Academic Buoyancy In Second Level Schools: Insights From Ireland

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Abstract

Academic Buoyancy has been described as a students' ability to successfully navigate the everyday challenges that are typical of school life. This project sought to ascertain whether there are distinguishing features of this buoyancy that can be identified in young people in the Irish second level context, and if so, what these were. Additionally, this research investigated whether the concept of buoyancy can help understand the decisions to stay in school/leave school early, against a backdrop of a persistent disparity in school completion rates between young people of advantaged and disadvantaged backgrounds in Ireland. A mixed methods approach was utilised to achieve these aims. Ethnographic methods were employed in two case study schools comprising 31 students. Buoyant students displayed a noteworthy ability to examine their own experiences, and contrast them with others in society. The characteristics of this evident buoyancy were termed: “Confidence”, “Control”, “Planning”, “Autonomy” and “Persistence”, and these became the focus of the development of the Student Buoyancy Instrument (SBI). The SBI questionnaire allowed students to reflect on their buoyancy, and was administered to 581 students in 17 Irish second level schools. The data obtained from this cohort suggested that the instrument is both valid and reliable, and displays some qualified predictive validity. The students who reported themselves as least likely to leave school early, scored significantly higher on the Confidence, Planning and Persistence measures. It is recommended that refinement and wider deployment of the SBI may yield greater insights the buoyancy of students in school – once the instrument is deployed responsibility in a way which is affirming for young people’s competencies, rather than to negatively label deficiency.

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1. Introduction

Social class or socio-economic inequalities remain a feature of education systems throughout the world. In thinking about and researching such inequalities it is common to see a focus on the “risk” factors which are associated with low educational attainment. In the most recent Irish Programme for Government (Ireland, 2011), for example, there are references to students “at-risk” of early school leaving. Such references to risk are also oftentimes found in academic literature on early school leaving (such as Byrne and Smyth 2010). Indeed, Kellaghan et al. (1995) has suggested that “at-risk” and “educational disadvantage” are oftentimes used interchangeably. Factors correlated with low educational attainment are often used as a way of identifying students who are “at-risk” in order that these students can be targeted through initiatives (such as additional resources or alternative curricula). In Ireland, for example, students are identified as being at risk if they are experiencing a number of different conditions, including living within particular impoverished communities, having a parent who is unemployed, or being in a family in receipt of state assistance with respect to medical care. Additional resources are then provided to schools which educate such “at risk” students (Tormey, 2007).

This concept of “risk” is based on an epidemiological model borrowed from the health sciences. However, within the health sciences there has long been an effort to re-think the notion of risk with reference to its counterpart – resilience. The concept of resilience originated with psychological studies of schizophrenia. It was notable that schizophrenics that were able to maintain a working life and other relationships prior to suffering from the disease, tended to suffer from the mildest forms of the disease (Masten et al 1990). This suggested a need to focus on the factors which helped to insulate and protect those otherwise at risk. This – more positive – repositioning of the research agenda also came to impact upon other studies of social phenomenon including comparatively poor educational attainment. Related to the concept of resilience is that of ‘academic buoyancy’ which is defined as the ability of students to navigate and survive the everyday stresses and challenges of school life (Martin and Marsh 2006, 2008a, 2008b, 2009, Martin et al 2010; Martin 2014).

Buoyancy can be associated with social context and other factors external to the student; however there is also evidence that personality-type factors can play a role in buoyancy. Masten and Garmezy (1985), for example, have argued that high self-esteem and autonomy are markers of resilience. However, such personality factors should not be thought of as being simply innate to the learner – rather schools can help learners to develop the interpersonal skills and dispositions which will aid their buoyancy. Downey (2008) suggests twelve recommendations for conferring resilience on pupils. These essentially focus on the supporting autonomy through helping students become responsible for reaching high expectations, promoting students’ self-esteem, and on developing the interpersonal skills to build healthy interpersonal relationships through methods like cooperative learning.

