

Integrated Curriculum & Pedagogy

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Abstract

An integrated curriculum offers a way of designing and structuring a school curriculum organised in terms of topics and themes, rather than a more traditional subject-based approach. It has been attempted in many systems, periodically attracting educationists and curriculum planners around the world and becoming a trend in curriculum and educational knowledge restructuring. Its protagonists, including some educational researchers and theorists, intend it to focus on its claimed advantages and capacity to enhance quality education. Change in the form of knowledge structure leads to change in pedagogic modality in the direction of one which emphasises ways of knowing, employing new teaching and learning methods. Yet, despite the widespread appeal of curriculum integration there is no agreement as to what can be integrated or how it can be achieved. An examination of the literature shows that there is lack of consensus on two main issues. First, as with "curriculum" there is no one agreed definition or meaning and secondly, there are no specific methods for its establishment in school practice. This paper aims to review the literature on the integrated curriculum in two main sections. The first focuses upon definitions, aims and features of "integrated curriculum", and the third is devoted to review of Bernstein's work and particularly his theory of curriculum and pedagogic practices.

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Introduction

The meaning and definition of the term 'curriculum' continue to be contested and, in turn, gives rise to different prescriptions and practices. These have shifted over time, with a tendency to place more or less emphasis on content and pedagogy. They have been shaped by the contributions of psychologist, philosophies and sociologists of education and, more recently, by politicians. The contest may be viewed as one for the definition and control of knowledge as a mean of regulating the distribution of power in society. It has not just been over the control of the formal curriculum but also the informal or 'hidden' curriculum, which shapes individuals' wider attitudes and beliefs (Kelly, 1989). As Goodson (1988) argued, the 'struggle' over the curriculum is a matter of social and political priority as well as intellectual discourse. The main aim, therefore, is in the ways in which knowledge is selected, distributed and evaluated in the context of the social system in which it takes place (Bernstein, 1971, 1977, 1990, 1996, 2000).

Reading literature, integrated curriculum is discussed across all curriculum subjects, e.g. Bewer (2002); and Venville, and others (2002). It has been attempted in many countries and attracted many educationists and curriculum planners all around the world, some educational researchers and theorists, tried to focus on its advantages and capacity to achieve better education quality. As Costley (2015) puts it, 'integrated curriculum has many different meanings. Everyone has his or her own definition of an integrated curriculum' (p. 2).

Integrated Curriculum Definitions

According to Bernstein (1971), integrated curriculum 'refers minimally to the *subordination* of previously insulated subjects *or* courses to some *relational* idea, which blurs the boundaries between the subjects' (original emphasis). He emphasised that integration means to link insulated subjects around main topics, themes or ideas:

'In order to accomplish any form of integration, there must be some relational idea, a supra-content concept, which focuses upon general principles at a high level of abstraction' (p. 60).

Bernstein (1971) argued that such change in the form of knowledge structure leads to change in pedagogic modality in the direction of one which emphasises ways of knowing, employing new teaching and learning methods which focus on how knowledge can be created and taking pedagogical process away from focus the mastery of insulated subjects.

In his analysis of integration, Bernstein (1971) distinguished between teacher-based integration and teachers-based integration, suggesting that the former is easier to introduce than the latter as practices and meanings will tend to be vary in terms of the number of teachers involved in its implementation. Integration may be confined to one subject as, for example, in science, or run across subjects.

Drake and Burns (2004) had a more general view about integrated curriculum by saying: 'in its simplest conception, it is about making connections' (p. 7).

Gehrke (1998) defined integrated curriculum as educational knowledge restructuring which aims to meet students' needs and satisfy their wants, his 'supra-content concept', in Bernstein's term. He added,

'It (integrated curriculum) is a collective term for those forms of curriculum in which student learning activities are built, less with concern for delineating disciplinary boundaries around kinds of learning, and more with the notion of helping students recognize or create their own learning' (p. 248).

