

Special Feature

Papers invited following the Education Studies Postgraduate Conference, University of Bedfordshire (Polhill campus, Bedford), 13 July 2012

While delivering a workshop on academic writing at the Education Studies Postgraduate Conference last July, we invited submissions from the participants. The four papers that follow were the ones that impressed us most. – Eds.

A multi-dimensional approach to principalship

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Abstract

In the last two decades, principalship within further education has moved from being the chief academic officer to one which has bought about the combination of the chief executive element with the academic role, imposing greater demands and levels of accountability on the postholder. In light of these changes, it is appropriate to ask what is known about the nature of the role and how individuals can be encouraged to aspire to principalship. This paper considers what principals themselves perceive the role to involve and looks at existing literature on the way in which the principalship can be categorised. Relatively little has been written on the role of principals within further education colleges, yet at a time when Frearson (2005), Hargreave and Fink (2006) and Davies and Davies (2011) are debating the 'timebomb' within educational leadership more needs to be understood about the nature of the role if individuals are to develop into the next generation of college leaders.

Keywords: sustainable leadership, further education, principals, future leaders, leadership development.

Introduction

Leadership in further education has changed over the past twenty years, from local authority managed to one of institutional autonomy, reflecting shifts in state policy and ideology (Ball, 2009). This is the result of colleges' newfound autonomy, external pressures such as the need to understand the complexities of a nationally imposed funding methodology, and increases in inspection and audit. Colleges were required to appoint specialist managers to lead institutions in this new environment, such as directors of finance, quality and performance (Harper 2000). Randle and Brandy (1997) observe that as a consequence of the external demands on colleges, a new form of manager has emerged within further education, with managerial values which differ from those of academic staff. Elliot (1996) calls this dichotomy a clash between 'student centred pedagogic culture' versus 'the managerialism culture of managers'.

This is supported by Wilkinson (2007) who suggests that the introduction of managerial practices and ideologies into education has eroded the influences and power of the educational professional. It is these practices which will potentially undermine the purpose of education.

It is this dichotomy which has required the role of the principal to evolve in order to respond to the competing academic and business requirements. At the same time, Frearson (2003), Clancy (2005) and Colinson and Colinson (2006) all argue that there is a chronic shortage of suitability experienced candidates pursuing principalship. This is a situation that Frearson (2003) suggests is made worse by an ageing workforce amongst currently serving principals. Hargreaves and Fink (2005) propose that this shortage is a result of the principals' role becoming increasingly complex and demanding, due to changing student expectations and increased financial constraints. Davies and Davies (2011) suggest that the shortage is due in part to individuals trying to manage their work-life balance. As a result of state policy and the application of free market principles, colleges were facing significant increases in state led regulation. This meant that they had to adopt managerial principles more commonly found in the private sector. This has resulted in college leadership focusing on financial control, efficiencies, delivering more with the same or less funding (Gravatt, 2010) and the creation of a flexible workforce able to respond to consumer demand (Morrison, 2006). These reports were published at the time when the Foster (2005) review of education identified a chronic weakness in the quality of leadership within further education which resulted in the subsequent workforce reforms (DIUS, 2006). The government at the time felt that there was a need to professionalise the further education workforce, which saw the introduction of mandatory initial teacher education for staff in colleges and the requirement on newly appointed principals to undertake the Principals' Qualifying Programme.

This paper uses the finding of a questionnaire to all principals of further education colleges in the south east and London along with one-to-one interviews to determine the different aspects of the principals' role. The research will contribute to the understanding of how the role has evolved in response to the challenges faced by the changing operating environment. Focus groups were subsequently conducted with middle curriculum managers to gain an understanding of their perceptions on principalship. Furthermore, Lumby and Tomlinson (2000) state that much more research is needed on leadership experiences in further education and this paper adds to the existing body of literature.

