will be on the national curriculum for schools in England from September 2014 to be taught as a cross-curriculum subject, with financial calculations to be taught in Maths and all other aspects within Citizenship (APPG on Financial Education for Young People, 2013).

Literature review

This research study draws on the seminal work of Kolb (1984), who provides a framework to review the process of experiential learning. Kolb’s (1984) ideas on the distinctive nature of experiential learning influenced Sen (1993) to develop the notion of competencies and this led Johnson and Sherraden (2007) to their definition of financial capability. This literature review draws on the research of Whitty et al (1994) who examined the obstacles to teaching life skills as a cross-curriculum subject. This review also highlights how in response to the financial crisis along with various mis-selling scandals and economic upheaval, financial capability has gained prominence among government bodies and the banking industry, whereas the academic world has currently shown less interest.

Kolb (1984) believes that experiential learning offers a holistic integrative perspective on learning, and involves combining experience, perception, cognition and behaviour. Kolb advocates Deweys’s (1938) model of experiential learning where: “...The impulse of experience gives ideas their moving force and ideas give direction to learning.” Kolb asserts that experiential learning rests on a different philosophical and epistemological base from behaviorist theories of learning (which concentrate on the attainment of set learning outcomes). Experiential learning is based on the premise that ideas are not fixed but rather they are formed and re-formed through experience. This view accords with Bruner (1966) “... Knowledge is a process, not a product.”

Johnson and Sherraden (2007) believe that participation in economic life requires both financial knowledge and competencies, together with an ability to act on that knowledge, and the opportunity to act. They advocate pedagogical methods that enable students to practise and gain these competencies, which they define as financial capability. Their definition of financial capability is based on Sen (1993): “... the freedom that a person has to lead one kind of life or another”. They propose that the teaching of financial capability should focus on experiential learning and not be isolated from real life experience (Harris et al, 1989). They explain how experiential learning allows students to test their understanding and explore their own developing ideas through interaction with the environment (Kolb, 1984). They highlight the research of Pliner et al, (1996) which shows how children given an allowance learn how to handle money more responsibly and become more sophisticated money managers.

These skills have been assessed by the OECD’s PISA programme 2012, which examined the financial literacy of half a million 15-year-old children in 13 countries. It found that only 10% of students were able to analyse complex financial products, while only 15% could make simple decisions about everyday spending. The study revealed minimal correlation between times spent teaching financial literacy and students’ level of financial capability. By contrast it found strong correlation between Maths skills and financial literacy and the impact of direct experience, where those with a bank account scored higher than those without. Marcouse (2014) argues that these tests place too much emphasis on Maths skills and recommends that the PISA tests should examine a much broader range of issues such as awareness of the causes of past problems and scandals, and of the fundamental problem of asymmetric information.

The literature review also considered the likely obstacles in the teaching of life skills through a cross-curriculum environment. Whitty et al’s (1994) review of the implementation of five cross-curriculum themes (as part of the 1988 Education Reform Act (ERA)) examined the idea that in order for these five themes, which were all linked to life skills, to become quasi-subjects
Research methodology

The research methodology was based on grounded analysis using an inductive approach with nine people taking part in semi-structured interviews (Easterby-Smith et al, 2012). Transcripts of all of these interviews were produced and these led to the emergence of key themes. A synopsis of these key themes together with other data is set out in this paper.

The grounded analysis follows a seven-step process in accordance with grounded theory. As recommended by Glaser (1978) it commenced with familiarisation to help define the focus area for this research study. This was followed by reflection to review and in part redefine the focus area, a challenging task given the rich source of data. It involved evaluation and critique to compare the data to the findings in the literature review. This led to conceptualisation and followed Charmaz’s (2006) approach of treating the main questions as codes to help keep the process open. The next step was to catalogue these into focused codes, which were labelled as key themes. As further interviews were held, this led to a re-coding of some of the themes. The next step was to link these themes to develop theoretical codes to gain a more holistic viewpoint. As the process and interviews progressed draft versions of the research paper were shared with colleagues and a personal tutor allowing for the argument and supporting data to be scrutinised and to seek verification. The final step was to re-evaluate the findings in the light of the feedback comments and to remain open to repeating this seven-step process.

Each interview lasted between thirty minutes to one hour. The interviewees included five teachers from schools in England and Northern Ireland (academy, grammar and independent) who have responsibility for their schools’ financial capability programme and senior figures in both financial education and education policy with an interest in this area.