This definition emphasises the idea that integrated curriculum organises educational knowledge so that learning activities are prepared to meet students' needs and to encourage them to active involvement in the process of their learning using techniques, such as research projects, learning by doing and problem solving. Here students try to think and to act as historians or mathematicians, for example, rather than to memorise written facts in different subjects and to be given relatively more freedom and autonomy in the learning process than is permitted in more subject discipline centred constructions. In other words, Gehrke (1998) saw integration not as an end in itself but as the means to achieve another important goal: changing pedagogy so as to stress various ways of knowing rather than emphasising the status of received knowledge, echoing Bernstein's initial description of the modality.

Warwick (1972) used the term integrated studies rather than integrated curriculum, defined as 'two or more teachers united to inaugurate the study of some common issue, making use of the skills and techniques of a variety of subjects and disciplines in order to present and evaluate the discoveries made by the children during a given period of study' (p. 42).

Warwick (1972) related the idea of integrated curriculum to team teaching but this is a contingent relationship.

Kysilka (1998) reviewed some of the different definitions provided in the literature, including that of Jacobs's (1989), which focused on type and degree of change that happens to the disciplines and whether they remain separate entities, taught in regular time-frames, or their boundaries break down, requiring new time-tables. Fogarty (1991) was more concerned with the 'how', or pedagogy, rather than the organisational structure of the curriculum. Drake (1993) used the terms multidisciplinary, interdisciplinary and transdisciplinary to refer to different types of integrated curriculum (as cited by Kysilka, 1998, p. 202-203). Multidisciplinary refers to the same topics or themes addressed by different subjects, interdisciplinary refers to specific skills, processes or ideas that are common to all disciplines and transdisciplinary refers to curriculum planning which focuses on a 'life-centred approach', where knowledge is taught as it exists in the real world. Kysilka (1998) argued that the current use of such a variety of curriculum terminology indicates a continuum of thinking with respect to the role which subject matter can play in its organisation, as well as the roles which 'processes' and teachers and learners can play in its development and conduct.

It might be that the case is even more complex as the literature provides more and more underlying theories (frameworks of planning) for such integrated curriculum. 'The attention to integration is growing exponentially and with such rapid growth

comes confusion, uncertainty and concern over exactly what is meant by integration and how schools ought to go about implementing such ideas' (Kysilka, 1998, p. 198).

Differences in definition also arise from different models for planning and the different practical implications and sequences inherent in the implementation of each particular model. This leads us to acknowledge that different models of planning for integrated curriculum also lack a basis in consensus, creating large amounts of potential confusion for both teachers and curriculum planners and making their accomplishment rather difficult. Although an 'integrated curriculum' may achieve a child-centred approach for curriculum knowledge restructuring which may be regarded, as will be considered later, *inter alia*, as advantageous, this does not remove difficulties with its meaning which will depend on: whether part or the whole of the school curriculum is to be integrated; whether only some subjects are integrated subjects and for which cycle (stage); to what extent the curriculum to be integrated; and in what ways this will be planned and approached at practice. According to Kysilka (1998):

'At the moment it seems that integration means whatever someone decides it means, as long as there is a 'connection' between previously separated content areas and/or skill areas. Before any teachers or administrators can successfully plan for integrated curriculum, a much clearer concept of what is meant by integration needs to be understood' (p. 198).

The aims of curriculum integration

Warwick (1972) claimed that integration is a more rational and human approach for curricular planning than classification on the basis of a division of knowledge taken from past generations. He contended that,

'Subject integration arises from a desire to pursue broader topics of immediate interest laterally over a widely defined area rather than following a series of seemingly unconnected items in multifarious random directions. It strives to develop 'whole' personalities by restoring some of the 'wholeness' to knowledge' (p. 10).

Moreover, '(E)nquiry, research, and discovery are the qualities at a premium in the modern world. These are the methods of approach almost universally adopted by Integrated Studies' (*Ibid.*). Thus, the main aim and most significant value of integration is to prepare and to qualify youngsters to cope with the modern world and its requirements which rely on searching and learning by discovery. 'This is achieved by re-grouping the standard subjects, or certain aspects within them, in a fashion more related to the world in which the pupil lives' (*Ibid.*), aiming to relate school knowledge to pupils' own experiences and lives and, in so doing, enhancing their enjoyment of learning as it relates to their everyday's reality, and maybe adapted to their life's problems and demands.