Martin and Marsh (2008a) (see also Martin et al 2010) have suggested a “5C” model for understanding academic buoyancy. The “5C’s” of this model consist of: “confidence” (self-efficacy), “co-ordination” (planning), “control”, “composure” (low-anxiety) and “commitment” (persistence). These dispositions have been found to be associated with enjoyment of school, as well as general self-esteem (Martin and Marsh, 2006). These factors are similar to those found in, for example, a five-factor personality model (Goldberg et al., 2006) and, as such, lend themselves to being assessed through a personality style inventory. It should be noted that the assessment of personality-style factors in educational settings has a long history through the concept of “learning styles”. Such learning styles models have, in the recent past, (Coffield, Moseley, Hall, and Ecclestone, 2004) been strongly criticized as encouraging the labelling of students using quasi-scientific methods. On the other hand, Coffield et al. have argued that such inventories can be useful when their principal focus is to encourage teachers and learners to think about their approaches to teaching and learning.

The goals of this research were two fold (a) to develop an understanding of the processes of student buoyancy and resilience and (b) to develop a buoyancy inventory which would meet the basic criteria for psychometric reliability and validity and could be used, not to label or “diagnose” students as being “at risk” or “buoyant”, but rather to aid both teachers and students to reflect upon and develop the skills and dispositions which are associated with buoyancy.
2. Methodology and Results

A two-stage mixed methods approach was utilised to address the research questions: whether there are distinguishing features of academic buoyancy that can be identified in second level students in the Irish context, and whether the concept of buoyancy can help to understand the decisions made by young people to stay in school or leave school early. The first phase of data collection was undertaken using a qualitative approach, the results of which went on to inform phase two – which utilised quantitative methods.

2.1 Phase One

The first phase of data collection comprised of two case studies. Both case studies tracked the progress of different second level class cohorts over three month periods. The second level school experience for students in Ireland consists of a three year Junior Cycle, culminating in a state examination (Junior Certificate) followed by one of three Senior Cycle experiences – the Leaving Certificate Established (LCE), the Leaving Certificate Vocational Programme (LCVP) or the Leaving Certificate Applied (LCA) which are also state certified. The first case study tracked a cohort (C1) in the final year of the Junior Cycle, and second case study tracked a cohort (C2) in year one of the Leaving Certificate Applied programme. The Leaving Certificate Applied strand of the senior cycle experience is intended for students who either do not intend to pursue third-level education, or for students whose needs, aspirations and aptitudes are not catered for by the LCE or LCVP strands (NCCA, 2001). The total number of students observed was n=31 (n=20 in C1, n=11 in C2). Both of the case study schools participate in the “School Support Programme” overseen by the “Delivering Equality of Opportunity in Schools” (DEIS) scheme, the policy instrument of the Department of Education and Skills to address educational disadvantage in Ireland.

Ethnographic methods were employed in the case studies. To facilitate this approach, consent was obtained from school principals, class teachers, students, and finally from a parent/guardian of the students concerned. All individuals concerned were free to refuse consent in advance of data collection, as well as to withdraw their consent prior to the completion of data collection. School staff aided the researcher in giving background information on the academic history of students involved in the research, as well as giving their assessments of the likelihood of students completing school. The classroom observations were conducted by one member of the research team, who joined the class groups for the duration of the study periods, and who documented the day-to-day experiences of the students. To support the observations, focus groups were also utilised with students who agreed to make this commitment. The students and researcher agreed the location and duration of these focus groups – which were held during ordinary school hours in all instances. The focus groups served to clarify the researchers’ understanding of the contexts, and to allow a narrative platform for the students to interpret their experiences.