This paper was based on primary qualitative research and enables this work to be distinguished from other pieces of research. The interviews gave access to a rich source of primary qualitative data, which enabled deeper analysis to be undertaken. This exploratory research has accessed new data to explore what has been going on in the teaching of financial capability skills to children and young adults and follows an inductive rather than deductive approach (Fereday and Muir-Cochrane, 2006).

The author acknowledges that there are other ways of undertaking the chosen research, notably a more quantitative approach involving a questionnaire for a wider sample of schools; however, taking into account the constraints of this research – notably word count and time – and that this is a nascent area for many schools, it led to the adoption of an exploratory approach.

The research

The primary research into the impact of experiential learning in the teaching of financial capability has been grouped under main headings, which are linked to the interview questions. The interview responses have been sub-grouped into key themes and perspectives.

What does financial capability mean?

i) Ability to manage money and understand the value of money. This involves students being able to understand financial statements, wages, bank accounts, savings and household budgeting. Students are part of the consumer society – it is vital they understand about money and finance. At the lowest level of understanding it is about basic processes in the twenty-first-century world, so they are ready to take an active role in society and become independent. Many students are aware of buzz terms but they do not understand what they mean, for example teaser rates. It involves Maths skills of estimation. It also involves considering more philosophical issues such as that money is not the be all and end all.

ii) Making choices and developing life skills

According to the OECD (2014) financial capability is an essential
life skill as important as reading and writing in the consumer society of today, matters that affect lives and the ability to make sensible decisions. At college or university they will have debts and will need to learn how to manage these. This relates to the debate with Ofsted about the Trojan horse investigation on what life skills children need, financial capability being one aspect of this. We also need to be sensitive to the issues of religion, such as savings and interest for Muslim children.

This data leads to the conclusion that if pupils leave school without developing financial capability skills they are more likely to become financially vulnerable young adults.

What teaching methods/approaches should be used?

Exploratory and formatative

Playing games, for example a stock market game, appeals to many students as it introduces competition. An exploratory approach encourages debate; a good source of material is the Money Charity with publications such as “How does debt become a problem?” Get students to lead an assembly on finance matters. Two distinct aspects, arithmetical teaches Maths skills for example mortgage rates and simple banking calculations. However, there is also the values aspect; education is too technocratic and reductionist. There is a need to develop the whole person, for example developing understanding of why it is important to pay tax in a social context. Education developed out of moral philosophy and this aspect has been lost.

The data leads to the finding that for teaching of financial capability to be effective it needs to be challenging and thought provoking.

How important is experiential learning and how might this be incorporated?

It is the most important aspect of teaching financial capability. It is the only way to teach the subject effectively. A great example of this is Citrus Saturday (2014) programme run by UCL Enterprise. Year 11 onwards students have lunch in town and have to manage their own cash and make decisions. It is important but we need to be sensitive to different experiences. Case studies allow pupils to look at practical examples through role-play or real banking, such as setting up enterprises and using either real money or token currencies.

In practice a range of approaches should be used

As part of Applied Maths i.e. an area that relates to the real world and make sense to use it. Computer modelling in groups allows pupils to examine the decisions they make and the consequences of their own decisions. A good approach is through fun-based activities at the end of term with the emphasis on being informative.

The data leads to the finding that a diverse range of activities is needed to help broaden pupils’ awareness and understanding.

How will students be able to connect learning in Maths and Citizenship?

i) Maths led
Co-ordination is a big challenge. Identify skills used in Maths and help students make links. There is a place for following ethics and cultural aspects within Maths, but some schools may feel it is better to split the two. There is a danger that the attempt develops into Applied Maths or becomes boring, i.e. a mechanical exercise, and pupils perceive it is not important.

ii) Financial capability led approach will help some pupils to engage with Maths
Observed examples of students who do not like Maths – so tended to misbehave. Exercises based on financial capability helped them to engage with Maths.

iii) New mindset
Making the connections in students’ heads is very different to educators setting this out on paper. The way to engage them is to have activities that affect young people. For example a values-driven approach to consider which is the best training shoe, might choose Nike and break down the cost into marketing, image, branding and quality of the product. This allows students to legitimately buy a less well-known brand, and give legitimacy to what could be perceived as an ‘inferior product’. Another example is perfectly working old TVs being thrown away, while the financially vulnerable buy flat-screen TVs on hire purchase. There is a need to help arm people so they can make rational decisions and be shopper aware. These examples reflect the pressure of modern capitalism.

