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ANALYSES OF THE ENGLISH ACADEMIC/VOCATIONAL DIVIDE IN PHYSICAL EDUCATION

AN INVESTIGATION INTO THE CLAIMED PARITY OF ESTEEM BETWEEN THE A-LEVEL PHYSICAL EDUCATION QUALIFICATION AND THE ADVANCED GENERAL NATIONAL VOCATIONAL QUALIFICATION LEISURE AND TOURISM.

by

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A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements of the degree of Master of Arts

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ABSTRACT

British Government introduced a new General National Vocational Qualification (GNVQ) as an alternative to the A-level qualification in response to a low skilled workforce. Although these qualifications are promoted as equivalent to the A-levels, vocational qualifications are considered second best, causing an academic/vocational divide. Some researchers have analyzed the internal and external nature of the qualifications. However, little empirical evidence directly compares the two. This study focused on analyzing the two equivalent qualifications represented in the national framework.

The study used common areas of the A-level Physical Education and the GNVQ Leisure and Tourism curriculum to construct an examination paper consisting of an equal number of A-level and GNVQ-style questions. Two groups of A-level and GNVQ students were randomly selected from Godalming Sixth Form College to take part in the examination, and the performance scores were analyzed. Findings suggest no significant difference in performance scores, $t(28)=0.08, p=0.94$, supporting the need for further research. These results may assist in closing the academic/vocational divide. In turn, this may lead to more opportunities in industry and in universities for those achieving the GNVQ. In order to achieve true parity of esteem between the qualifications, reform needs to focus on the internal structure of the qualifications by combining the two curricular into one course represented as one qualification rather than organising the separate qualifications in a hierarchical external framework that still promotes the academic/vocational divide within the framework.

RESUME

Présentment, en Angleterre, il existe une manque d'ouvriers habiles. Afin d'addresser cette problème, le gouvernement a introduit un deuxieme Programme d'etudes qui s'appelle "General National Vocational Qualification GNVQ. L'examen GNVQ est suppose d'etre considere comme l'equivalent de l'existant examen academique "A-level" mais avec une concentration plus vocationelle. En realitee, societe voit une qualification GNVQ comme etant inferieure a une qualification "A-level". Ceci cree une inegalite entre les gradues des deux Programme d'etudes. Une revue de la literature existante demontre qu'il existe une quantite minimum de comparaisons formelles et publiees entre le GNVQ et le "A-level". Cette etude analyse les deux Programmes d'etudes presentment offert.

Cette etude a identifiee les endroits communs des Programmes d'etudes du GNVQ loisirs et tourisme et de l'education physique de "A-levels". L'etude a selectionee un nombre egal de questions des examens des deux cours pour creer un examen. Du college Godalming Sixth Form, parmi les deux programmes d'etudes,un nombre egal d'etudiants a ete choisi par hazard. Ces etudiants ont completes le nouveau examen. Les resultats on etes analyses. Les donnees n'ont pas demontrees une difference entre la performance des deux groupes, $t(28)=0.08, p=0.94$, supportant le besoin d'avantage de recherche.

On espere que les resultats de cette etude vont contribuer a creer une parite entre les etudiants qui atteints les qualifications de "A-level" et de GNVQ. Afin de realiser cet but, ca va etre necessaire de reformer le Programme a un niveau national. Les deux Programme d'etudes devraient etre combines pour creer une seule cours Les etudiants ecriveraient un seul examen et atteindraient un seul niveau de qualification avec des competences specifiques a leur proper progammes d'etudes..

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CHAPTER I

INTRODUCTION

Traditionally, vocational education in England had been viewed as 'second rate' in further education or post-16 education (Knight, Helsby, & Saunders, 1998; Sutton, 1994; Whiteside, 1992). In recent years the qualification system in England has been rationalised to two main routes into further education or post-16, these being vocational and academic.

The Academic Qualification

The study focus for the "academic route to further education" is the General Certificate of Education (GCE) A-level. The majority of full-time students take GCE A-levels at the age of eighteen after a two-year course. An "A-level" serves a similar role to that of the Abitur in Germany or the Baccalaureate in France. Unlike the qualifications in France and Germany, the A-level is not a set course. The course consists of a combination of compulsory elements and individual subjects selected by the student. Assessment is largely through externally marked final examinations. Each subject requires two examinations. An exam is used to test a volume of prescribed knowledge and can be up to three hours duration. The format of the exam requires extended writing in the form of essays. A-level passes are available from 'A' to 'E', the highest pass being 'A'. Three passes are required for university entrance, usually a combination of 'A' to 'C' passes.

The Vocational Qualification

The study focus of the "vocational route" is the General National Vocational Qualification (GNVQ), a relatively new qualification introduced on a pilot basis in 1992. The GNVQ is an extension of the National Vocational Qualification (NVQ) introduced in 1987 as a response to no systematic training or qualifications being available in the workplace. The NVQ was designed as a work-based qualification covering all occupational functions. However, because of the specific nature of NVQs, they were not transferable into general education. Thus the principles of the NVQ model were developed to form the GNVQ that could be used in general education.

The GNVQ has three levels: Foundation, Intermediate and Advanced. The Advanced level is represented as equivalent to two (GCE) A-levels. The full-time qualification was mainly designed for sixteen to nineteen year olds but may be taken by students of any age and also part-time. The GNVQ Advanced Level is also an alternative pathway to higher education. The GNVQ course consists of elements or units that interrelate. An Intermediate course consists of nine units and the Advanced course twelve units. There are different types of units: mandatory, optional, and additional. GNVQs at all levels incorporate core skills, communication, numeracy, and information technology. Students may also take additional units if required; for example, they may need a foreign language or an extra subject as a prerequisite for a university course. The assessment of GNVQs is set out in units, and a student must meet the criteria of each unit. The evidence for appraisal in GNVQs is partly from projects and assignments that are marked internally and partly from externally marked written tests for each mandatory unit, the pass mark being seventy per cent. Internal

verifiers are responsible for checking the "portfolio of evidence," which must contain all the requirements for each unit. External verifiers, just like external examiners, act on behalf of awarding bodies, visiting the schools and colleges to scrutinise a sample of the assessments in the portfolios of evidence. This is to ensure a consistent standard across all schools and colleges.

Organisation of the English Qualifications

The Dearing Report (Dearing, 1996) was an introduction to a rationale of academic and vocational qualifications of equal standing. Proposed was a new qualification framework in which all three existing streams of qualifications would be brought into alignment.

The General Certificate of Education (GCE) is a qualification primarily obtained through compulsory schooling. The General National Vocational Qualification (GNVQ) is primarily available in schools and colleges. The National Vocational Qualification (NVQ) is primarily available through employment training. At the Advanced level, the separate GCE Advanced Supplementary qualification (GCE AS) represents half an A-level qualification and is available in a range of subjects. The focus of this study is the Advanced level of the framework.

The prompt for government policy direction and subsequently the Dearing Report (Dearing, 1996) was the White Paper, "Education and Training for the 21st Century" (Department for Education/Employment Department/Welsh Office [DFE/ED/WO], 1991). The White Paper, in part, represented a search for a national framework of qualification reform. In a summary of the White Paper, Hodgson and Spours (1997) point out that a main characteristic of the White Paper was the formalisation of a triple-track national qualifications framework including an

academic track (A-levels), a broad vocational track (General National Vocational Qualifications), and an occupational specific track (National Vocational Qualifications). The intention of these three tracks was to allow limited links between the qualifications, facilitating the mixing of academic and vocational study within the same course. Table 1 is a visual representation of the new national qualification framework.

Table 1

The English Qualification Framework

National Award: Advanced Level		
GCE AS and A-Level	GNVQ Advanced Level	NVQ Level 3
National Award: Intermediate Level		
GCE Grades A-C	GNVQ Intermediate Level	NVQ Level 2
National Award: Foundation Level		
GCE Grades D-G	GNVQ Foundation Level	NVQ Level 1

The Need for a Vocational Equivalent Qualification

The rationale for an equivalent vocational qualification has been to create a system whereby vocational and academic routes have equal standing. There are both academic and vocational issues that suggest a need for an equal standing qualification. Literature highlights the problems with the academic General Certificate of Education A-level route (Department of Education and Science [DES], 1988; Finegold, Keep, Miliband, Raffe, Spours, & Young, 1990; Young & Leney, 1997). The A-level has, since its introduction, been an early selection process for university entrance. It was

designed to pick out those candidates who could be educated to a high standard (Smithers, 1994). This was not a problem in the 1950's when the qualification was introduced; those that were not successful at A-levels could still get an office job or become a nurse or teacher with qualifications gained through schooling. Nowadays this is not the case. As a result of a changing economy and the changing role of the worker in industry, many feel the A-level system has outgrown itself (Finegold et al., 1990; Young & Leney, 1997). Common reasons for changing A-levels are that they do not provide for a range of abilities, underrate applied education, and only provide the scope of three subjects. Some subjects are considered to be more difficult than others and are therefore less popular (Smithers, 1994). With a view to updating and reforming the system in 1988, the Secretary of Education and Science and the Secretary of State for Wales requested a report on the principles that should govern the A-level curricula. The Higginson Report (DES, 1988) recommended some radical changes, emphasising a broadening of A-levels and proposing a five-subject examination much like the Abitur in Germany. Higginson gave his opinion of the A-level system:

> They encourage critical attitudes and develop analytical and interpretative skills. Where some have seen a fundamental weakness, however, is in their failure to identify with sufficient clarity their aims, objectives and criteria for assessment. The common perception is that over the years syllabuses have become too voluminous and candidates over-burdened with having to memorise a large amount of information to the exclusion of other important demands. (DES, 1988, p.3)

Government, giving clear indications of reluctance to reform the infrastructure of the A-level system, rejected the Higginson Report proposals. With a relatively unchanged academic system, just over a third of 16-19 year olds take A-levels and proceed into full-time further education (Williams, 1997). This leaves over two-thirds of the present day population, the majority, with no options to continue with general

education, so they try to find work (Farley, 1985). England, in comparison to other major industrial European countries, has always neglected the majority of its youth as they move from school to adult life. Priority has always been given to those who remain in full-time education, usually entering higher education and thereafter taking academic degree courses.

The literature indicates a need for a vocational qualification of equal standing to the academic qualification within the current qualification system (Finegold et al., 1990; Finegold & Soskice, 1988; Spours, 1995). Hodkinson (1991) stated, "It is often said that one crucial element in Britain's declining economic performance is an inappropriate education system" (p.27).

The Effects of the Present Qualifications in British Industry

Conclusions of other research studies (Confederation of British Industries (CBI), 1989; Finegold et al., 1990; Finegold & Soskice, 1988; Spours, 1995) share the general opinion that Britain has an undereducated workforce. The implication is that the existing system results in a combination of low academic achievement during compulsory schooling and a high proportion of students who leave school at sixteen and do not continue into further and higher education. This has meant that the British worker enters the employment market with a low standard of qualifications.

The situation improves little for workers once they gain employment. Finegold (1991) describes two industrial responses to a changing world. One industrial response, termed "flexible specialisation" by Finegold, is seen in the situation in which employers are prepared to invest in the training and development of their workforce in order to compete more effectively in the market place. This "enlightened self-interest" allows employees to gain higher levels of skills and

technical expertise, which enhances their value to the employer. The industry sees this as an investment, and the individual's employment tends to be more secure.

Finegold (1991) describes a second industrial response as "competitive flexibility." In this case the necessary skills and technical expertise are concentrated in the management hierarchy, and there is a deliberate policy of employing unskilled workers whose duties involve only simple repetitive tasks. Earnings would be clearly linked to productivity by some type of piecework or target-based system. Employment security can be detrimentally affected by such factors as mechanisation and flexible responses to market fluctuations. In this situation there is little to encourage employers to underwrite the costs of any training and development of the workforce; the workers are not seen as "investments" and are not highly valued. A "hiring and firing" tradition is therefore easily established.

Finegold (1991) goes on to say that Britain is locked in a low skills approach and this needs to change if it is to survive as an economically prosperous nation. Having a low skills approach is particularly highlighted during high crisis periods such as the two world wars. Yeomans (1998) stated, "The historical record shows that interest in vocational education increases during periods of economic difficulty and the late 1970's and early 1980's were marked by rapidly rising unemployment and the decimation of important sectors of the economy" (p.128).