The results that emerged from both study locations suggested significant differences between students who seemed likely to complete school and those who seemed unlikely to. The most striking difference concerned the higher levels of engagement shown by the students assessed as likely to complete school relative to those who were assessed to be unlikely to do so. This engagement manifested itself in several different ways. The students were more likely to complete homework, reported that they studied for longer after school, and displayed more compliance with their teacher’s behavioural requirements in class. It is worth stressing that no student in either case study was universally engaged in all subjects. The process through which engagement comes about was nuanced – and was mediated largely by the extent to which students valued specific subjects and how useful they predicted subjects to be in their future lives (with greater levels of engagement shown in classes deemed relevant), but also by other factors such as how “easy” students interpreted it as being (easier subjects showing higher engagement), and how much homework and classwork students were assigned (classes with less homework assigned showing higher engagement levels). A second significant finding was that the students who were viewed by teachers as unlikely to leave articulated that while they may not necessarily “enjoy” or “value” school, they were aware of its importance in terms of their future life chances – and that regardless of their own desires to do otherwise at times, they must “play the game” of schooling, so as to maximise their chances of later success in life. Even though it was not valued by them, they were able to put their perspective in contrast to those perspectives of others in society – a kind of social metacognition not dissimilar to that suggested by Bourdieu as a mechanism through which the habitus can allow
actors to modify their position in a field (Bourdieu, 1998). Conversely, those who appeared unlikely to complete school displayed no such desire to “play the game”.

2.2 Phase Two:

In addition to the differences in experiences reported above, a number of different competencies were demonstrated by the students who appeared likely to complete school. They shared a composure and confidence in relation to their prospects for successfully completing school. They believed that they were in control of their success, and that it was a function of their sustained effort and planning. Guided by these competencies, existing literature on academic resilience and buoyancy was examined, and of particular relevance is discourse on academic buoyancy (Martin, 2014; Martin, Colmar, Davey, & Marsh, 2010; Martin & Marsh, 2006, 2008a, 2008b; 2009) who have made similar observations regarding the importance of such factors in relation to academic buoyancy. These competencies informed the second phase of the research which was the design and validity testing an instrument to help students and teachers to reflect on these competencies – the Student Buoyancy Instrument (SBI).

The instrument was assembled using 39 items drawn from the “Self-Efficacy”, “Planfulness”, “Anxiety”, “Industry” and “Locus of Control” scales available from the International Personality Item Pool (Goldberg et al., 2006). The 39 items were edited to ensure their ethical suitability for use with children, and the readability of the instrument was assessed in a two stage pilot. The first pilot was completed by a class group of LCA year one students who had a mean reading age of 12 years old. These students made suggestions that informed the second pilot, conducted with a group of students nearing the end of primary school (6th class students aged between 11 and 12 years) who also had a reading age of 12. Following some minor revisions arising from the second pilot, the instrument was administered across 17 second-level schools to a total number of n=571 students. The research team was able to estimate that a student with a reading age that was equivalent to their chronological age should be able to complete the instrument in 30 minutes or less on the strength of the pilots, and this knowledge allowed school principals to select appropriate windows for deployment of the instrument to their students.

The results of this administration of the instrument were that the validity and reliability of the instrument were acceptable. Following a principal components analysis (PCA), a total of 29 of the items were retained, and loaded into five distinct factors broadly as expected. The five factors accounted for 44.71% of the total variance observed. The names of the factors, and the variance each accounted for were as follows: “Confidence” (18.64% of variance observed), “Composure” (9.42%) “Planning” (7.115%), “Anxiety” (5.144%) and “Persistence” (4.397%) (these diverged slights from those suggested by Martin and Marsh, but reflect the factors emergent from the data). Convergent validity between the items in each scale was assessed using a Spearman’s Rho analysis and was found to be significant at the .01 level (2-tailed, p=.000). The observed correlations ranged from low/moderate to moderate/substantial. Divergent validity was also established using a Spearman’s Rho analysis, where the highest correlation observed between any two measures was a low/moderate correlation between Confidence and Persistence. Face Validity was established by convening an expert group at the University of Limerick who examined the items that loaded onto each factor and were satisfied that the factors constructed were both valid and meaningful.