The data leads to the conclusion that when combining numeracy with other aspects of financial capability the examples chosen need to be relevant and of interest to pupils.

What training and support needs to be offered

i) Varied approach likely ranging from low priority to schools that draw on the experience and skills of staff
In an ideal world Economics and Business Studies teachers should teach Financial Capability as they have a deeper understanding. If Citizenship or Maths teachers teach it, then the key is access to good resources such as portfolio worksheets, handouts, games and videos. In practice, look at the skills needed and match these to the skills of the teachers. Courses are all well and good but they then require teachers to have the passion and time to disseminate the key ideas within the school. A contrasting view is that no direct training is needed – given that it is such a small part of the syllabus. At the level at which teaching takes place, there is an assumption that there is awareness among teachers of how financial issues affect people. If taught in PSHE in form periods, it may be perceived as low status; i.e. if it is not examined then it is not important. It needs activities that are relevant and fun to gain momentum.

ii) More outward approach drawing on external training and CPD
Financial capability can involve complex situations and many teachers may feel ill equipped to explain these from their own experiences. For example mobile phone rates and tariffs – it is hard for someone with a Maths degree to convert these into a format to allow for meaningful comparisons. A collaborative approach may be more effective and involves organisations with experience in delivery of financial education such as ifs University College and the Youth Financial Capability Group who work with Money Advice Service and PFEG. The ifs also plans to offer the Post Graduate Certificate in Teaching Financial Capability from September 2015.
iii) Call for high-quality materials
Good-quality materials – which can be tailored for different age groups and academic profiles is key. The key is to make teachers’ lives easier. By making the materials and approach more uniform, it will help to ensure that the subject is taught consistently.

The data leads to the finding of a diversity of opinion on the benefits of training and external support.

Should financial capability be assessed?
No camp – evokes strong feelings
Categorically no. Pupils are assessed so much already – this is a life skill. Ultimately school can give guidelines, but when it matters they need to have the ability to work things out for themselves. The boys tend to be very outcome driven: if they do not think it will count for anything, they will not put any effort. The values element – the forces and pressures part – is very hard to assess and shouldn’t be. Once start assessing then a subject gets taught to the assessment. It is more important to assess the quality of teaching and learning, as there is too much assessment of students already.

Yes camp – assessment needs to be more open ended
It is very difficult not to assess if you want something to be taken seriously. It is possible to assess the mathematical calculations. Other aspects should not be assessed in the form of a traditional exam, but should be more open ended to encourage discussion. A better way forward might be project based, combined with a portfolio of evidence for students to take with them through the school – this is a similar idea to BTEC. A good example of this is Asdan Level 3 in Personal Effectiveness.

The data leads to the recommendation for assessment to be more informal and primarily activity based.

What are the main obstacles?

i) Teachers’ lack of knowledge, confidence and attitude
Teachers are just ordinary people who can be scared or afraid of being placed in a hard or unfamiliar situation. When they move outside of the basics in terms of knowledge and skills, teachers can get out of their comfort zone. The amount of content delivered depends on the attitude of staff. Some might view financial capability as “wishy-washy” as it is not being directly assessed; for example, they might query whether time would be better spent teaching simultaneous equations which are certain to be examined.

ii) Out-of-date learning materials
Youth culture demands up-to-date resources. If as is the case the main textbook remains out of date (for example refers to the main method of making payments as using a cheque book), this can put students off. For example Tesco no longer accept cheques.

iii) Lack of time and good-quality learning materials
Well-prepared materials will help to motivate staff who will find the subject area more interesting to teach – they may feel they are learning something as well. The challenge is that the curriculum is set up so that teachers feel pressured to try and fit in as much as they can. Curriculum issue of pressure on timetable if not assessed is not valuable. The attitude towards PSHE can be that they have to do it, but the subject might not generate any meaningful commitment, as it is not valued by teachers and students. Students tend to compartmentalise life – the challenge for teachers is to help them break down these barriers.

iv) Impact of larger class sizes and budget cuts means less flexibility
Pressure from budget cuts and lower staff numbers has led to larger class sizes with less freedom to do things outside the box. The level of content is an issue: teachers are always fearful of spending too much time on something slightly different: i.e. sacrificing time that could have been spent on other elements.

v) Minister for Education undervalues practical skills and cross-subject skills
Michael Gove, despite what he might say, understands the curriculum in a way that makes it difficult for him to understand the importance of practical skills and cross-subject skills. It is a case of “double think” going on and this reinforces the likely outcome in many schools that life skills are seen as low status. The national curriculum is too cumbersome.