In 1982 a governmental response to the unemployment situation was the Youth Training Scheme, which was envisaged as a way to provide subsidised training for school leavers. It was partly successful in that some, those who were lucky enough, were screened and selected by employers while training and received a job at the end of the course. However, employers used others on the Youth Training Scheme as cheap labour. There is little evidence that the Youth Training Scheme

made a significant difference to Britain's "skills gap." Although Spours (1995) suggests that the Youth Training Scheme grew quickly to counteract the youth unemployment of the time, Finegold (1991) stated that only forty per cent of entrants to Youth Training Schemes obtained any sort of vocational qualification. The need to adapt the education training to the changing economic environment remained.

International Comparisons of British Educational Participation Rates

International comparisons by Spours (1995) show full-time participation rates in further education in Britain to be significantly lower than in competitor nations. The work considered full-time participation rates of sixteen to eighteen year olds combined, rather than full-time, part-time and training participation at sixteen. By doing this, Spour's study provides a clearer representation of those studying to Advanced levels and achieving qualifications for entry into higher education.

Throughout the 1980's and 1990's Britain was at the bottom of the statistical results for achievement in further education (Spours, 1995), demonstrating that for some reason its students decide not to participate or achieve higher levels in further education. The dominant A-level early selection system has been in place since the 1950's with relatively little change. For those not selected there has been no alternative to studying to Advanced levels, especially in employment settings. So while the educational system has continued to produce well-educated professionals graduating from university, it has neglected the general work force of Britain. Additional figures from the Department for Education, which looks at a significant change in trends, identify a sharp decline in the growth of attainment rates for the General Certificate of Secondary Education and A-level in 1994, possibly dropping to zero growth in 1995/6. These figures provide another indication of an inadequate

system. International trend comparisons of full-time participation rates at sixteen, seventeen and eighteen years of age in 1992/3 suggest vital differences between the modes of participation. One of these points to the fact that Australia, New Zealand and Britain can be grouped as they all show moderate levels of participation at sixteen, sharp decreases at seventeen and eighteen, and decreasing patterns in education from that point on.

National Education Targets (Sutton, 1994), a reaction of government to increasing availability of statistical comparisons of Britain with other major industrial countries, were designed to increase participation and achievement of the sixteen to eighteen year olds for the near future. The targets state that education and training courses should develop flexibility and breadth, this being identified as a main feature of the Higginson Report, "Advancing A-Levels" (DES, 1988). Higginson suggested that there was too much depth in individual subjects in the GCE A-level qualifications and not enough breadth of subjects. Officially launched in 1991, the National Education Targets stated that by 1997 eighty per cent of young people should have the opportunity to participate in education and training up to the age of eighteen. By the year 2000, fifty per cent of young people should gain NVQ Level Three. This occupational specific qualification mentioned earlier in the chapter replaced the Youth Training Scheme. National Vocational Qualification Level Three is nationally recognised as Advanced level and is represented as equal to the GCE A-level and to the Advanced GNVQ.

Up to this point the literature cited has dealt with issues highlighting the need for a vocational qualification of equal standing to the existing academic A-level. Sutton (1994) summarises, "The problem has been compounded by the absence of a

credible vocational alternative to the academic route way, with the result that few young people reach Level Three" (p.338).

The Proposed Solution

The framework in which the English qualifications have been placed represents the A-level and GNVQ at the Advanced level as equivalent. Government policy is clearly promoting vocational and academic courses of equivalent standard at each national level (Dearing, 1996). One of the intentions of the qualification framework is to enable links between qualifications. These links have become possible with the development of modular curricula. For the first time it is possible to detect common areas of study between academic and vocational curricula. One such common area of study occurs with the GCE A-level in Physical Education and the GNVQ in Leisure and Tourism at Advanced level. Government has been very active in using and publicising these ideas of equivalence between the qualifications on the three pathways, but at no point have these notions yet been researched and systematically tested (Sharp, 1998).

Significance of the Study

It is therefore the intention of this study to directly compare common areas of study by creating a test using questions from the cross section of the GCE A-level Physical Education curriculum and the GNVQ Leisure and Tourism curriculum.

England has always had a deep-rooted dual education system: academic and vocational. Unwin (1997) stated that this dual system no longer works. A large proportion of sixteen-year-old students leave school and enter into full-time post-16 education, only to leave after a year, and up to one fifth of A-level candidates fail to

get the required grades to move onto higher education. This gives strong indications that a creditable and rigorous vocational alternative might be more suitable for some students.

Industry also provided strong evidence for a change to the present qualification system. Statistical international trend comparisons on participation and attainment at the post-16 age level made powerful claims that Britain is behind its economical competitors and in need of a better skilled workforce.

Government responded to this dilemma with the introduction of the General National Vocational Qualification (GNVQ). This was not meant as a replacement for the dual qualification system but an attempt to bring the academic and vocational qualifications to equal standing. Dearing (1996) proposed a framework into which he organised all the present qualifications and their corresponding levels up to higher education.

The framework system at the Advanced level holds two very different courses and vast amounts of research have examined each of those in detail. However, there is little research on comparisons of qualifications apart from one study comparing the qualifications through student assessment (Barry, 1997). The main emphasis in Barry's study was on learning demands made by the course.

This present study developed Barry's concept of comparisons of the qualifications through student assessment to produce empirical quantitative data to enhance the results of Barry's work. The attainment scores from one group of A-level students and one group of GNVQ students were expected to give indications of whether the two different courses produced the same standards or if they are just being represented as equal. The study was also expected to contribute to the

clarification of the framework proposed by Dearing (1996). Is it the beginnings of a unified framework or just a framework with very different qualifications within it?

Statement of the Problem

Traditionally, vocational education in England had been viewed as "second rate" in further education or post-16 education. The purpose of this study was to consider whether, in the light of evolving attitudes, students taking the new Advanced GNVQ in Leisure and Tourism could score as highly as students taking the General Certificate of Education A-level in Physical Education on a combined GNVQ/A-level test.

Hypotheses

It was hypothesised that

1. There would be no overall significant difference in attainment scores between GNVQ and A-level participants.
2. There would be no significant differences between the scores of the two groups as a result of the origin of the examination questions. That is, there would be no significant differences when the groups responded to questions from their own course, and there would be no significant differences between the scores of A-level and GNVQ groups when they responded to questions from the other course.

Operational Definitions

GCE A-Level

This is the Advanced level General Certificate in Education, which is an academic qualification that is taken in different subjects. The course is normally started at the end of schooling. After the duration of a year to two years an examination is taken, usually around the age of eighteen years. The A-level is graded and normal university entrance requirements stipulate three good A-level grades, usually A, B, or C.

General National Vocational Qualification

The General National Vocational Qualification is a vocational qualification that has been introduced and represented at a similar standard as the A-level qualification. The GNVQ employs an entirely different methodology and gives the opportunity for an alternative route for progression.

Competence

Competence is considered in this study to be the ability to perform to the recognised standards of the GNVQ outcomes model. This provides a broad foundational knowledge in relation to the standards expected of an employee in a particular vocation.

Parity of esteem

Parity of esteem can be translated to equivalence of value. In this study it refers to the A-level Physical Education academic qualification and the GNVQ in Leisure and Tourism as having equal regard or value.

English Qualifications

Educational systems of England, Wales and Scotland are different. This study deals only with qualifications in England and Wales.

Limitations

1. Only one group of A-level and GNVQ participants was tested due to the timing of the study having to be right at the end of the students' courses.
2. Only one geographical location was used.
3. The study only deals with the English qualification system.
4. There is only a "small crossover section," which will limit the ability to state conclusively that the qualifications are "equal."

Delimitations

1. Students aged 18 years participated in this study.
2. Students from only one Sixth Form College were studied.
3. Only the A-level in Physical Education and the GNVQ in Leisure and Tourism represented the academic and vocational qualifications.

CHAPTER II

LITERATURE REVIEW

There are many disputes in education about which type of knowledge is more important or superior. To a certain degree, industry influences the knowledge promoted through education. In the past, societal needs dictated that the workforce required two main groups of workers: skilled and unskilled. This was reflected in education and created an academic/vocational divide. Those who passed examinations went to become skilled workers, and those who did not became unskilled workers. This division is still prevalent in the current education system in England despite the changing needs of industry and the presentation of "equal status" qualifications leading to higher education. Academic A-levels (General Certificate of Education) were designed for individuals who are university bound, and the newer General National Vocational Qualification (GNVQ) was designed for individuals who are trade bound. This chapter will examine ways in which knowledge is translated into the post-16 curriculum and identify alternate forms of knowledge and learning. It will look at the status of academic and vocational qualifications offered in the post-16 curriculum and present the newest movements to break down the academic/vocational divide.

A question central to this investigation is whether students taking the A-level G.C.E. are "better" than those taking the new GNVQ. If students in each of the two programs are essentially able to perform successfully a wide range of tasks of the same intellectual rigour, they could be considered equivalent. However, each qualification values certain concepts of knowledge and competencies more than others. In general, A-levels are considered to encompass the intellectual rigour and GNVQ the wide range of tasks (Edwards, 1997). In spite of their differences, Dearing

(1996) has identified common areas, including curriculum content, that suggest an overlap of the two qualifications. It is from this notion that the research has been based.

Knowledge and Learning Theories

Academics have looked at knowledge in many ways. This literature review considers the pursuit of knowledge from three of these differing perspectives. The first looks at knowledge in the form of abilities that are sought above others in the educational pursuit of knowledge. The second perspective suggests there are multiple intelligences, most of which are not "differentiated" in education, and the third challenges the accepted traditional theories of knowledge.

It could be said that education is, in part, the pursuit of knowledge. Like so many things, English educational institutions have developed with deep-rooted traditions and history. Priority concerns include the quality of mind that education is supposed to produce and the forms of knowledge with which education should be concerned. Changes in what constitutes quality of mind have occurred through time. For example, it once was practical to study subjects such as Latin. In the modern world, there is a reduced need for classical languages; modern language studies have replaced them. In the same way, physical education has evolved from a Swedish style of personal exercise to a form promoting team games.

Who can say what forms of knowledge are more important than others? In an educational environment, the definition of "knowledge" still tends to reflect a traditional form. Perhaps it is time for the concept of knowledge to evolve to a role more fitted to today's society. Hirst (1965) identified three areas of knowledge, each distinguished by its method of learning: the natural sciences, the humanities and the

social studies. The cultivation of certain aptitudes and attitudes of mind occurs through the three elements of knowledge.

Hirst (1965) also believed that the four abilities sought above others in the pursuit of knowledge are to think effectively, to communicate thought, to make relevant judgements, and to discriminate among values. He described, "effective thinking" as logical thinking that is applicable to practical matters, such as which partner to choose to marry. This perspective explains effective thinking as a mental ability that results in an achievement. The achievement is publicly describable and publicly testable. According to Hirst, there can be effective thinking only when the outcome of mental activity can be recognised and judged by those who have the appropriate skills and knowledge to do so. Hirst explained "communication of thought" as requiring another group of skills, those of speaking and listening, writing and reading. The ability to "make relevant judgements" involves a person acquiring a whole range of ideas and translating them into experience. It is the art of relating theory to practice, thoughts to actions. Finally, "discrimination of values" is described by Hirst as a person's ability to prioritise values. An example of discrimination of values might be the awareness of fair-play or self-control.

The concepts of knowledge are not unproblematic. Hirst (1965) made the point that generalisations on these individual concepts of knowledge are very misleading, pointing out that knowledge criteria are peculiar to the particular area of knowledge concerned. For example, communication in the sciences has only certain very basic features in common with communication in poetic terms. It is only when you look at abilities in the various domains and what they refer to in publicly recognised terms that it is evident what is involved with developing them. Understanding the concept of effective thinking is like talking of the development of

successful games playing. A unifying label is misleading when the process involved with playing tennis has nothing in common with the process of playing tiddly-winks. Hirst stated, "It is vitally important to realise the very real objective differences that there are in forms of knowledge, and therefore in our understanding of mental processes that are related to these" (p.120).