The n=571 students who undertook the SBI were drawn from a non-representative sample of Irish schools, and accordingly this paper does not explore the predictive validity of the instrument in detail. With this caveat in mind, in terms of addressing whether academic buoyancy can help to understand decisions to stay in school/leave school early, the results suggest value in further exploration. Results from Mann-Whitney U tests on this cohort suggest students were significantly less likely to report that they were likely to leave school early if they showed higher scores on the Confidence, Planning and Persistence measures. The relationship between Autonomy and reported likelihood of leaving school early was also notable, if marginally non-significant. Wider deployment of the instrument may increase our understanding of the role of buoyancy in such decisions, provided it is done responsibly; in a way that is affirming for young people and their competencies and not to label deficiency.
3. Conclusion

Educational under attainment of children from lower socio-economic groups remains an issue throughout the world. Although much of the research focuses on risk factors associated with low attainment, it may also be productive to ask what factors work to insulate or protect pupils who are in situations which would be recognized as “at risk”. These insulating factors are a feature in ‘academic buoyancy’. The qualitative data presented here highlights a number of factors associated with buoyancy, including an ability to reflect upon ‘the game’ on staying in school and to choose strategies for ‘playing the game’. The qualitative data, like the broader literature, also highlights the possible contribution of a number of personality-type factors including self-confidence, composure, planning, low anxiety and persistence. Such factors should not be simply thought of as innate to the learner – these capacities can be learned and developed. A personality-type self-report instrument could be utilized by teachers and pupils as a means of reflecting upon and developing metacognitive abilities in relation to these features. The instrument which was development – the Student Buoyancy Instrument shows - acceptable validity and reliability for the five scales. There is reason therefore to see this scale as being of use to pupils and teachers. Additionally, both the qualitative and quantitative results are convergent and suggest that the highest reported personality-type characteristics are confidence and composure (with planning coming in third). These findings are broadly in-line with the 5C’s as suggested by Martin & Marsh (2008a). They state that high self-esteem is crucial for successful resilience and define confidence as being composed of self-efficacy. Both self-esteem and self-efficacy (and control) are positively mediated by robust self-concept clarity. According to Ritchie, Sedikides, Wildschut, Arndt, & Gidron (2011), self-concept clarity is both a state and a trait and means having clearly and confidently defined self-beliefs. Moreover, Ritchie et al. (2011) suggest that having a robust self-concept clarity enables individuals to create a stable frame of reference for the self which allows for interaction and assimilation with the external environment (in this case, school).

Given this, two caveats need to be entered in relation to such a scale. First, such a scale should not be used for labelling pupils (as ‘at risk’ vs. ‘resilient’, for example). The goal of such a scale should be to help teachers and students to think about their existing capabilities, the capabilities they would like to develop, and how they can do so. Further labelling of already disadvantaged pupils would be an unjust use of such a tool. This stance is justified by the significant findings in Phase One. That is, that student behaviour (staying in school) was positively effected by the attitudes of their teachers (they thought that the students would stay in school). Research has garnered evidence that has shown that attributes and implicit biases can be transferred from the perceiver to the perceived (Ferguson, 1998). Obviously this can negatively impact student success as it may foster stereotype threat (Steele & Aronson, 1995) in ‘at risk’ students. Secondly, it must be noted that, while personality-type factors can play a role in buoyancy, many of the reasons for educational inequality are structural – they lie in the organization of educational systems and in their curricula – not in the personality of the pupil (see, for example, OECD, 2013 and Stadelman-Steffen, 2011). While a focus on developing personal buoyancy skills can be an aid to individual students in fighting disadvantage, there is a need to take seriously the role which educational policy plays in creating the disadvantaging processes in the first place. A tool like the Student Buoyancy Instrument can be useful if used appropriately and if it is part of a broad based policy response to educational inequality.

The findings garnered from the current research provide educators of ‘at risk’ students with a reliable and valid tool that can be used to assess buoyancy and resilience of their pupils. This may enable them to use meta-cognitive strategies to decrease student educational dropout rates. Future directions of research should be focused on examining process (is self-concept clarity mediated/moderated by teacher attitude/meta-cognition or vice versa? From such analysis a concrete model could be posited.

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