The data leads to the finding that the principal obstacles relate to teachers’ knowledge, confidence and attitude and to lack of quality materials.

Measures to overcome obstacles including monitoring and assessment

i) Raising the status of PSHE/Citizenship
The status of PSHE, in resource terms and accreditation, needs to be raised. For this to happen, it will require political and professional buy in. Employers are not sure what they want and HE has too much focus on academic attainment. It could be argued that FE colleges went too far with life skills and it has now swung too far in the other direction. It should not be seen as an “either or”; it should be both. Lobbying is needed to increase its importance. Ofsted’s keen eye is needed to make it happen. The fact that it is now on the national curriculum is an important development.

ii) Collaboration and CPD
Citizenship Foundation is a good resource which provides case studies and other resources. There is also the PSE Association. Providers like ifs need to come within an umbrella organisation making it easier for schools to find and access key resources. Schools get a lot of requests from external companies, such as banks, to teach financial skills to the students; however, schools tend to adopt a cautious approach to outside groups as they are often not good presenters to the students. CPD should be provided to those with whole-school responsibility. A good idea for inset days is to partner with other schools to help share and incorporate best practice.

iii) Adaptable given time constraints
It could be taught in tutor groups with 30-minute maximum sessions. This needs to be adaptable as lessons may get shortened. Responses revealed that the amount of teaching time varies considerably, with a typical range of between one and seven hours per school year.

iv) Observations and student feedback
Citizenship classes will have lesson observations to see if lessons...
are being delivered properly. It is not realistic to expect this initiative to lead to a huge change in behaviour within two to three years. Citizenship issues covered are reported back annually to parents with respect to what they have covered, but this does not comment on the level of engagement and understanding of each pupil. It is always helpful to seek informal feedback in classes by assessing students’ level of engagement.

v) External reviews and reports

Ofsted needs to be given specific remit to look at this. This was the principal challenge that **ifs** presented to Justin Tomlinson of APPG. There also needs to be much greater focus on careers education and some sort of accreditation perhaps by the likes of **ifs** or Asdan. In the current world of education unless it falls within the area of inspection and assessment it will not get on the priority list. **ifs** will carry on with the Young People’s Money Index.

The data leads to the recommendation that Ofsted should make financial capability a focus area and that external support needs to be well co-ordinated.

Conclusions, findings and recommendations

This research study has examined the impact of experiential learning in the teaching of financial capability in secondary schools. The conclusions for this research are that students leaving school without financial capability skills are more likely to become financially vulnerable young adults. When teaching concepts that involve numeracy along with other aspects of financial capability, the examples chosen need to be relevant and of interest to students.

The findings are that teaching of financial capability needs to be challenging and diverse to help broaden students’ awareness and learning opportunities. There is likely to be a wide disparity in approaches to training and external support, ranging from schools that embrace this to others where this is seen as a low priority. The principal obstacles to overcome relate to teachers’ knowledge, confidence and attitude, together with a lack of quality materials.

The recommendations are for assessment to be activity based to allow students to obtain immediate feedback on their approach and decision-making skills. Ofsted should make financial capability a focus area and, where schools are failing to deliver good teaching and learning, well-co-ordinated external support should be provided to rectify this.

Areas for future research

This research has highlighted differences of opinion on whether this life skill should be assessed. It is therefore recommended that research be undertaken into different methods of assessment and how these affect the teaching of financial capability. It is also recommended that research be undertaken into the monitoring and external assessment of the pedagogy and learning of financial capability.

Final thoughts

Recent scandals, such as PPI and interest rate swap mis-selling, have been catastrophic for many thousands of families and small businesses, and have led to a compensation bill for the banking industry of over £20bn. At the end of the day banks, whether deliberately or unintentionally, exploited the fact that their customers did not have the financial capability skills to independently assess the financial risks of these products and were unable to make informed decisions. Financial institutions will always have an incentive not to provide perfect information when endeavouring to maximise the return for their shareholders. The place to start addressing the nation’s financial capability skill gap and to help prevent future scandals is in our schools.