There is also a danger of looking for transfer of skills where none are detectable. It must not be assumed that skill in tiddly-winks will get us very far with tennis. Even if there are common skills in activities such as squash and tennis, it must not be assumed that the rules for one activity will do as the rules for the other.

Multiple Forms of Intelligence

Different forms of intelligence and different ways of learning have been described by Gardner (1984). Considering the concept of intelligence, Gardner presented seven different forms of intelligence: Linguistic, Musical, Logical Mathematical, Spatial, Bodily Kinaesthetic, Intra-Personal and Inter-Personal. These different categories of intelligences will be briefly described.

The first intelligence is identified as Linguistic (Gardner, 1984). An individual who exhibits linguistic intelligence understands the connotations and semantics of words, has a firm grip on phonology, and possesses a mastery of syntax. Linguistic intelligence involves the ability to use the rhetorical aspect of language, the mnemonic potential of language, and language for explanation. The domain of linguistics is demonstrated with an example of a poet whose linguistic skills or relationship to words are thought to be far beyond our ordinary powers.

The second area of intelligence, Musical, is described through musical abilities such as those exhibited by a composer, conductor, instrumentalist, or singer. It includes the ability to use melodies, rhythms, and harmonies.

Logical-Mathematical intelligence is identified as the third form of intelligence. It is concerned with formal-operational thought and logical-mathematical operations. It begins with an intuition of numbers and an appreciation of simple cause and effect. It can be traced into the highest reaches of contemporary logic, mathematics and science.

The fourth form of intelligence identified is Spatial intelligence. Central to Spatial intelligence are the capacities to perceive the visual world accurately, to perform transformations and modifications upon one's visual stimuli. It is noted that an individual with Spatial intelligence can have acute visual perception but little ability to draw, imagine or transform an absent world.

Bodily-Kinaesthetic intelligence is the fifth form. It is characterised as the ability to use one's body in highly differentiated and skilled ways, for expressive as well as goal-directed purposes, and a capacity to work skilfully with objects involving fine motor movements and gross motor movements of the body.

Intra-Personal intelligence, being able to understand the internal aspects of a person, is identified as the sixth form. The core capacity is the ability to access one's own feelings, knowing one's range of affects or emotions. Intra-Personal intelligence is further described as the capacity to effect discriminations among these feelings and, eventually, to label them, to enmesh them in symbolic codes, and to draw upon them as a means of understanding and guiding one's behaviour.

The final form of intelligence identified is Inter-Personal intelligence. This is the ability to notice and make distinctions among other individuals, in particular, among their moods, temperaments, motivations and intentions.

It seems apparent that there are some domains of intelligence that are given more priority than others in educational practice. Hirst's (1965) definition of knowledge and ability and Gardner's (1984) descriptions of multiple intelligences raise the question of whether English educational institutions are moving with a changing society, promoting the best opportunities for learning? Hirst (1965) states,

> Syllabuses and curricula cannot therefore be constructed simply in terms of information and isolated skills. They must be constructed so as to introduce pupils as far as possible into the interrelated aspects of each of the basic forms of knowledge, each of the several disciplines. And they must be constructed to cover at least in some measure the range of knowledge as a whole. (p.132)

Alternative Perspectives on Knowledge

Burgess (1986) challenges the accepted traditional theories of knowledge and learning, focusing on the scientific method as a measure for new theories and laws and using Karl Popper's (1959) theory of the logic of scientific discovery to challenge existing theories of education. The researcher notes that references made to Hirst and Popper are dated; however, both were very influential in the 1960's, setting the direction in English education. The usual scientific method depends on induction based on observation and experimental evidence. A vast number of repeated observations lead to a hypothesis which, when verified, is established as a law. Popper's theory tackles induction by stating, "there is no induction, because universal theories are not deducible from singular statements" (Burgess, 1986, p.63). However, Popper (1959) does propose that singular statements can refute them. His theory starts with a problem, to which is offered tentative theory, solution, or hypothesis; error is eliminated, eventually leading to theory. Critical revision gives rise to new problems.

Popper's theory is interesting because his theory of knowledge and learning are the same.

This paper claims that using Popper's (1959) theory we should, in the same way, be questioning what we do in educational practice. The modern education system operates on acceptance of induction. The whole activity of teaching depends completely on the basis that knowledge exists and can be imparted. It is also suggested that learning courses (this term in England has the same meaning as "program" in North America) and curricula assume that knowledge is independent of problems. For example, few people ever ask, "what kinds of questions does my degree course prepare me to solve?" Examinations are little more than a test of the accumulation and manipulation of knowledge. The problems they pose are seldom the problems of passing an exam (Burgess, 1986).

In keeping with Popper's (1959) theory, it is important to distinguish different kinds of problems. Firstly, there are problems of "what is the case?" which are called scientific problems. Secondly, there are problems of how to get from one state of affairs to another, which can be called engineering problems or practical problems (e.g., how to get from one side of the river to the other or get bread to toast). Thirdly, there are the formal problems of mathematics or chess. Lastly, are the philosophical problems, which include ethical and aesthetic problems.

Most people are concerned with engineering or practical problems. They need to know how to get from one state of affairs to another. Problems usually concern homes, families, jobs, income and leisure. People typically want to change their circumstances; in this they believe education will help. Unfortunately, educators are preoccupied with the other kinds of problems and concentrate on ready-made scientific, formal, and philosophical solutions. By accepting the logic of learning, by

organising education at all levels explicitly around the formulation of problems, the proposals of solutions, and the testing of these solutions, we are on the brink of a creative revolution in education (Burgess, 1986).

It is clear that there are different formulations of knowledge (Gardner, 1984; Hirst, 1965; Wolf, 1995) that have produced different strategies for the learning of particular knowledge. Put another way, there are different learning strategies for knowing who the fifth King of England was as compared with learning strategies for knowing the quickest route from the north of France to the south. One is seeking knowledge for the sake of knowledge; the other is for practical reasons. This scenario is not, however, unproblematic as might originally be thought because more than one learning strategy might lead to the same answer. For example, there might be two different routes that lead to the south of France and different learning strategies for identifying the fifth King of England. Hirst (1965) reinforces this thought by stating,

> Some places in a territory may only be get-at-able by a single specified route and some forms of knowledge may have concepts and relations that cannot be understood without first understanding certain others. But that countries are explore-able only in one way is in general false, and even in mathematics, the most strictly sequential form of knowledge we have, many ways of coming to know the territory are possible. The logic of a subject is relevant to what is being taught, for its patterns must be accepted as essential to the form of knowledge. But how those patterns are best discerned is a matter for empirical investigation. (p.135)

Competence-Based Theory

This section will explain how knowledge has been translated into two specific courses that are the focus of this study. It will describe how the new course's learning theory contrasts with the traditional learning theory of the older course.

The introduction of the GNVQ has been from a vocational perspective rather than an academic one, so a different theory has been employed in the production of the curriculum. The new qualifications are based on an explicit "statement of

competence." This term can mean many different things to different people. So in the form of a qualification, a specification needs to be written down in a recognisable, agreed upon format for everybody to see. In this study competence is considered in terms of the National Council of Vocational Qualifications proposed model within the NVQ and the GNVQ.

In the past, provision of vocational education and training was not seen as directly related to employment needs. Similar to traditional education courses, Vocational Education and Training tended to be "educationally" oriented both in content and values, concentrating on an acquisition of knowledge and theory while neglecting performance. However, it is performance that essentially characterises competence.

The statement of competence in the new qualification defines what candidates are required to be able to do for the award of NVQ or GNVQ. It includes criteria by which performance can be assessed. This, in turn, lends itself to goal setting for education and training courses, producing new kinds of standards of achievement. Justification for the new model is that previous initiatives in competence-based education and training have tended to be limited to particular courses, and performance criteria have often been absent. Competence-based learning is now being implemented as a total system (DFE/ED/WO, 1991). Competency is achieved through experiential learning, work place learning, and open learning, and achievements via these roots are on an equal footing with those of more formal courses of education and training. The awards are based upon assessed competence, not the way in which competence is acquired.

When considering education as a whole, education does have some vocational relevance simply because schooling leads into employment. Wolf (1995) suggests

that the concept of competence has always been present in vocational and professional education and training, and that it is here that the concept of competence is described as "the ability to perform the activities within an occupation" (p.31). Thus by competent we mean performing at the standards expected of an employee doing the same job (Manpower Services Commission, 1985). The relevance of vocational education compared to traditional education is highlighted by Wolf (1995), who states, "The competent plumber is one who can build or mend an efficient central heating system, not the one who can define a substance's specific latent heat of fusion" (p.32).

In educational terms this has translated into two courses, the academic and the vocational, each with distinctive features and purpose. To examine these, it is necessary to present each course so that individual features and purposes can be identified, thereby providing a foundation for further issues concerning the status of each course and possible methods of comparing their status.

Characteristics of NVQ and GNVQ

For the NVQ and the GNVQ, different modes, contexts and timescales are used to suit differing abilities and opportunities. The learning objectives are expressed as outcomes independent of learning and assessment. Figure 2.1 gives a visual representation of the way competence theory has been applied in the NVQ and the GNVQ. Outcomes are expressed within this qualification structure as Statements of Competence and Statements of Achievements, which are considered synonymous.

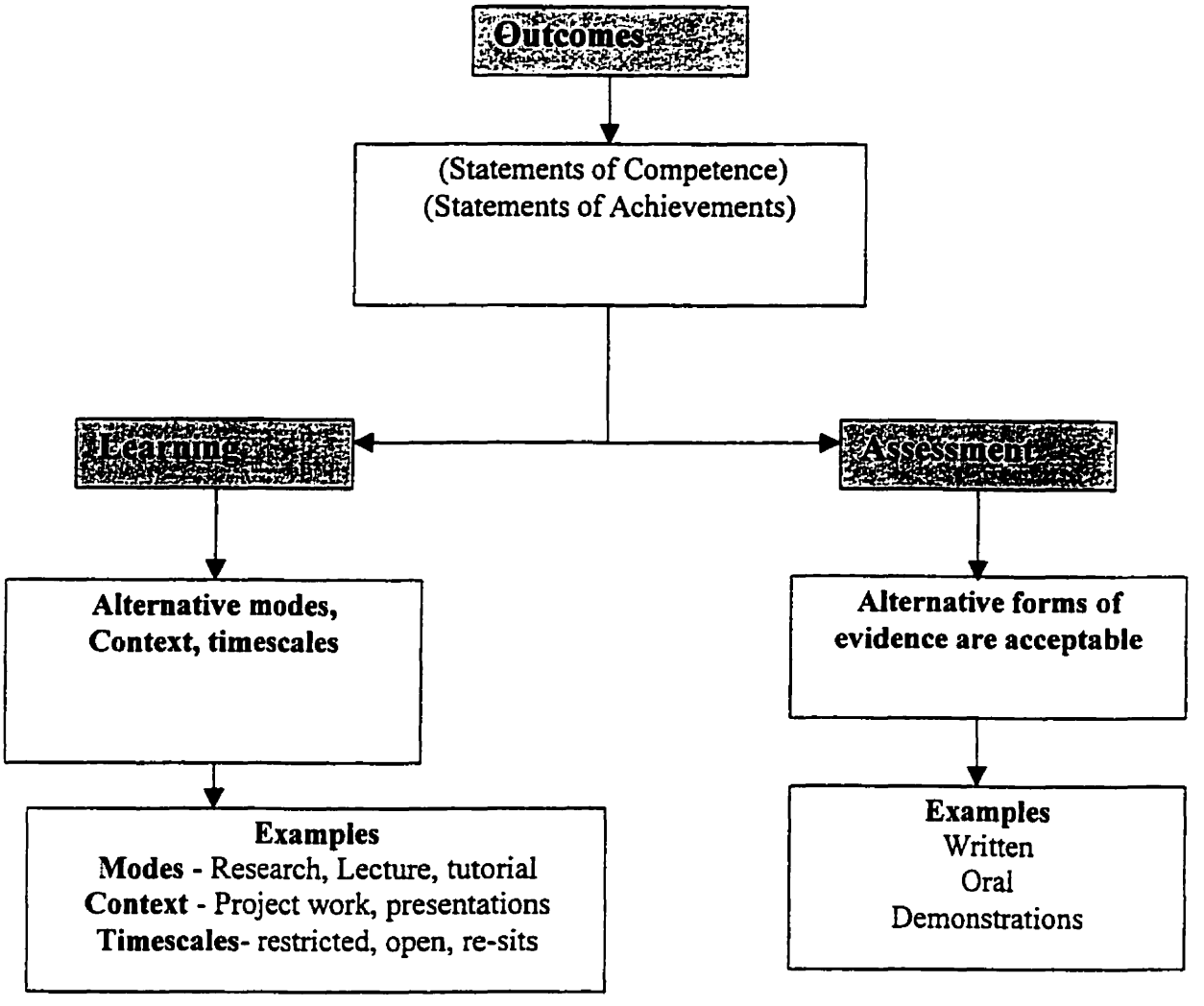

Figure 2.1 The curriculum model on which NVQs and GNVQs are based.