Current Leadership Context

Frearson (2003), Clancy (2005) and Colinson and Colinson (2006) all argue that there is a chronic shortage of suitability experienced candidates pursuing principalship. This is a situation that Magnus (2009) suggests is made worse by an ageing workforce amongst currently serving principals. Statistics from Frearson (2003) show that in 1997, 23.6% of college 'leaders' were aged 50 plus, rising to 42.7% in 2002; whilst Clancy (2005) suggests that by the end of 2010, 60% of college principals would have retired. Hargreaves and Fink (2005) propose that this shortage is a result of the principals' role becoming increasingly complex and demanding, due to changing student expectations and increased financial constraints.

At the same time Foster (2005) suggested that there was an acute weakness in further education leadership at all levels, a view which was also supported by Ofsted (2006). As a result of these reports and at a time when the Leitch (2006) review highlighted the pivotal role that further education had to play in ensuring the UK remained economically competitive, the government announced plans to professionalise the FE workforce (DIUS, 2006). Concerned by the growing pace of the emerging tiger economies (Bottery, 2004), the workforce reforms proposed by DIUS (2006) were designed to ensure that staff in further education colleges had undertaken a mandatory programme of initial teacher education. Newly appointed principals had to complete the principals' qualifying programme, enabling colleges to remain at the forefront of the UK's skills development.

While the Principals' Qualifying Programme might have established some parity between the compulsory and post-compulsory phases of education, there were some fundamental differences between the two programmes. Unlike the National Professional Qualification for Headship (NPQH), the Principals' Qualifying Programme was a post-appointment development programme

delivered by a sector representative organisation, rather than an executive agency of the Department for Education, as in the case of the NPQH. The post-appointment approach presents a number of challenges to those starting the programme. The participants have to complete the programme within two years of commencing principalship, at a time when they are establishing themselves in the role and for some in an unfamiliar institution. The programme itself was designed to allow participants the time to reflect on their leadership practices, learn about various leadership theories, receive support and mentoring from an experienced principal, and undertake a period of work placement in an organisation outside of the education sector. None of these elements, however, prepared an individual for the day-to-day role of being a principal, unlike its counterpart in the schools sector. For those who aspired to become headteachers, the NPQH programme focused on individuals who were no more than eighteen months away from being appointed as headteachers and was designed to provide participants with the skills and techniques to lead a school. Successful completion of the programme acted as an eligibility criterion for individuals who sought headship, for one could not be appointed unless the qualification had been gained. Yet despite the government's attempt to professionalise the further education workforce, Gibb (2010) removed the mandatory requirement for completion of either the NPQH or the Principals' Qualifying Programme. The removal of these mandatory requirements, Gibb suggests, were part of the government's drive to reduce centrally imposed bureaucracy in the education sector. This would enable schools and colleges the freedom to appoint individuals appropriate to the role.

Hargreaves and Fink (2005) suggest that in order to counter the potential disincentives of being a principal, organisations need to consider building capacity, both of the organisation and of individuals, to ensure that there is a pool of potential candidates with sufficient skills and experiences to pursue principalship, a view shared by Davis (2009). Hargreaves and Fink (2005), Hill (2006) and Davis (2009) all advocate sustainable leadership as a model which could be used to develop the aforementioned capacity.

A point to note is that the concept of sustainable leadership is in its infancy, and as such the earliest literature on the subject only dates back to 2003. Most of the currently available literature focuses solely on the compulsory sector and only Lambert (2011) has developed a model specific to the further education sector. It is not within the scope of this paper to critique current models of sustainable leadership. However, it is

worth spending some time in order to understand the terminology used as sustainability is usually associated with ecology, the environment and conserving resources. One should not confuse sustainable leadership with 'leadership for sustainability', of which there is a considerable body of literature which examines the leadership of organisations to ensure that they preserve the environment in which they operate.

Hargreaves and Fink (2006) are two of the earliest writers on sustainable leadership and argue that sustainability is greater than any one individual within an organisation, requiring instead that organisations invest time to develop leaders at all levels, as this 'yields good value for money'. They also suggest that developing an organisation which embeds the ideas of sustainable leadership will not see dividends in the short-term, but in the long-term where the trajectory of the organisation will continue, regardless of who is occupying the headteacher/principal role. This will challenge headteachers or principals in terms of their ability to develop a sustainable culture, as this requires a significant commitment in time and resources, whilst maintaining the requirement for short-term gains, whether they are in performance or efficiencies.