Limitations

Given that financial capability only commenced on the national curriculum in September 2014, it is premature to make any assessment on the quality of the pedagogy and learning of this life skill in schools. Ideally it would have been helpful to interview a larger number of schools encompassing a broader range of backgrounds across the country. Given time constraints this qualitative research has been limited to seven interviews involving nine interviewees.
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Independent learning at a distance: a collaborative experience for part-time professionals

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Description

This part-time MSc in ‘Banking Practice and Management’ is a selective, wholly online course delivered via a Moodle-based virtual learning environment (VLE). At the heart of the MSc are asynchronous discussion forums, synchronous online webinars and, for those students able to commit to regular attendance in London, the option of face-to-face workshops. The programme aims to be as flexible and collaborative as possible, while simultaneously maintaining a high degree of structure to support students’ effective management of their own workload and eliminating the sense of isolation that can sometimes be experienced by distance learners.

All current MSc in Banking Practice and Management students hold full-time roles in the financial industry. The students aspire to rise to senior management positions in the sector by broadening and deepening their interest in, and existing knowledge of, financial services beyond their own institutions. This objective is even more prevalent in the aftermath of global events of the last seven years whereby the uncertainty and constant fluidity of the banking industry demands that its managers explicitly evidence strengthened competencies and academic credentials. The students all work in the same sector, are driven by similar motivations to study and are thus bound together by commonalities. Yet, their backgrounds are varied in terms of individual organisations, roles and nationalities, with finance professionals from locations as widespread as the UK, Africa, the Middle East and the Caribbean. Each learner is, therefore, able to benefit from the diverse knowledge and experience of his or her peers in an area of relevance to the group as a whole through the collaborative design of the course.

The programme’s central resource is the online study guide, available via the course VLE. Updated prior to each delivery to ensure ongoing currency and industry relevance of the syllabus content, the study guide takes students week-by-week through every module. The guide provides essential contextual background, directs students to both required and optional readings and suggests a number of activities to support and deepen their understanding.

The study guide helps students to organise their work and manage their time by taking them through the module and the readings systematically, supporting the students’ broadening interests and engagement with the wider debates and literature. As students work their way through the study guide, they are directed to read chapters from books or articles. These are normally available through the University’s online library, ifs KnowledgeBank, or are freely available via the Internet. The readings are selected to offer a different (and sometimes intentionally contradictory) perspective on industry issues.

Students may be invited to weigh up both sides of an argument and come to their own reasoned view.

The online study guide activities help students engage in personal learning by drawing on their own professional experience and making links between that and the topic they are studying. However, rather than students simply learning in isolation, it is critical that ‘independent learning’ also encourages collaboration. To this end, the study guide activities involve students reflecting on and evaluating key resources/ readins (e.g. academic, industry or government reports, or media freely available), sharing those critiques, reflections and insights with their peers and responding (critically but constructively) to other students’ comments. The guide also invites students to make short reflections in a blog or journal (which they are encouraged to share with the group and which, on occasions, contribute towards the programme’s summative assessment) and link these to the reading in which they have engaged. Finally, the guide asks them to research particular topics further (either using ifs KnowledgeBank or in students’ own organisations) and to summarise their findings for the group.

A core pedagogic ethos of the course is the formation of a close-knit, interactive and supportive learning environment, with strategies for community building embedded throughout the programme design. The asynchronous discussion forums are very much seen as a ‘safe’ environment where students can engage in debate centred on the study guide activities, make mistakes and identify areas of challenge or weakness, without fear of being judged. Frequently, students will support their peers, perhaps by suggesting additional reading which may provide clarification on a particular point, highlighting a topical news item or drawing on their own professional experience. Both the face-to-face workshops and webinars also provide invaluable opportunities to engage and collaborate with the rest of the group and build on students’ own independent learning; the workshops, in particular, allow students to gain additional insights through industry lectures, debates and discussions, often delivered by guest speakers from the financial services industry.