To understand the functioning of this model, it is necessary to look at the origins of the statement of competence for the NVQ. Jessup (1991) defined it this way: "A statement of competence clearly relevant to work and intended to facilitate entry into, or progression in, employment and further learning, issued to an individual by a recognised awarding body" (p.32). Competence is described by the statement as confirmation of the ability to perform a range of occupational related activities and the underpinning skills, knowledge, and understanding required for the performance

of the occupation. The statement of competence provides a target for individuals and courses to aim at.

The statement of competence is built up of bricks in the form of elements of competence and the associated performance criteria. The statement leads to performance, which is central to the concept of competence. Knowledge and understanding underpin the requirements of the performance. Figure 2.2 is a visual representation of how the statement of competence is operationalised to develop the overall grading system for the GNVQ.

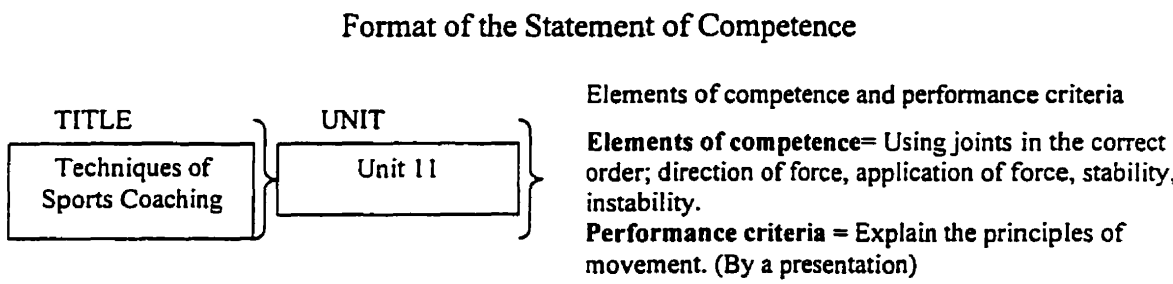

Figure.2.2 How the statement of competence is operationalised with an example from the Advanced GNVQ.

The statement of achievement relates to the GNVQ model, which incorporates the essential features of the NVQ. The GNVQ model has evolved from the principles of the NVQ and may be perceived as an extension of the NVQ model into the education system. GNVQs are made up of units as in the NVQ model, but there are a number of differences between GNVQ and NVQ methodology (Further Education Unit, 1993).

General National Vocational Qualifications are vocationally specific and concerned with broad-based vocational education. The NVQs are occupationally

specific and concerned with occupational competence. GNVQs are not designed to develop occupational competence directly. Their purpose is to facilitate the acquisition of a foundation of skills, knowledge, and understanding that underpin a variety of occupations (Jessup, 1993). They are based on statements of achievement developed by the National Council of Vocational Qualifications. The NVQ, based on standards developed by the Confederation of British Industries (1989) cover functions performed in a specific occupation.

Core skills are another significant feature of vocational education. Six core skills have been presented: problem solving, communication, numeracy, personal skills, information technology, and competence in modern foreign languages. The GNVQ includes core skills whereas the NVQ does not include core skills. The purpose of core skills is to encourage breadth of learning and develop the ability to use the skills in different situations. Communication, for example, might entail a verbal presentation of a task set within the GNVQ curriculum. Such skill can then be applied to an employment or higher education setting. The individual core skills are assessed as units in a similar manner to the general structure of the GNVQ unit. This is intended to make the core skill and its transfer to other situations more apparent to students and more transparent for employers to identify (Spours, 1995).

Within the GNVQ all qualifications at the same level are composed of the same number of units of the same size. GNVQ have three national levels: Advanced, Intermediate and Foundation. The number of units varies according to the level of the award being taken. For example, at Advanced level there are eight mandatory vocational units, four optional units, and three core units in areas ranging from Manufacturing to Leisure and Tourism. At Intermediate level there are only six vocational units that include mandatory and optional units and core skills. GNVQs do

not require work-based assessment but require externally set tests. The NVQs require work-based assessment but do not require externally set tests. GNVQs are graded; NVQs are not graded. The number of GNVQ titles, or occupational areas of study, is restricted; there is no restriction on the number of NVQ titles.

The A-level Curriculum

In contrast to the GNVQ, A-level qualifications emphasize 'knowledge for its own sake' rather than the practical application. One way of presenting the A-level curriculum so that it can be understood is by comparison with other European qualifications taken at the same age. The A-level curriculum promotes only a small number (four or less) of subjects studied in depth whereas a continental curriculum promotes five or more subjects in less depth. The A-levels studied are fewer simply because they go into so much more detail. The following section highlights some of the issues of the internal frameworks of the components of the A-level and GNVQ curricula, thus illustrating the features that keep them independent. The features to be considered by this study are the curriculum, philosophy, and assessment.

Young and Leney (1997) present a list of points that compare the socially and intellectually exclusive features of the present A-level curriculum and an Advanced level curriculum of the future. They highlight the differences in the design of the curricula, which in turn would lead to differences in delivery and assessment.

The present A-level curriculum supports technical knowledge and skills. The courses have traditionally linear curricula, and the testing of the A-level is exclusively by terminal assessment. The knowledge content of the A-level curriculum promotes knowledge for its own sake and prioritises reproduction of given knowledge. The goal of the A-level is to be socially selective.

In contrast, the Advanced level curriculum of the future supports the process of learning skills. Courses are formatted largely as modular curricula, and testing of the Advanced level curriculum is varied and continuous. The knowledge content of the Advanced level curriculum focuses on specific purposes and prioritises production of new knowledge. The goal of the Advanced level curriculum is to be socially accessible. Most of the components of the Advanced level curriculum of the future are principles seen in the GNVQ.

Philosophy of the General National Vocational Qualifications

Another way of discovering internal differences between the A-level and GNVQ curricula is from the perspective of the learner. Hodkinson (1991) explains the A-level curriculum as traditional, described as subject-centred, indicating that the curriculum is designed on the subject matter or content to be learned. The GNVQ curriculum is described as progressive and student-centred. Its curriculum is designed in terms of the required learner outcomes.

Elaborating on the student-centred curriculum, some researchers promote a philosophy regarding the curriculum and the learner that is referred to as empowerment. The term empowerment exists both in the work place and in education. In the work place there are various contrasting views of the purpose of empowerment. Mabey and Salaman (1995) explain it in terms of focusing on empowering staff to develop the individual and to engage employees' commitment, creativity and energy. Employers see empowerment as a way of securing greater employee satisfaction. A second view presented by Peters and Waterman (1982) is that an empowered worker is a more flexible worker, capable of initiative and enterprise. Thirdly, empowerment is expected to reduce the supervision of employees

and reduce costs (Guest, 1987). However, these ideals of empowerment do not stand unchallenged. Marchington (1982) promulgated the view that even when employees are given a teamwork task, the senior management usually dictates not only the outcomes of the task but the resources that are available to complete it. So this then becomes empowerment within a predetermined framework and does not give pure autonomy to the individual.

The same argument exists when translating these theories into the GNVQ. Bates, Bloomer, Hodkinson, and Yeomans (1998) suggest the GNVQ's philosophy of empowerment gives learners more control over their learning. However, empowerment is identified in terms of the powers of different groups of people; in education this refers to students and teachers. Empowerment in this context could be likened to a continuum where at one end there is very close teacher control and responsibility and at the other end there is a strong emphasis on student individualisation and self-responsibility. Daniel (1995) remarks, "The key objective of the current English reforms is to empower all members of an increasingly diverse population to lead fuller lives" (p.xvii). Burke (1989) comments on the Jessup (1993) Outcome model, saying that it is "directed to liberating and empowering the individual rather than controlling or merely modifying behaviour" (Burke, 1989, p.10). The philosophy, in part, is supposed to complement the economic function. The theory of empowerment lends itself, even if restricted, to different approaches of learning and teaching the curriculum, unlike the traditional academic curricula (Hodkinson, 1991).

The Assessment of A-level and GNVQ.

Steadman (1995) identifies the purposes of academic assessment as a form of selection for further progress and a method for judging standards of individuals across groups. He interprets these purposes as (a) using formative information to aid diagnosis of the progression of the individuals and (b) detecting differences between individual students. The paper-based assessment process that Steadman describes is summarised as "record keeping when a lot of the information is not used. Predictions of future performances, formative/diagnosis, summative certification and accountability" (p.202). In contrast, vocational assessment reflects the economic competitiveness of the country and is used to raise skill levels of individuals in direct relation to economic activity. The standards are defined in terms of competencies and are directly related to occupational performance.

The assessment of a qualification strives to be valid. Many traditional qualifications only assess a proportion of the specified award by giving a choice of questions to answer in an examination paper. The strength of the GNVQ model is the emphasis on validity of assessment (Oates, 1994). For any given activity, the most appropriate method of assessment is used. For example, if assessing a candidate's competence in interpersonal skills, the most appropriate assessment would be observation. This model also promotes written tests as having a role to play in the assessment of knowledge. Students do not, for example, have a choice of questions from the curriculum. The GNVQ tests check systematic knowledge over a particular unit and the pass rate is 70%.

Qualifications are not primarily a means to an end. They are a representation of an area of knowledge covered and an indication of what an individual can do. Ultimately it would seem that qualifications are used as currency to convince an

employer to employ one candidate over another. From the employer's point of view it might make more sense if a vacancy was to be filled by the person with the most appropriate training in the area, although this ignores other attributes. Even specialists' activities requiring a degree level qualification, still boil down to the particular areas of performance that need to be filled. For example, to become a teacher requires a degree; however, the degree does not guarantee suitability for a particular position. The job is dependent on the individual needs of the employer who might have an additional agenda that goes beyond the degree qualification.

Within the assessment area questions arise relating to both knowledge content and quality of assessment. Each discipline justifies itself to its own satisfaction. However, vocational qualifications still struggle to gain equal status with academic. Is this because of a deep-rooted tradition causing prejudice?

What Constitutes the Academic/Vocational Divide?

What are the problems arising from these obvious differences in curriculum, teaching, learning, and assessment? In our society today, does it not make more sense to allow pupils to have the choice of their preferred learning medium and the opportunity to select an academic or vocational learning path to obtain equivalent qualifications? The answer seems to depend on judgements made on the status of the qualifications. Research has shown that many universities will not accept GNVQs as equal in status to A-levels (Anderson & Haywood, 1996). However, Government reforms have given the appearance of a breakdown of this academic/vocational divide.

Government Intervention into the Academic/Vocational Divide

There are commonly stated reasons for changing the A-level curriculum. The A-levels do not cater to a sufficient range of talents, and taking only three subjects is unnecessarily limiting (Finegold et al., 1990). A-levels can be a risky investment of time as so many are left without a qualification at the end of the course (Smithers, 1994). There are also issues of "shelf life," inferences that knowledge and skills quickly fade if not practiced. A great deal of the A-level curriculum comes down to memorising knowledge for a written examination (Blackstone, 1997).

With this evidence of the need to amend the A-level curriculum, the government has slowly made attempts at reform. However, Spours (1993) suggests that while many of the reforms have the appearance of breaking the divide, in actual fact they are strengthening it. Spours (1993) purports that there are three basic opinions about the GNVQ. The first, adopted by the government, is that the GNVQ is a separate but highly regarded post-16 route. Jessup (1993) and others see the GNVQ as being able to erode barriers and divisions over time. A third position argues that the real barrier to reform is the preservation of A-levels, which will ensure that history repeats itself and vocational awards will once again chase the academic.