Davies and Davies (2011) suggest that schools and colleges need to invest much more in developing individuals, particularly where people are the key resource. They go on to suggest that this is more than merely succession planning and filling typical hierarchical leadership roles, but instead is a process of developing leadership deep within the organisation. It is this depth of leadership which is a key element of the sustainable leadership models proposed by Hargreaves and Fink (2006), Davies (2009) and Lambert (2011). Kambil (2010) reminds us that when planning and implementing a development strategy the responsibility needs to be on both parties, the college and the individual embarking on a programme of development, with aspiring leaders ensuring that they cultivate the traits and skills necessary to pursue senior leadership positions and the current generation of leaders assisting those in reaching the top. This is a point which is reinforced by Davis and Davis (2011), who propose that leaders model the behaviours they require from others. If one leads well, although not defining what they mean by 'well', then success in the present can be assured, while future success will be secured if others are enabled to learn the principles of leading well. However, in order to facilitate the development of aspiring leaders there needs to be a structure in which individuals can develop the necessary aptitudes.

The literature presented in this paper has suggested there is a shortage of individuals wanting to pursue senior leadership positions within education. Magnus (2009) suggests this is as a result of an ageing population, while Hargreaves and Fink (2006) argue that this is as a result of the changing external demands being placed on those who occupy the post of principal. Despite previous attempts to provide mandatory development programmes for headteachers and college principals, Gibb (2010) removed the requirement in an attempt to free institutions from the burden of centrally imposed legislation. Writers such as Hargreaves and Fink (2006) and Davis (2009) advocate models of sustainable leadership as a means of developing potential future leaders, but these frameworks do not provide the necessary detail pertaining to the aptitudes and experiences which need to be cultivated in those who aspire to principalship.

Methodology

Extant research on educational leadership employs a descriptive, qualitative design with semi-structured interviews with key informants (Austin *et al.*, 2012). This study conforms to this trend and based on the assumption that principals were a primary target, by staff, for disapproval of their management values and actions (Lumby and Thomson, 2000), this article explores the differing dimensions and perceptions to principalship. The paper reports on the findings of questionnaires to all principals of further education colleges in the south of England and London and interviews with six principals conducted during 2010. This is eighteen years after colleges were incorporated out of local authority control and after Kennedy (1997) had highlighted concerns around further education management and Goddard-Patel and Whitehead's (2000) review of failing further education colleges. Finally, focus groups were conducted with 36 middle curriculum managers across the participating colleges.

The questionnaire provided information on a number of aspects of leadership, particularly on the implementation of sustainable leadership and the role of the principal, and was distributed to 65 principals of general further education colleges. Despite implementing the suggestions of Edwards *et al.* (2002) on how to increase response rates to surveys, this yielded only nineteen responses, representing a 29% return. The final question asked respondents whether they would be willing to participate in subsequent phases of the study, the one-to-one interviews and the focus groups.

Five of the six principals participating in this study came through an academic route, commencing their careers

as teachers, progressing to head of department, faculty, then assistant or deputy principal prior to becoming principalship. One participant was from a finance background, having been appointed as a deputy principal responsible for finance and resources. Two of the five participants who started as teachers did so through teaching in the compulsory sector, the other three were further education teacher trained. Three of the principals were experienced having held principal posts for number of years, while three were newly appointed having been in post for less than one year. The principals participating in the study were from colleges categorised as either medium or large using Payne’s (2008) classification by income. All interviews were taped, transcribed and analysed for common themes.

Focus groups were planned to coincide with existing college meetings to ensure the maximum number of middle managers were available to participate. The discussions focused on the perception of the role of the principal, including the skills which they [curriculum managers] perceive are needed to be success as a principal and the challenges which they face in pursuing leadership within colleges.

The interviews and focus groups produced a significant insight into the various aspects of leadership, the development of future leaders and the highs and lows of being a college principal. This paper, therefore, is only going to focus on the predominant themes arising from the interviews.