Finally, staff are key to ensuring a successful independent learning experience. Emphasis is placed on the blend of academic and ‘real life’ industry input into every programme, and the MSc in Banking Practice and Management is no exception. Academic module teams thus seek to develop students’ theoretical knowledge and academic skills by drawing on each individual’s professional expertise; questioning, encouraging and challenging students while providing ongoing feedback on their progress (the latter being critical to encouraging student achievement).

Although the above example of independent learning relates to postgraduate study, it is equally relevant to part-time professionals studying at undergraduate level. The Quality Assurance Agency for Higher Education’s (QAA) level six qualification descriptors1 call for undergraduate students to, inter alia, demonstrate the ability to devise and sustain arguments, to show an appreciation of uncertainty, ambiguity and limits of knowledge, and to manage their own learning, making use of scholarly reviews and primary sources. Each of these can undoubtedly be attained by an appropriately designed independent-learning model such as the one described above. For this to work, it is essential to ‘know your student’ and put the characteristics and needs of the learning group at the heart of the course design.

1 This paper was published in the Compendium of effective practice in directed independent learning, QAA and The Higher Education Academy, March 2015 https://www.heacademy.ac.uk/node/10476 [Accessed 7 May 2015]

Effectiveness

The programme’s main strength is that students are able to draw on the diversity, depth and breadth of the group as a whole, in terms of both professional and academic experience, in order to scaffold their own independent learning. One student noted that:

*ifs University College* attracts an extremely high calibre of students. As such you can learn masses from each other. On my course there is a head of credit, a CEO, a head of risk, an investment banker – all from different organisations. The learning opportunities are incredible.

Listening to student feedback is at the heart of this programme, and as one student observed:

A major plus to this course is the small cohort and the fact that *ifs University College* really do listen to their students. It is guaranteed that the course you will be studying has been shaped and moulded by those that have gone before you; an educational environment like none I have experienced before.

Since the MSc in Banking Practice and Management was launched in 2011, student feedback has informed, at all stages, the ongoing enhancement of the programme. For example, online webinars were introduced in 2013 responding to student feedback that the inclusion of additional synchronous discussions within the programme would support the embedding of various concepts and provide extra collaborative opportunities among the group. Webinars are recorded for students unable to attend in ‘real time’.

Regarding weakness, the limited availability of study time is undoubtedly the group’s biggest barrier, with the students’ professional roles increasingly demanding longer hours and the meeting of urgent deadlines. Furthermore, many of the students have family commitments meaning that a strong personal support network at home and work is vital. The programme is thus designed to help students fit their study around their work and other life commitments, with the study guide and asynchronous discussion forums, in particular, enabling students to learn independently and at their own pace, while still encouraging that sense of feeling ‘connected’.

Promotion

While not explicitly employing the term ‘independent learning’, the ethos of independent learning is communicated to students. From day one of the programme, students are asked to reflect on the critical and evaluative skills that are expected of them at postgraduate level and provided with guidance on how to develop academic and study skills such as time planning, reading critically, note-taking, online searching and referencing. Tailored online webinars and workshop sessions led by both the programme team and experts from *ifs University College’s* wider academic community support students to build these techniques, which promote successful independent learning.

The programme’s online discussion forums offer a strong ‘scaffold’ for students. This support is initially driven by the module lecturer(s). However, as the course progresses and students develop their own self-confidence – as well as trust in and a rapport with their peers – students increasingly take responsibility for their own learning by drawing on input provided by the group as a whole. Online blogging forms part of the summative assessment for two modules. For example, in Bank Risk Management and Regulation, students work independently to find information relating to global and national events taking place in the financial regulatory environment, with the blog bringing together those threads of investigation and acting as a record of students’ thinking and insights. At three stages during this 15-week module, lecturers give students written formative feedback on their progress, with ongoing commentary from the student group considered equally valuable in encouraging independent learning.

The 15,000-word dissertation – the final element of the MSc programme – is the culmination of the students’ independent learning ‘journey’. The dissertation provides students with the opportunity to produce an individual piece of research in an area of their choice in the field of banking and financial services, under the guidance of an academic supervisor. Partway through the dissertation period, students are invited to orally present their research to peers and the programme team, thereby sharing the challenges and successes of their own independent efforts. Dissertations achieving a distinction are published via *ifs University College’s* website and/or *ifs KnowledgeBank* (with the exception of any that are confidentially sensitive), with some students presenting the research to their employers (who have, in the majority of cases, sponsored participation in the study programme).