Despite the rejection of the Higginson Report (DES, 1988) discussed in Chapter I, a slow change began to occur to the A-level curriculum with a move towards modular courses, increased components of coursework, the introduction of criterion-referenced assessment, and a role for core skills. However, this came to an abrupt halt and changes to A-levels started to reverse with the 1991 government White Paper, "Education and Training for the 21st Century" (DFE/ED/WO), 1991). The document clearly demonstrated the government aim to restrict access to A-levels and promote participation in the vocational alternative.

A move that demonstrated these government intentions was the restriction on the amount of coursework in the A-level. This was despite a broad professional consensus that increased coursework helped to improve students' motivation and levels of performance, especially for those that were at the margins of the academic track. This, in turn, led to a re-emphasis on terminal assessment. Participation rates were affected as fewer individuals, only the top 25 % of A-level participants, could expect to gain two A-level A-C grades within the academic track. Ball (1992) summarized the effects of reduced coursework quite succinctly. ".... The British have persistently underestimated the human potential to learn. The worthy plodder, so the received wisdom goes, will never make the grade. The gifted layabout (if he pulls his finger out for a minute or two) probably will" (p.12).

Core skills were proposed for breadth of study, which was a strong recommendation from Finegold et al. (1990) in his work comparing the English system with that of other countries. Core skills were introduced as a minimalist way of bridging the gap between academic and vocational qualifications. What has actually resulted is a government curriculum policy on core skills about which Spours (1993) stated, "It is prepared to broaden the curriculum requirements slightly for those outside the top quartile in the academic track, but the curriculum of the 'elite' remains unchanged" (p.153).

Challenges to the Internal Nature of Qualifications

The internal nature of qualifications refers to the building blocks of content that make up the particular course. There has not been a lot of progress in this area as government has brought a halt to initiatives that were working on changing the internal structures of courses.

Researchers have tried to illustrate the effects of changing the internal structure of the qualifications through an approach known as the Y-model (Burgess, 1993). Y-models were attempts to alter the internal nature of qualifications by modularising and designing content to combine academic and vocational study, which produced common learning processes for the two tracks. One of the most well known Y-models was the Wessex Modular A-level Project (Rainbow, 1993). The Wessex Project modularised the A-level curriculum, expressing a whole approach that emphasises the role of guidance, the preparation of materials, and the availability of support to assist learners in making choices within a modular system. Spours (1993) commented on innovations that challenge the internal structure of courses, saying that the Wessex Project in particular had shown great success. In the pilot study, it demonstrated that academic qualifications could be amended to produce higher results, increased choice of courses, and motivation of students. These innovations also show signs of bridging the gap between the academic and vocational divide. The important point regarding these projects, one of which is the GNVQ, is that they all challenge the existing system. They all have a common starting point of criticism of the academic/vocational divide and their purpose is to create greater breadth and flexibility of learning by breaking down the academic/vocational tracks that have been created in the qualification system.

Once again the government has intervened by closing down reform opportunities in the academic track. "... the government does not wish to encourage common curriculum features such as substantial in-course assessment or modularisation between the dual tracks" (Spours, 1993, p.163).

Trackers, External Frameworks, and Unified Systems

To understand qualification external frameworks, it is helpful to compare three basic positions on the reform of English qualifications. The Trackers' educational position on the reform of qualifications supports the idea of preserving a distinction between the various academic and vocational qualifications (Hodgson & Spours, 1997). Trackers believe this accommodates different types of abilities and recognises that the academic and vocational qualifications have different purposes.

Another position on the reform of qualifications is held by a group known as Frame-workers (Hodgson & Spours, 1997). They promote a framework around the existing qualifications with the intention of flexibility and choice of qualifications. Frame-workers create the beginnings of a combination of academic and vocational study. However, frameworks are also seen as a means of continuing with the existing qualifications and providing only a modest stimulus for reform of the existing and continuing qualification tracks, namely academic and vocational.

Young (1993) describes the third educational position on the reform of qualifications as that held by a group known as the Unifiers. Unifiers argue for a unified qualifications system. This would mean replacement of the existing qualifications in favour of one single qualification structure, promoting a single enriched academic and vocational curriculum that would then pave the way for modularity and assessment strategies of the curriculum. Unifiers believe this would increase the government's aims of participation rates post-16 and provide the knowledge required for the economic demands of the next century.

The present situation with the reform of English qualifications is the educational position of the Frame-workers (Dearing, 1996). Existing qualifications have been placed within a framework in Dearing's hierarchical structure, previously

discussed in Chapter I. The research presented in this document up to this point suggests that the qualifications remain unchanged. There has been no government intervention to reform qualifications from the viewpoint of a unified system. So the A-level and GNVQ qualifications remain represented as equal status whilst, in practice, there is no common ground to be able to prove equivalence of the qualifications in a quantitative manner.

With the government not supporting reforms in the A-level curriculum, the two courses remain very different in construction of their curricula. No common ground in the curriculum means no common assessment methods and no direct means of comparing the A-level and the GNVQ. In view of this predicament it is a contradiction that the government has insisted on external testing of GNVQ to establish parity of esteem with A-levels (Spours, 1997)

Sir Ron Dearing (1996) proposed a need for testing different abilities and skills. Major barriers to breaking down the academic/vocational divide seem to be the inconsistencies in the way these two qualifications define their levels, the amount of learning in their constituent parts, and the outcomes of that learning. Stanton (1995) suggests that these inconsistencies diminish the possibility of providing effective and understandable guidance, establishing parity of esteem between the different routes, encouraging credit accumulation and allowing credit transfer, and avoiding duplication or voids when moving from one course to another.

The present situation leaves those involved in education having to understand two different languages. The GNVQ has "statements of achievement" composed of units, all of which are the same size and have to be allocated by levels. The A-level has grades indicated by letter.

The success of the GNVQ has enabled a wider range of subjects from which to select studies. In turn, despite government intervention, there are common curriculum overlaps appearing between A-levels and GNVQs (Steadman, 1995). These overlaps, although small, present an opportunity to investigate directly the knowledge gained in the GNVQs and A-levels.

Although researchers have looked at the internal structure of qualifications using a modularised curriculum, very little evidence has tried to establish empirically if the two qualifications are, in fact, of equal standard. One piece of research that directly relates to this study is reported in a paper produced by Barry (1997), entitled "An Analysis of the Relative Demands of Advanced GNVQ Science and A-Level Chemistry." The main emphasis of Barry's study was on the learning demands made upon the learner. The purpose of this focus was to determine how the different approaches to learning might relate to the quality of learning outcomes. To obtain initial data, three questionnaires were used. The first questionnaire gathered information regarding background knowledge of the individual participants, such as performance on their school qualifications. The second questionnaire gathered data concerning the participants' preferred learning styles. The third questionnaire was an adaptation of an existing questionnaire that looks at approaches to studying, the purpose being to interpret the participants' approaches to study per se and to place them into one of three existing learning categories. The participants then took a test that was a compilation of A-level questions and GNVQ questions taken from the science and chemistry subject domains. The point of this test was to identify any differences in the standard of the questions for the two courses. The findings suggested that the standard of GNVQ multiple-choice questions was not as high as the standard of the A-level multiple-choice questions.

It was the intention of the present study to develop and expand the work of Barry (1997) by gathering additional empirical data. The study did not look directly at the standard of the A-level and GNVQ questions but focused on the performance scores of the A-level and GNVQ participants to see if there was a significantly higher scoring by the A-level candidates compared to the GNVQ participants. To obtain this information, the exam questions were set in a similar fashion to those in Barry's work. The exam questions also had to be within the parameters of the existing examination systems for A-level and GNVQ. So in this study the test was compiled of A-level Physical Education questions and questions from the A-level nearest equivalent GNVQ, Leisure and Tourism, using past examination papers. This ensured that the validity of the questions was already tried and tested.

It was hoped that the study would provide some empirical evidence on the standard of the two qualifications with regard to parity of esteem. At the present time, even though the government is presenting them to be of the same standard, there is little evidence to support it. This is further complicated as the two qualifications are very different in structure, instruction, and assessment. The small crossover section, or common ground, in the qualifications was seen as a window of opportunity to put these two qualifications to the test by obtaining quantitative data to support each qualification. If the results of the exam paper were not heavily weighted towards one qualification or the other, then it would give an indication of the equivalency of the two qualifications. However, it should also be noted that because there is such a "small crossover section," this would limit the ability of the research to state conclusively that the qualifications are "equal."

Summary

There has always been debate about which English qualification is superior to others. Researchers have challenged this concept suggesting that English educational institutions are preoccupied with placing more importance on some forms of knowledge and ways of learning than others. This has created an academic/vocational divide represented in this study by the A-level Physical Education academic qualification and the Leisure and Tourism GNVQ. Due to the nature of knowledge and ways of learning, both the A-level and GNVQ have particular features that keep the two qualifications independent of one other.

Identifying where government has intervened enables the reader to see the predetermined boundaries in which this study operates. The problem is emphasized, by the government framework, which arranges the English qualifications in a hierarchical order, whereby the academic and vocational qualifications of the study are promoted as equal in status. However, in practice the government promotes the vocational qualification as being of a lesser standard than the academic alternative.

Researchers have responded to the problem of the academic/vocational divide by trying to promote parity of esteem through the structure of the individual qualifications. They proposed to do this by breaking down the independent features of each qualification and re-structuring them as one qualification. This would provide common ground on which to achieve parity of esteem.

Strong government resistance has met these challenges, and the present situation leaves educationalists with three basic positions on the reform of the qualifications: 'Trackers', 'External-Frameworks', and 'Unified Systems'. The present English qualification system is represented as an External-Framework.

Researchers have unsuccessfully challenged the internal structure of the qualifications in order to reform the qualifications and promote common ground between them. This has prevented direct comparisons of the separate qualifications. However, with the successful uptake of GNVQs and the increased subject areas of study, small crossover sections of common curriculum content in the two qualifications have been achieved.

This study investigated empirically whether the two qualifications are, in fact, of equal standard by directly comparing performance scores of students taking A-level Physical Education and students taking Leisure and Tourism GNVQ. In addition, the following points discussed in this chapter will be addressed in the discussion:

How will empirical evidence comparing GNVQ in Leisure and Tourism and A-level Physical Education affect those taking GNVQs?

Do GNVQs lack knowledge content?

Can clear parity of esteem be achieved when the existing qualifications are operating as an External-Framework?

Is true parity of esteem more likely to be achieved by changing the internal structure of the qualifications?

CHAPTER III

METHOD

The purpose of this study was to determine whether two educational courses provide students with similar knowledge content levels and equivalent qualifications for entering employment or higher education. Specifically, the study examined the effect of the A-level Physical Education course and the General National Vocational Qualification (GNVQ) in Leisure and Tourism course on post-16 students' knowledge of the courses' common curriculum areas. Results were expected to provide empirical evidence about the equivalency of the two qualification routes.

Participants

The participants selected were all aged eighteen or over and of mixed gender. All participants were on their final year of their respective two-year courses. The type of institution used in the experiment was a single Sixth Form College. Both courses were operated from the same institution. Separate members of staff at the institution taught the two courses.

The participants were students taking either the A-level or GNVQ course; there were two classes in each course for a total of 73 students. To ensure appropriate representation from each course, the participants were randomly selected from the class lists of the two courses. An equal number of 15 GNVQ students and 15 A-level students were selected with seven females and eight males in each group.

Instrument

The instrument used in this study was a test in the form of a short exam paper. The test was compiled by studying the A-level Physical Education curriculum and the

Advanced GNVQ Leisure and Tourism curriculum to find common topic areas. Questions were then selected from the respective A-level examination papers and from questions created by an exam writer from "Educational Excellence," the awarding body for the GNVQ. Due to only a "small crossover section," from each of the curricula, it was recognized that the exam was limited in its ability to state conclusively that the qualifications are "equal."