Defining a multi-dimensional approach to leadership

Green (2000) suggests three elements to the role of principal: academic leader, manager and administrative, and all the activities undertaken by the principal can be categorised under one of these three headings. Salas (2003), however, suggests the role of the principal can be considered under the heading of professional advisor to the corporation, management, accounting officer and

public relations. Leithwood *et al.* (2004) suggests that there are three key aspects to the role of the principal: developing people, setting organisational vision and creating an effective organisation; however, Davis *et al.* (2005) argue that there is more to the role than this, suggesting that principals should also focus on supporting teachers and developing the curriculum.

All of the aforementioned commentators appear to categorise principalship as functional activities, and there is no doubt that a majority of a principal’s work can be classified in this way. For example, setting the annual budget could be classed as administrative using Green’s (2000) definition, part of Salas’ (2003) accounting officer function, or using Leithwood *et al.* (2004) classification, creating an effective organisation. Prior to being able to categorise the role of the principal under the heading proposed by the aforementioned commentators one has to identify the key aptitudes and experiences which aspiring principals need to develop. There needs to be an understanding as to the key activities undertaken by principals. Respondents were asked to identify the amount of time spent, during a typical week, against a number of prescribed functions. The list of functions was derived from an analysis of principal and chief executive job descriptions and amended through the piloting process. The focus was not to complete a time and motion study (Barnes, 1940), rather to gain an insight into the activities which principals typically spend time on. It is worth acknowledging that the classifications used in figure 1 are subjective as ‘a lot’ to one principal, might not be to another, but other than asking principals to undertake a full time and motion study, which as already mentioned was not the purpose it was felt that this was sufficient.

Figure 1 illustrates the range of functions which principals identified and the proportion of their time, per week, spent on each of the activities. What figure 1 also demonstrates is that activities can be classified as either internal or external facing.

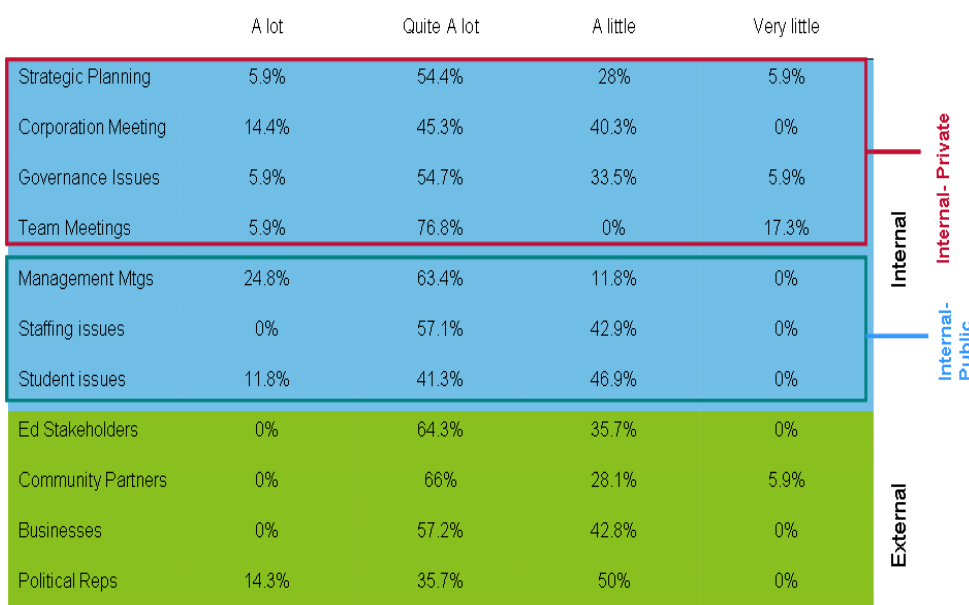


Figure 1: Activities associated with principalship. (Ed Stakeholders include Local Authorities, Funding Agencies (EFA, SFA) National Apprenticeship Services, Ofsted.)