The areas of the GNVQ course directly in common with the A-level physical education are units 11 and 12, "Techniques of Sports Coaching" and "Planning for Sports Coaching." These optional units of the GNVQ course are assessed through the writing of essays rather than by formal external examination. For this study, the GNVQ examiners were asked to create multiple-choice and short answer questions from the unit. Educational Excellence produces external test papers for other units of the GNVQ in similar ways. Further details of this procedure are reported in pilot testing.

All the A-level questions were adapted from past papers of the Associated Examining Board (AEB) ranging back to 1982. Assisted by guidelines and an A-level moderator, the researcher adapted a selection of multiple-choice questions and a selection of short answer questions. Once all the questions were available, five multiple-choice questions from a GNVQ background and five from an A-level background were compiled for the multiple-choice section. The short answer questions were made up of one GNVQ style question, one A-level style question and one question incorporating both A-level and GNVQ styles. All the questions were compiled in random order into one test consisting of 10 multiple choice and three short answer questions. The complete examination can be found in Appendix A.

The 13 questions were considered a reasonable number for the participants to answer in a revised period of 30 minutes; this was altered from pilot study information. This time was agreed upon, with the GNVQ examination writer and the Heads of Departments in the college, as being short enough to encourage students to participate, to prevent them from becoming bored, and to encourage them to answer the test questions proficiently.

The researcher acknowledges that creating such a test is complex and has limitations due to the different philosophies that each course is built upon, namely academic and vocational. It is noted that the testing instrument is limited to existing forms of test construction based on valued knowledge conceptions of the time that are in the linguistic areas (Gardner, 1984). The written test itself was limited to recognised forms of testing that the students were familiar with, so as not to compromise the validity and reliability of an established method of written testing. This also tied in with other limiting factors such as time and cost. Despite these limitations, it is felt that the strongest approach was undertaken by this study in order to address the hypotheses.

Pilot testing

The instrument used in the main study was pilot tested using co-educational sixth formers of mixed genders, aged eighteen or over from Godalming college. All participants were from the same institution. Five participants were just completing a two-year A-level Physical Education course and five participants were completing a two-year GNVQ in Leisure and Tourism. In total there were six females and four males that took part in the pilot study. None of these students were included in the main study. The same institution was used in the pilot study and the main research.

The intention of the pilot study was to develop Barry's work (1997) into more detail by gathering empirical data. The main focus of the pilot study was on the performance scores of A-level and GNVQ participants, investigating whether there was significantly higher scoring of A-level participants to GNVQ participants. In order to obtain this information, the exam questions had to be set in a similar fashion to Barry's (1997) work. The exam questions also had to be within the parameters of the existing examination system for A-Level and GNVQ. The questions were created using past examination papers. This ensured that the validity of the questions were already tried and tested.

An important aspect of the pilot study was the creation of the GNVQ questions. Because the overlapping GNVQ curriculum unit was accredited through the writing of essays, there were no past papers to select the GNVQ proportion of test questions. A GNVQ exam writer, who, through experience of writing multiple choice and short answer questions for other units within the overall GNVQ award, was able to create the questions needed, resolved the problem. As this is the main concept of the study, it is necessary to report the procedure.

All external test papers are produced in a similar way. The Examination Board - Ed Excel (Educational Excellence) produces external test papers and is an awarding body for GNVQ. The Ed Excel foundation incorporates BTEC (British Technology and Educational Corporation) and the London Examination Board. Since the government's intention to introduce GNVQ in the White Paper, 'Education and Training for the 21st Century" (May 1991), the task of coordinating the design and development of the qualification was given to the National Council of Vocational Qualifications. In order to ensure that the tests set by each awarding body meet a

common standard, a code of practice has been established that governs the setting and marking of tests.

The procedure for producing exam papers starts with the home writer. These people are selected for their knowledge in the unit areas and are employed by the GEAU (Government Examinations and Assessment Unit). The writers then hand their drafts to editors. This process involves three independent editors who first edit the paper then, if there is a major problem, send the paper back to the writer; or the editor makes minor alterations and then sends it to the chief examiner. The procedure is repeated with editor number two, and then editor number three. If the third editor finds a major problem, the paper is sent to Government Examinations and Assessment Unit. When the paper has successfully satisfied all three editors, it is sent to a home chief-examiner. Once the chief-examiner has approved the paper, it is submitted to the Government Examinations and Assessment Unit as a draft paper. It then goes to the Government Examinations and Assessment Unit-editing panel. If accepted, it is then passed to chief examiner. All the chief examiners cover a specified number of papers that are to be produced and analysed within a given time period. Their responsibilities include approval of draft papers for the editing panel, chairing editing panels, approving changes and signing off papers, conducting the post test analysis of results, production of a test series report, and attendance at a January series review of papers. Subsequently, two different proofreaders will check the final draft of each paper for spelling, punctuation, grammar, and house style. Following the incorporation of any amendments as a result of the above, a third proof reader checks the camera-ready copy of each paper as it goes to print. Once printed, the papers are then distributed to the test centres.

The procedure for implementing the test paper, once compiled, consisted of meeting the participants of the college over a two-hour lunch break. This was the only time available that did not interfere with their lectures and revision time. The procedure was broken up into a 5-minute period to brief the participants on the purpose of the study and to hand out the exam papers, a 40-minute period to complete the exam paper under examination conditions, and a 15-minute period for discussion of the paper. The discussion covered problems identified with the exam questions, instructions, arrangements, and any general improvements. The experimenter noted any interesting observations during the exam that might help improve the instrument or the administration of it.

The results indicated a 10% overall percentage difference of correct answers in favour of the GNVQ group. Comparisons of paired participants revealed that only one A-level student out-performed a GNVQ student and by only one mark. The results were not heavily weighted towards one qualification or the other, indicating that further investigation would be worthwhile.

As a result of the pilot study, the following changes were made to the instrument. After remarks from the participants and consultation with the respective Heads of Departments at the college, the duration of the examination was reduced from the original 40 minutes to 30 minutes. This was considered to be a reasonable time for 10 multiple-choice questions and three short answer questions. Short answer questions were added to the original 10 multiple-choice questions to vary the format of the exam. Question nine of the original exam was replaced with an alternative as students expressed difficulty with the wording of the question; the new question was provided by a GNVQ examination writer and approved by the Heads of Departments at the college. In addition, the procedures were altered to eliminate noise caused by

students leaving. Students who were allowed to leave once their test was completed disturbed others and encouraged those still finishing to rush the test. To eliminate the noise factor when leaving the examination, participants were required to stay for the duration of the examination.

Procedures

Once the examination paper was approved and piloted, permission to conduct the main experiment was obtained from the Head Teacher of the single college used. Permission was also obtained from the Heads of Departments of both GNVQ Leisure and Tourism and A-level Physical Education. Each was given a copy of the examination paper and asked to check that the students had covered all topics within the range of questions. This was necessary as the range of topics covered does vary from college to college.

Pilot information was also discussed with the Heads of Departments. Specifically, it was noted that, with little incentive, not many students volunteered for participation. The Heads of Departments agreed to talk to the students expressing their wish for the students to participate if selected. No information regarding the experiment was given to the students at that time. Consent Forms (see Appendix B) were handed out to all the students; they were returned during lectures to the Heads of Departments. The selection of participants was made from the returned consent forms.

The time tabling of four visits by the researcher was carefully planned over a two-week period so no interaction between the four student groups (two classes from each course) would be made. Each visit by the researcher dealt with one class group

of either GNVQ participants or A-level participants. The researcher introduced the purpose of the study and checked all the consent forms.

The test was administered as an examination paper in exam conditions. The participants sat a distance from each other making sure that their bags and coats were at the front of the class. Silence was maintained for the duration of the examination. Anyone who required the researcher's attention raised his or her hand.

The researcher gave a brief explanation of the nature of the study. (This information was also stated on the consent forms). The researcher then handed out the examination paper face down so that everyone started the test at the same time, and the participants were instructed to complete the test under normal examination rules. The researcher was present throughout the duration of the test to ensure the validity of conditions and answer any queries. All participants were instructed to stay in the examination conditions for the full 30-minutes.

Using past "official marking schemes," official answers to past examination papers created by the awarding bodies of the qualifications, the researcher scored the participants' performance. An A-level moderator and a GNVQ external verifier then checked all results for consistency.

Design and Analysis

Once the data were collected, the subject's scores on the GNVQ and A-level examination questions were identified. The two sample means of the GNVQ total scores and the A-level total scores were subjected to an independent t test to evaluate the total scores for each student. The data was then analysed for additional patterns via a two-way ANOVA with one repeated measure. The two factors were Groups

(GNVQ, A-level) and Question Type (GNVQ, A-level) with repeated measures on the second factor.

CHAPTER IV

RESULTS

This chapter is divided into four sections. The first section reports the descriptive summaries of the A-level and General National Vocational Qualification (GNVQ) groups. The second addresses the first hypothesis and considers the overall performance of the A-level and GNVQ groups. The third section addresses the second hypothesis, reporting performance of the groups on specific question type. The final section presents the statistical assumptions made of the data and as such allows the reader to judge the validity of the data analysis in terms of appropriateness and power.

The purpose of this study was to determine whether two educational courses provide students with similar knowledge content levels and equivalent qualifications for entering employment or higher education. The A-level and GNVQ groups undertook a common paper that was comprised of an equal number of questions from both courses.

Descriptive Summaries

The following table illustrates the correct responses of GNVQ and A-level groups for each question within the test and reports the mean correct responses. Figure 2.3 represents this data in graphical form.

QUESTION	QUESTION TYPE	CORRECT RESPONSES	
		A-LEVEL (n=15)	GNVQ (n=15)
1	A-LEVEL	10	9
2	A-LEVEL	3	1
3	A-LEVEL	1	3
4	A-LEVEL	15	14
5	GNVQ	4	8
6	GNVQ	12	9
7	GNVQ	4	3
8	A-LEVEL	11	9
9	GNVQ	10	13
10	GNVQ	7	9
11	GNVQ	15	15
12	A-LEVEL	10	11
13	GNVQ	15	15
MEAN CORRECT RESPONSES		**9**	**9.15**

Table 2

Correct Responses of A-level and GNVQ Students on Each Question

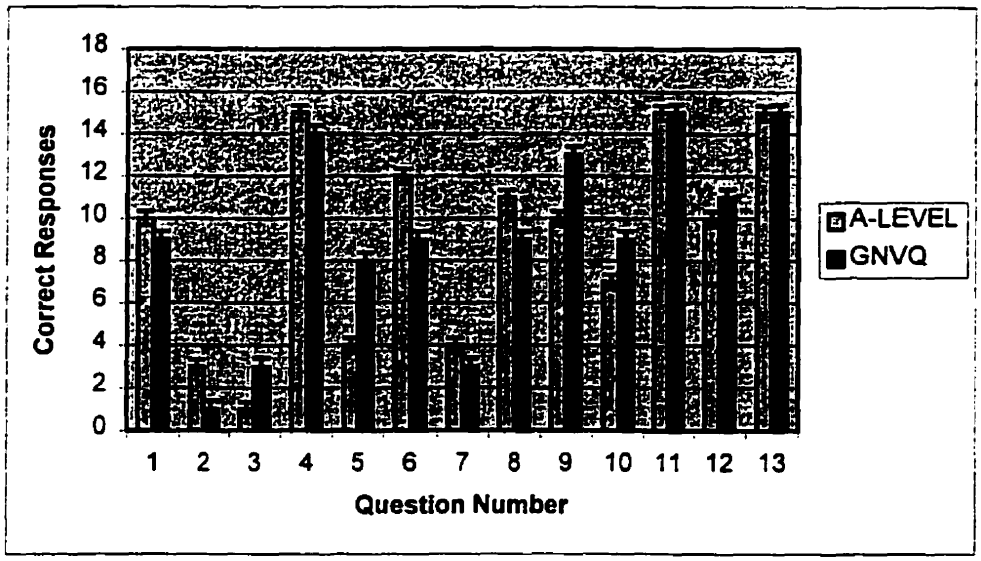

Figure 4.1. Correct responses of each question comparing A-level and GNVQ groups.

Scores for both the GNVQ and A-level groups tended to be higher on questions generated from the GNVQ Course (Total Ms = 4.5, 4.3, GNVQ and A-level) compared to those from the A-level Course (Total Ms = 3.9, 3.9, GNVQ and A-level) (Table 3).

Table 3

Estimated Marginal Means Comparing Group With Question Type

	QUESTION TYPE		
Group	**Same Course**	**Other Course**	
GNVQ	**4.47 ± .33**	**3.87 ± .40**	**4.17 ± .31**
A-level	**3.93 ± .33**	**4.27 ± .40**	**4.10 ± .31**
	4.20 ± .23	**4.07 ± .29**	**4.13 ± .22**

Overall Performance

The mean numbers of correct questions for the 15 students in each group were 8.20 ± 2.54 and 8.27 ± 2.19 for the A-level and GNVQ groups, respectively. An examination of the descriptive statistics reveals similar levels of both typical attainment and diversity. Unsurprisingly, the subsequent independent-groups Student t test revealed no significant difference between the scores of the two groups, $t_{(28)}$=0.08,

p=0.94. The first hypothesis claims no overall significant difference between the GNVQ and A-level attainment scores. Although this result does not provide conclusive evidence, it has provided support for further research into this issue.

Performance on Specific Question Types

A two-way analysis of variance with one repeated measure (ANOVA) revealed the differences between the scores of the two groups on each type of examination question (from own Course, from other Course) to be non-significant, $F_{(1,28)}=0.217$, $p=.645$ In addition, the interaction analysis(question type by group revealed no significant differences, $F_{(1,28)}=2.65$, $p=0.12$. The summary analysis of variance is shown in Table 4.

Table 4

Analysis of Variance Comparing Group Scores on Two Types of Questions

Source	df	F
Between Subjects		
GROUP	1	.879
Error	28	(2.817)
Within Subjects		
PART	1	.217
PART *GROUP	1	2.654
Error (PART)	28	(1.231)

Note. The value enclosed in parentheses represents mean square error.

The mean numbers of correct answers for the questions generated from the A-level course were 3.93 ± 0.33 and 3.87 ± 0.40 for the A-level and GNVQ groups

respectively. The mean numbers of correctly answered questions generated from the GNVQ course were 4.26 ± 0.40 and 4.47 ± 0.33 for the A-level and GNVQ groups, respectively.

These results have addressed hypothesis 2 and revealed no significant differences between the scores of the two groups in relation to their own or other course. This indicating support, although not conclusive evidence, that further research should be conducted in this area.

Statistical Assumptions

Prior to the analysis of data the number of correct answers for overall and for the composite parts of the paper were investigated to determine whether they met the conditions for both parametric analysis and multifactoral analysis. Normality and homogeneity of variance were demonstrated for each interaction cell of the two by two ANOVA and for the overall main effects. It was therefore concluded that it was appropriate to run both the Student's t test and the ANOVA procedures. In adherence with usual convention the power ratings for the inferential tests have not been included, as no significant differences have been indicated.

CHAPTER V

DISCUSSION

The purpose of this study was to assess and compare performance scores of an A-level Physical Education group and a General National Vocational Qualification (GNVQ) in Leisure and Tourism group on an examination compiled of both A-level and GNVQ questions. The goal was to provide empirical, quantitative data, to assist in determining whether the two qualifications can be held to be of an equivalent standard. The discussion addresses two complementary aspects of this project. The first considers the main results of the experiment with the hypotheses. The second part considers how the results relate to questions posed by the literature review.

The first hypothesis of the study was concerned with the overall performance of the two groups. The findings revealed no significant difference between the performance scores of the A-level and GNVQ groups. It is noted that a larger sample size would improve analysis between the different groups of students. However, the experiment had to be conducted at the end of the two courses of study to ensure that both groups had covered all common areas of the curriculum. Thus the students were revising before their final exam and it was considered unreasonable to expect a lot of participants.

For the remaining hypothesis the results also suggest some support: The hypothesis considered that there would be no significant differences between the scores of the two groups as a result of the origin of the examination questions. First, there would be no significant differences when the groups responded to questions from their own courses. Secondly, there would be no significant differences when the groups responded to questions from the other course. Therefore the results of this study have provided some support for the hypothesis.

Although the hypotheses are not rejected, the researcher would like to state that, the results do not provide conclusive evidence to fully support the hypotheses. The researcher would like to acknowledge the following cautions when considering the hypotheses. The choice of test material was very constrained by a very limited overlap between the two curricula. It could be that the remaining majority of the A-level course would be much too hard for GNVQ students or that the remaining GNVQ course much too easy for A-level students. Due to limitations, the questions within the test are mainly concerned with an individual's understanding of words and ability to reason logically. Therefore, it could be that participants were relying on those features rather than their knowledge of content areas when answering the test questions. Lastly, following on from the last point, there is a possibility that the questions strike at the lowest common denominator of both courses, indicating the need for further research in this area.

One question posed at the conclusion of the literature review was "How will empirical evidence of the GNVQ in Leisure and Tourism and A-level Physical Education affect those taking GNVQ?" The results of this study suggest that the new GNVQ may provide an opportunity for those who are not suited to the A-level style of qualification to access an alternative style of qualification at an Advanced level. Such a rise in achievement at post-16 could lead to attainment of the government National Targets and improve the skills of the country's workforce. A main reporting of the literature was the problem of an unskilled workforce, something that the A-level qualification has not been able to solve.

The GNVQ is designed to equip the individual with a broad foundational knowledge in an area of industry and provide the basic skills directly related to the job. This is in contrast to in-depth A-level study where the individual does not utilise

a lot of the knowledge gained because the job does not require it. Therefore, new opportunities and higher positions within industry might become a benefit for those choosing the GNVQ route.

Anderson and Haywood (1996) contend that universities are unwilling to offer places to students with a GNVQ because they consider it is not equivalent to the A-level qualification. The findings of this study suggest that empirical evidence may ultimately contradict this belief, so that those with GNVQ Advanced levels will have similar opportunities to those with A-level qualifications. In light of this information, it appears that the new GNVQ has been introduced at the right national level. Further research is needed to clarify the values of GNVQ for industry and universities.

The second question raised by the literature review was "Do GNVQs lack content knowledge?" The question addresses the theoretical aspect of the study, as the GNVQ represents competence-based knowledge and the A-level the conventional ideology of knowledge. It has been suggested that there are different forms of knowledge and intelligence (Gardner, 1984; Hirst, 1965; Wolf, 1995). It has also been purported by Gardner (1984) that educational practice gives priority to some domains of knowledge over others, namely the conventional knowledge that has been identified as logical – mathematical and linguistic. The results of this study indicate that the knowledge gained through A-levels and GNVQs may be similar, even though this knowledge was obtained through different methods of teaching and learning.

The GNVQ has also been criticized for lack of depth in knowledge, and the A-level claims it is superior in this area. This study did not support this claim. Since its introduction, the purpose of the A-level has been early selection of candidates. The A-level qualification has justified itself as prestigious and sought after with many individuals not achieving a pass. One reason given for the many failures of the A-

level qualification is the in-depth amount of knowledge that is required to pass the examination. A qualification cannot justify itself as being superior just because many individuals do not pass the examination. It must surely depend on the most appropriate qualification for the circumstances. The depth of knowledge involved in a qualification should be proportionate to what the qualification will be used for. On the one hand, the medical profession needs a good in-depth knowledge base due to the serious consequences if an individual does not have enough knowledge in this field. However, on the other hand, an extremely in-depth knowledge would be redundant in some professions.

There is also an argument for a balance between conventional knowledge and the application of knowledge. Wolf (1995) suggested that the competent plumber is one who can fix and mend a central heating system as opposed to the person who can define a substance's specific latent heat of fusion. This is where competence-based knowledge competes with the paradigm of conventional knowledge, but what use is conventional knowledge if you cannot apply it? Further study concerning the educational priorities of knowledge is warranted.

A third issue that was raised from the literature review was "Can clear parity of esteem be achieved when the existing qualifications are operating in an External Framework?" The results of the study provided preliminary data supporting the possible equivalency of the two qualifications and Dearing's (1996) hierarchical qualification framework. However, other aspects of this research study do not support Dearing's concept. Hodgson and Spours (1997) pointed out that the main intention of the external framework was to enable limited links for the mixing of academic and vocational study within the same course. If this were the case, the breakdown of the academic/vocational divide would begin to occur. However, in the creation of this

study only very small crossover sections in the A-level Physical Education and GNVQ Leisure and Tourism curricula were revealed. That is, in this particular case, there is very little evidence of academic and vocational study mixing within the same course. The external framework seems to be presenting the separate qualifications in an organised hierarchical structure but doing little to bridge the academic/vocational divide. Again, further research is recommended.

The last question to be considered from the literature review is: "Is true parity of esteem more likely to be achieved by changing the internal structure of the qualifications?" Williamson (1997) and Steadman (1995) indicate that only a third of the individuals taking the A-level qualification pass. Furthermore, Steadman demonstrates that assessment of individuals is made across the group, so some pass at the expense of others failing. Would a common assessment of the achievement of individuals in the two courses, similar to the model used in this study, offer improved chances for success? Should alternative forms of assessment be considered?

Other internal features might also be combined to break down the academic/vocational divide. This idea has already been promoted as one of the basic positions on the reform of English qualifications. The Unifiers' position promotes the idea of a unified qualification system, combining the A-level Physical Education and GNVQ into one curriculum represented as one qualification (Young, 1993). The Wessex Modular A-level Project is an example of the system, and until Government intervention, it was a successful system. Therefore, a possible way forward to achieve true parity of esteem would be to reform existing qualifications through the internal structure of the qualifications rather than concentrating on the external.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of the study was to assess performance scores of a General National Vocational Qualification (GNVQ) in Leisure and Tourism group and an A-level Physical Education group. The two groups took a written examination to establish empirically, with quantitative data, whether the two qualifications have an equivalent standard.

Summary

Two groups of students participated, 15 GNVQ Leisure and Tourism and 15 A-level Physical Education. All students were from a single co-educational Sixth Form College and were on the final year of their respective two-year course.

The students took part in a 30-minute examination paper consisting of questions from common areas of study in the A-level and GNVQ courses. The examination paper had an equal number of GNVQ and A-level style questions. The performance scores of the two groups were analysed using a two-way ANOVA.

Results from the study partially supported the null hypothesis that stated there would be no significant difference between the GNVQ and A-level overall performance scores. The results also provide some support for the remaining hypothesis, considering there would be no significant differences between the scores of the two groups as a result of the origin of the examination questions. The second hypothesis stated there would be no significant differences when the groups responded to questions from their own courses and that there would be no significant differences between the scores of A-level and GNVQ groups when they responded to

questions from the other course. In respect of hypothesis 2, the results of the study provided preliminary data supporting the possible equivalency of the two qualifications and go some way to supporting the hypothesis, therefore indicating a strong recommendation for further research in this area.

Conclusions

Based on the results from this study, within its limitations, the following conclusions can be made:

1. There was no significant difference between the performance scores of the two groups overall, on the A-level questions, or on the GNVQ questions. Preliminary data provides some support of the possible equivalency of the two qualifications.
2. No evidence produced from this study suggests that one of these courses is superior to the other in knowledge content.

Implications

The findings of the study lead to the following implications.

As long as academic and vocational qualifications are separate, a divide will remain. To bridge the academic/vocational divide, curricula reform of the qualifications should concentrate on the internal structure of the qualification rather than on external methods.

Teachers and educational practice should recognise and promote the alternative qualifications instead of being pre-occupied with conventional ideas of knowledge and education. Previous studies have shown how beneficial alternative learning and teaching methods can be to those individuals who cannot access an

academic route. If society valued musical knowledge instead of conventional ideas about knowledge, would that mean those individuals who cannot read or play music are inferior? Or could it mean that those individuals' abilities lie in other knowledge domains, such as spatial abilities as suggested by Gardner (1984)? Should individuals not be equally recognised for alternative knowledge forms? How should this be catered for? This study has concentrated on a single subject and level of the GNVQ courses, but the principles of this study can be related to the wider GNVQ courses.

Government must promote reform by combining the two qualifications into a single qualification in order to dismiss the pre-conceived ideas of vocational qualifications. The academic and vocational qualifications at present are promoted in a framework that just gives the appearance of bringing the separate qualifications together. If the two qualifications were combined into one single qualification, employers and universities would be forced into revising pre-conceptions of qualification status, giving more opportunities for GNVQ participants in industry and in university.