Many of the external facing functions identified by principals were a result of autonomy created through incorporation and the development of a market-led environment in which colleges now find themselves operating, the outward-facing role of the principal has no doubt become more prominent. As the figurehead of the institution, principals find themselves representing the interests of the college within the local community, to businesses and for a minority regionally and nationally. But as principal D commented there is a misconception that if you are a principal who is active locally or nationally that you can '*change the world*', instead it is more about timing and knowing what others are interested in. Principal D further suggested that courting representatives external to the college is like engaging in a marketing campaign with the principal promoting the services, courses or ideologies of the college.

In the evolving role that has seen principals combine the worlds of academia and business, principal A acknowledges that '*principals have had to become business people*'. As a result of Gibb's (2010) announcement to reduce the level of state-imposed regulation on colleges, Principal A suggests that the relaxations in some of the policies previously in place has '*made the job scarier*'. With perceived autonomy comes an increased level of risk, as there are fewer safety nets in place if colleges get into difficulties. This was witnessed by Goddard-Patel and Whitehead (2000), whose studies focused on why colleges fail.

As a consequence of the increases in autonomy which colleges now have, the external public role in which principals have to engage is critical, either promoting the interests of the college or possibly defending the college as a result of potentially negative publicity. Aside from the importance of the public aspect of the post, it is equally important that principals have the necessary communications and, where appropriate, media skills to be able to engage externally in a manner which best represents the values of the college.

As well as the public role, principals also have an internal role where they are visible to staff and students who see them as the academic leader and custodian of academic standards who challenge mediocrity, as well as the business leader, responsible for securing the financial stability and viability of the college.

Nevertheless, this internal role also has a public facet, which this paper proposes to call the *Internal-public* element. This function, identified by principals includes as already mentioned leading the college both academically as well as in business, but also engaging with staff and students and dealing with issues affecting

both groups. Principal B summarised the internal role as '*ensuring the long term future of the college; if they're staff, ensuring security of their jobs; if they're students, ensuring that the college gives them a good deal*'. Principal A added that there was also a ceremonial function which the principal plays which included presentation of certificates at award ceremonies and graduations, where the principal has to step into the perceived persona of the academic leader.

Participants of the focus groups did not identify the internal-public element, instead preferring to categorise all the internal functions under one heading. When considering these internal public aspects of the role, as illustrated in figure 1, they all conform to Green's (2000) description of being either managerial, administrative or of academic leadership in nature.

Apart from the internal-public role there is another aspect to principalship which could be called the *Internal-private* element. This is the private role which the principal has where they are the strategic thinker, working closely with their deputies and the governors to jointly develop the vision and mission of the organisation, but also where they synthesise government policy and translate it into strategic plans for the college. It is this *internal-private* element which is often hidden from all but a few staff and as Principal A puts it '*staff don't see the headspace, the thinking time and space which you need*'. Principal B suggested that they need that private space to be a reflective leader, where they could step back from a situation, reflect and often undo something which has not gone to plan, such as a member of staff getting it wrong with a parent or a student or having made a '*silly*' purchase.

Principals participating in this research all subscribe to the idea of having the private time and space to think, and with Davis *et al.* (2005) suggesting that there is an expectation that they are visionaries and innovators within their institutions while at the same time serving the complex and often competing needs of stakeholders, this can only be achieved if they have that private space in which to operate.

From the evidence presented in this paper there appears to be an alternative way of classifying the role of the principal within further education. Using the headings of *public*, *internal-private* and *internal-public*, this paper suggests that most of the activities that a principal undertakes can be attributed to one of these categories. For a principal to be effective they need to be operating at the intersection of the three elements, as illustrated by the shaded area in figure 2.