Further Recommendations

With the findings of the present study in mind, the following recommendations are put forward for further study.

1. A larger sample size would improve the power of the experiment.
2. The employment of groups from different institutions would increase the validity of the study.
3. Base lines of academic abilities could be established in order to make sure that one group is not more academically advantaged than the other.

4. An ideal situation would incorporate the combination of the two curricula, which would be taught for a period of time and then assessed. Teaching should be by a single individual, which would ensure the same conditions for all concerned.

REFERENCES

Anderson, R. & Haywood, R. (1996). Advancing GNVQs. Forum 38, (3) 81-83.

Ball. (1992, January 31). 'Can the ladder replace the sudden drop?' Times Educational Supplement, p.12.

Barry, K. (1997). An analysis of the relative demands of advanced GNVQ science and A-level chemistry. Journal of Further and Higher Education, 21, 43-53.

Bates, I. (1998). The 'empowerment' dimension in the GNVQ: A critical exploration of discourse, pedagogic apparatus and school implementation. Evaluation and Research in Education, 12, (1) 7-22.

Bates, I., Bloomer, M., Hodkinson, P., & Yeomans, D. (1998). Progressivism and the General National Vocational Qualification: Context, ideology and practice. Journal of Education and Work, 11, (2), 109-125.

Blackstone, T. (1997, November 21). Everyone towards the goal of lifelong learning. The Times Educational Supplement, p.3.

Burgess, M. (1993). Linking BTEC and A/AS levels. In W. Richardson, J. Woolhouse, & D. Finegold (Eds). The reform of post-16 education and training in England and Wales (pp. 101-110). Harlow, England: Longman Group UK Ltd.

Burgess, T. (Ed). (1986). New ways to learn. Education for capability (pp. 61-70). Windsor, England: NFER – Nelson Publishing Company Limited.

Burke, J. (1989). The implementation of NVQs. In J. Burke (Ed.), Competency based education and training (pp 109-131). Lewes, England: Falmer.

Confederation of British Industries. (1989). Towards a skills revolution. London, England: Author.

Daniel, J. (1995) Foreward to J. Burke (Ed.) Outcomes, learning and the curriculum London. England: Falmer Press.

Dearing, R. (1996). Review of qualifications for 16-19 year olds. London: Schools Curriculum and Assessment Authority (SCAA).

Department of Education and Science (1988). Advancing A-levels: Report of the commission chaired by G. Higginson. London, England: Her Majesty's Stationery Office.

Department for Education/Employment Department/Welsh Office. (1991). Education and training for the 21st century. London, England: Her Majesty's Stationery Office.

Edwards, T. (1997). Educating leaders and training followers. In T.Edwards, Fitz-Gibbon, C., T., Hardman, F., Haywood, R., Meagher, N. (1997) Separate but equal? A levels and gnvqs. (pp. 8-28). London, England.Routledge.

Farley, M. (1985). Trends and structural changes in English vocational education. In R. Dale (Ed.), Towards a new vocationalism? (pp. 72-94). London, England: Pergamon Press.

Finegold, D. (1991). The changing economic context and its relationship with education and training. In D. Finegold, L. McFarland, & W. Richardson (Eds.), Whose policy is it anyway: Education and training policy transfer between the US and Great Britain. Lewes, England: Falmer.

Finegold, D., Keep, E., Miliband, D., Raffe, D., Spours, K., & Young, M. (1990). A British baccalaureate: Overcoming divisions between education and training. London, England: Institute for Public Policy Research.

Finegold, D., & Soskice, D. (1988). The failure of training in Britain: Analysis and prescription. Oxford Review of Economic Policy, 4 (3), 21-53.

Further Education Unit. (1993). A basis for credit? London, England: FEU

Gardner, H. (1984). Frames of mind: The theory of multiple intelligences (2nd ed.). London, England: Fontana Press.

Guest, D. E. (1987) Human resource management and industrial relations. Journal of Management Studies, 24 (5), 22-36.

Hirst, P. (1965). Liberal education and the nature of knowledge. In R.D. Archambrault (Ed.), Philosophical analysis and education (pp. 113-138). New York, New York: The Humanities Press.

Hodgson, A., & Spours, K. (1997). From the 1991 White Paper to the Dearing report: A conceptual and historical framework for the 1990s. In A. Hodgson & K. Spours (Eds.) Dearing and beyond 14-19 qualification frameworks and systems. (pp. 4-24). London, England: Kogan Page Limited.

Hodkinson, P. (1991). National Counsel of Vocational Qualifications and the 16-19 curriculum. British Journal of Education and Work, 4 (3), 25-38.

Jessup, G. (1991). Outcomes: NVQs and the emerging model of education and training. London, England: Falmer Press.

Jessup, G. (1993). Emerging framework B towards a coherent post-16 qualifications framework: The role of GNVQs. In W. Richardson, J. Woolhouse, & D. Finegold (Eds), The reform of post-16 education and training in England and Wales (pp. 131-145). Harlow, England: Longman Group UK Ltd.

Knight, P., Helsby, G., & Saunders, M. (1998). Independence and prescription in learning: Researching the paradox of advanced GNVQs. British Journal of Educational Studies, 46, 54-67.

Mabey, C., & Salaman, G. (1995). Strategic human resource management Oxford: England, Blackwell.

Manpower Services Commission. (1985). Guidance notes for two-year Youth Training Schemes. In Wood, R., Johnson, C., Blinghorn, S., Anderson, S. & Hall, J. (Eds.) (1989). Boning, blanching and back-tacking: Assessing performance in the workplace. R&D Series No.46. Sheffield: Training Agency.

Marchington, M. (1982). Managing the team: A guide to successful employee involvement. Oxford, England: Blackwell

Peters, T., & Waterman, R. (1982). In search of excellence, New York, New York:Harper Collins.

Popper, K.R. (1959). The logic of scientific discovery. London, England: Hutchinson.

Rainbow, B. (1993). Post-compulsory education: A national certificate and diploma framework. In Further Education Unit (Ed.), Discussing credit, pp. 21-26. London, England: Further Education Unit (FEU).

Sharp, P. (1998). The beginnings of GNVQs: An analysis of key determining events and factors. Journal of Education and Work, 11, (3), 293-311.

Smithers, A. (1994). The paradox of A-levels. The Curriculum Journal, 5, 354-362.

Spours, K., (1993). Analysis: The reform of qualifications within a divided system. In W. Richardson, J. Woolhouse, & D. Finegold (Eds.), The reform of post-

16 education and training in England and Wales (pp. 147-170). Harlow, England: Longman Group UK Ltd.

Spours, K., (1995). The strengths and weaknesses of GNVQs: Principles of design, Working Paper No 7, Learning for the Future Project. Institute of Education, University of Warwick.

Spours, K. (1997). GNVQs and the future of broad vocational qualifications. In A. Hodgson & K. Spours(Eds). Dearing and beyond 14-19 qualification frameworks and systems (pp. 57-74). London, England: Kogan Page.

Stanton, G. (1995) quality in qualifications and learning programmes. In J. Burke (Ed.), Outcomes, learning and the curriculum implications for NVQs, GNVQs and other qualifications (pp. 142-154). London, England: Falmer Press.

Steadman, S. (1995). The assessment of outcomes. In J. Burke (Ed.), Outcomes, learning and the curriculum implications for NVQs, GNVQs and other qualifications (pp. 201-213). London, England: Falmer Press.

Sutton, A. (1994). NTETs, GNVQs and flexible learning. The Curriculum Journal, 5, 337-353.

Unwin, L. (1997). Reforming the work-based route: Problems and potential for change. In A. Hodgson & K. Spours (Eds.), Dearing and beyond 14-19 qualification frameworks and systems. (pp. 75-88). London, England: Kogan Page Limited.

Whiteside, T. (1992). The "alliance" and the shaping of the agenda. In T. Whiteside, A. Sutton & T. Everton (Eds.), 16-19 changes in education and training (pp.17-34). London, England: David Fulton.

Williams, E. (1997, November 21). The end of A-level minority domination? The Times Educational Supplement, pp.2-3.

Wolf, A. (1995). Competence-based assessment. Suffolk, England: St. Edmundsbury Press Limited.

Yeomans, D. (1998). Constructing vocational education: From TVEI to GNVQ. Journal of Education and Work, 11, (2), 127-149.

Young, M. (1993). A curriculum for the 21st century? Towards a new basis for overcoming academic/vocational divisions. British Journal of Educational Studies, XXXXI, (3), 203-222.

Young, M. & Leney, T. (1997). From A-levels to an advanced level curriculum of the future. In A. Hodgson & K. Spours (Eds.) Dearing and beyond 14-19 qualification frameworks and systems. (pp. 40-56). London, England: Kogan Page Limited.

Appendix A

Examination

Test

The following questions have been generated from the Associated Examining Board General Certificate of Education Physical Education papers and GNVQ Advanced Level Leisure and Tourism Units 11 & 12.

Time allowed 30 minutes

There are 10 multiple-choice questions and 3 short answer questions. Ring the correct answer with a circle.

Answer the 3 short answer questions on the sheet provided.

Question 1

Setting goals is one way to help motivate a sports performer. Which of the following is a short-term goal?

A Get a personal best in the 100m
B Win a medal
C Keep legs straight in a handstand
D Practice tennis serves to achieve 80m.p.h.

Question 2

Identify the risk factor that is not associated with cardiovascular disease.

A Lack of physical activity
B High levels of carbon dioxide
C Elevated triglyceride
D Diabetes

Question 3

What are the two functions of the skeletal system?

1 To enable movement.
2 Provide shape to the body.
3 Production of blood cells.
4 Provide a large surface area for attachment of muscles.

A 1 & 3
B 1 & 4
C 2 & 3
D 2 & 1

Question 4

An athlete has both internal and external pressures before a performance. An example of internal would be?

A The coach
B Opposition
C Personality
D Parents

Question 5

Which one of the following would not be an implication of the Children's Act?

A Registration with local authority
B Qualifications of the coach
C Competition and cooperation
D Criminal record check

Question 6

A coach changes the dimensions of a playing area because the team of eight year olds are exhausted playing football. The coach is demonstrating knowledge of what?

A Mental skills
B Psychological skills
C Physical factors
D Principles of overload

Question 7

An exercise training session consisting of circuits, hill-sprints and plyometrics is more likely to be which of the following?

A Endurance training
B Strength training
C Flexibility training
D Speed training

Question 8

Which one of the following changes occurs in the respiratory system as a result of aerobic training?

A Decreased utilization of alveoli.
B More oxygenated haemoglobins.
C Improved alveoli therefore smaller surface area.
D Improved pulmonary ventilation.

Question 9

What aspect of training would you discourage if you were coaching children?

A Lots of variety.
B Modified rules.
C Strength activities.
D No physical contact.

Question 10

Identify the incorrect dominant energy system in the following competitive sports activities.

A Tennis – anaerobic.
B High jump – phosphocreatin system.
C Gymnastic vault – ATP/PC.
D Marathon runner – aerobic.

Short Questions

1. Using a team game, show how you would change the adult version to suit a ten year old.
2. Describe two factors which are important to take into consideration when setting goals.
3. What methods would you use to motivate a ten-year-old novice swimmer?

Appendix B

Consent Forms
and
Ethics Acceptability Form

CONSENT FORM

This form is to obtain your permission to be a participant in the following experiment.

A test has been compiled of both A-Level physical education and GNVQ leisure and recreation multiple-choice and short answer questions. The research being conducted is to see if the A-Level student's score significantly higher on the test compared to the GNVQ student's. Or the GNVQ students score significantly higher than the A-Level students. Or there is no significant difference between the scores of A-Level students or the GNVQ students.

Your participation in this experiment will enable direct comparisons of attainment from two separate Programmes and provide evidence of whether the two qualifications are of equal standing within the present qualification system.

I have read and understand the purpose of the study and agree to be a participant in the following experiment.

I am a student currently studying an **A-level/ GNVQ (Please Circle)**

Please print your name .....

Signed .....

(Your name and the College will not be identified in the research study.)