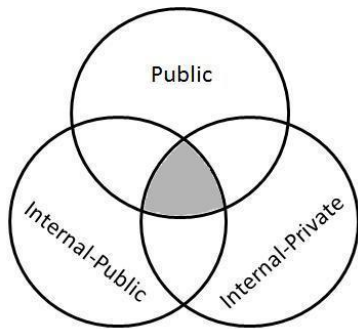


Figure 2: Leadership Venn diagram

Conclusion

This snapshot view of principalship presents evidence which in part suggests that there are three dimensions to the role of the principal and supports the managerialist idea that the role of the principal has shifted from academic leader to managerial. This paper suggests that rather than categorising the work of the principal by functions (Green, 2000; Leithwood *et al.*, 2004; Davis *et al.*, 2005) it can be done under the headings of internal-public, internal-private and public. It could be suggested that it is a matter of interpretation as to which element specific functions are categorised under depending on the model which is being used. For example, the internal-private aspect of principalship could include aspects of the principal's role previously categorised under Sala's (2003) 'professional advisor to the corporation' or Leithwood *et al.*'s (2004) 'setting organisational vision and mission' function.

The challenge is not only to maintain an appropriate balance between the various elements pertaining to principalship, but also to ensure that there is not a polarising between academic and managerial beliefs resulting from the dual role of academic leader and chief executive held by the postholder. Lumby and Thompson (2000) remind us that no one group has a monopoly of professionalism in further education, particularly if this is taken to mean primarily the commitment to students. But as Randle and Brady (1997) note there is an implicit assumption within the debate around managerialism in education that professional teachers and lecturers should retain control of teaching and learning, just as the medical professions do in the healthcare sector, as they are best placed to do so.

This paper suggests neither that all the changes which have happened in further education have been in the best interests of students, nor that senior managers always act with integrity and effectiveness. What this article does is argue that the role of principal has evolved significantly from that of chief academic officer to one which combines the academic responsibility with

A challenge for principals is ensuring that there is a balance between these elements; if the balance is skewed in favour of the external aspects of the role, there is potential for principals to become disconnected from the college (Davis *et al.*, 2005). If the balance is focused exclusively on the internal work of the college, the risk is that principals are perceived by external stakeholders as not engaging in the local community or being out of touch with the stakeholder demands, such as local authorities. But as Green (2000) highlights, each of the elements are not equal and there will be periods of time when there is an imbalance as a result of changing environmental factors.

those of being the chief executive of a multimillion pound business. This has required new skills and a different way of looking at the activities and functions which are carried out by the postholder.

What is needed is more research and debate on leadership in further education which tries to recognise and reach conclusions on the challenges facing senior leaders when operating in such a complex and constantly changing environment.

References

- Austen, S., Swepson, P. & Marchant, T. (2012) 'Governance and school boards in non-state schools in Australia'. *Management in Education*, **26**(2), 73-81.
- Ball, S. (2009) 'The governance turn!' *Journal of Education Policy*, **24**(5), 537-8.
- Bottery, M. (2004) *The challenges of educational leadership: Values in a globalised age*. London: Paul Chapman Publishing.
- Clancy, J. (2005) Future shortage at the top. *Times Educational Supplement*, 29th April 2005.
- Colinson, D. & Colinson, M. (2006) 'Communities of Leadership'. Lancaster: Lancaster University.
- Davies, B. (2009). *The Essentials of School Leadership*. London: Sage.
- Davies, B and Davies, B. (2011) *Talent Management in Education* London: Sage.
- Davis, S., Darling-Hammond, L., LaPointe, M. & Meyerson, D. (2005) *School leadership study: developing successful principals (review of research)*. Stanford, CA: Stanford University, Stanford Educational Leadership Institute.
- DIUS (2007) *A guide to the Further Education (Principals' Qualification) (England) Regulation 2007*. Department for Innovation, Universities and Skills. London: Stationary Office.
- Elliot, G. (1996) 'Educational management and the crisis of reform in further education'. *Journal of Vocational Education and Training*. **48** 5-23.
- Foster, A. (2005) *Realising the potential, a review of the future role of further education colleges*. London: Stationary Office.
- Frearson, M. (2003) *Tomorrow's learning leaders*. London: Learning and Skills Network.

- Gibb, N. (2010) Further freedoms for schools and colleges. Press release 24th July 2010. London: Department for Education.
- Goddard-Patel, P. & Whitehead, S. (2000) 'Examining the crisis of further education: an analysis of 'failing' college and failing policies'. *Policy studies*, **23(3)** 191-212.
- Gravatt, J. (2010) *Classification of colleges*. [letter] (personal communication, 7th September 2010).
- Green, F. (2000) *The headteacher in the 21st century: being a successful school leader*. London: Prentice Hall.
- Hargreaves, A. & Fink, D. (2006) *Sustainable leadership*. San Francisco: Jossey-Bass.
- Hill, R. (2006) *Leadership that lasts: sustainable school leadership in the 21st century*. London: Association of school and college leaders.
- KPMG (2009). *Delivering value for money through infrastructure changes* London: KPMG LLP.
- Kambil, A. (2010). 'Developing the next generation of leaders'. *Journal of Business Strategy* **31(2)**, 43-45.
- Lambert, S. (2011). 'Sustainable leadership and the implication for the general further education college sector'. *Journal of Further and Higher Education*, **35(1)**, 131-148.
- Leithwood, K., Seashore-Louis, K., Anderson, S. & Wahlstrom, K. (2004) *How leadership influences student learning*. New York: The Wallace Foundation.
- Leitch, S. (2006) *Prosperity for all in the global economy - world class skills*. London: Stationary Office.
- Lumby, J. & Tomlinson H. (2000) 'Principals speaking: managerialism and leadership in further education'. *Research in Post-Compulsory Education*, **5(2)**, 139-151.
- Magnus, G. (2009) *Dependency time-bomb*. Guardian, 4th February 2010.
- Morrison, K. (2006) *Marx, Durkheim, Weber. Formations of modern social thought*. London: Sage.
- Payne, L. (2008) *The evidence base on college size and mergers in the further education sector*. London: Stationary Office.
- Randle, K. & Brady, N. (1997) 'Further Education and the New Managerialism'. *Journal of Further and Higher Education*, **21**, 229-239.
- Salas, F. (2003) 'Leadership in Education: Effective U.K. College Principals'. *Nonprofit management and leadership*, **14(2)**, 171-189
- Wilkinson, G. (2007) 'Civic professionalism: teacher education and professional ideals and values in a commercialised education world'. *Journal of education and training*. **33(3)** 379-395

Teachers' views on the introduction and implementation of literacy tasks in the Year 7 Science scheme of learning

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Key Words: Scientific Literacy, Literacy, Teachers' views, Literacy Tasks

Abstract

The importance of literacy has continued since the publication of the Bullock Report in 1975 (Bullock, 1975) where schools are recommended to have a coherent approach for the effective teaching of reading and writing. Yet the Rose Report (Rose, 2006) found 16% of 11 year olds did not reach level 4 in reading at Key Stage 2. This case study looks at teacher views on the implementation of a literacy focus in the Year 7 Science scheme of learning within one school. The school is a mixed comprehensive located in a large town within Cambridgeshire with 1197 students on roll. The school has seen a local increase in the number of students with low literacy levels, level 3 or below at Key Stage 2 (KS 2). Within the cohort entering the school in September 2011, 188 students in total, 31.9% were judged by their KS2 tests to be level 3 or below in English. A mixed method approach was applied with document analysis of the Earth and Space scheme of learning to ensure tasks were embedded and a staff questionnaire was administered to gauge their views on the effectiveness of the strategies used, including the embedding of these within the scheme. Overall, teachers believe literacy is

important in the teaching of science and that specific activities designed to develop literacy can also be useful in aiding scientific understanding. The designed curriculum was found to contain a literacy focus but with an emphasis on key words and discussion. Several other literacy strategies were absent from the scheme bringing to the fore the struggle between teaching science and teaching literacy.

Introduction

Teaching occurs through spoken and written language. Within the secondary science curriculum students are faced with a very different subject in comparison to their experience of primary science. Students encounter new equipment, a laboratory, new concepts and a wide variety of new specialist terms at the start of their secondary science career. The ability to understand a new scientific concept is dependent on their ability to access and understand the language of science, which can be daunting when faced with up to ten new scientific terms in one lesson (Levesley *et al*, 2008). The importance of literacy in accessing the curriculum is clear; being unable to access and understand the language of science early in their secondary career can prove a major barrier to learning (Wellington and Ireson, 2008). The introduction of Assessing Pupils' Progress