Skilbeck (1976) questioned the reasons for and intended aims of integration, asking: integrated for what? Is the reason pedagogical in a more limited sense of composing and creating efficient strategies of learning? Is the aim to enhance collaborative work between different teachers in order to learn from each other, to exchange their expertise and to reflect on each other? Is it the aim to make pupils think about the

similarities, connections and overlap between different disciplines? The answer may vary from one project to another and sometimes attempt to incorporate all of these, or even more, like motivating pupils, creating positive attitudes towards schooling and creating a link between school knowledge and outside knowledge (home or community knowledge) based on the proposition that schooling should qualify and prepare youngsters for their future life and render them more able to cope with real life difficulties.

Reading the literature and research undertaken to investigate integrated curriculum proposals or projects and their practice in schools leads one to conclude that most of them express as their most frequent aim concentration on pupils' needs and requirements or a child-centred approach in the curriculum (Riquarts & Hansen, 1998; Campbell, 1999; Hansen & Olson, 1996). For example, Riquarts and Hansen (1998) investigated science integration that sought to take into account the interests preconceptions, abilities and special needs of students, as well as an opportunity for a shift to more pupil centred teaching and learning which took pupils' demands more seriously. Hansen and Olson (1996) investigated teachers' conceptions of discipline and pedagogy and dealt with the changes in teacher thinking necessary to cope with integrated curriculum. They considered that a main aim of the Science, Technology and Society scheme in which they studied teachers' views, was to help students to cope with real life problems by selecting contents which related to them. Focus on child centred approaches in curriculum design are explored further in the following section.

Features of Integrated Curriculum

It has already been noted above how sometimes extravagant claims made in the international literature for integrated curriculum have led to it being described as the solution to many educational issues because of its capacity to enhance quality education by employing 'child-centred' or 'progressive' approaches to curriculum design, relying on activities which are directly related to students' interests and needs. The notion of child-centeredness was expressed by Whitfield (1971) who considered that changing emphases within curriculum were influenced largely by the social sciences, in particular, psychological research about learning. More precisely, this has influenced methods of teaching rather than the content of what is taught.

Child-centred approaches place emphasis on children and their needs in the educational process rather than traditional classifications based on subject matter or conceptions of societal imperatives. Skilbeck (1976) claimed:

'The progressive education movement of the inter-war years drew attention to pupil choice, the claims of children's expressed interests as a criterion for selecting curriculum content, and the educational value of a texture of interpersonal relationships in groups and small-scale communities' (p. 123).

He considered the practical implications of integrated curriculum to be that relations between teachers and pupils become less authoritarian or hierarchical and more collaborative, co-operative and communicative. Focus shifted from how much information pupils' acquired and memorised to processes of thinking and searching for facts. At a lower level, between pupils themselves, relations tended to become

more collaborative, enhancing discussion and interpersonal relations between pupils who mostly worked in small-scale groups.

Kysilka (1998) also pointed out important possible features of an integrated curriculum which constituted advantages for education. Most of these insisted on the importance of students' participation in the learning process:

'Genuine learning takes place as students are engaged in meaningful, purposeful activity' (p. 198). Activity here indicates that learning should include practical activities which take the form of 'learning by doing', where the learner learns through those undertaken. The success of this method depended on the extent to which the curriculum is integrated. Hierarchy decreased between teachers and students as they worked co-operatively to ensure successful learning.

There is a pervasive tendency among authors and writers to suggest that integrated curriculum will create a type of learning and restructure knowledge in ways that are more related to real life problems, enabling learners to gain skills which are connected to daily life. This idea assumes that schooling ought to qualify youngsters for their future as 'good' adults, enabling them to deal with different problems they might encounter in their lives. Nagel (1996) emphasised the importance of employing such real-world problem solving in creating a meaningful context for learning. 'Students are engaged in learning situations that reflect interactive learning in the real world' (p. 198).

Integrated curriculum and pedagogy

Integrated curriculum change can best be described as manifold, where changing the structure of educational knowledge from subject to topic based is associated with changing teaching and learning methods to become more child-centred, where meeting pupils' different educational, personal and pastoral needs are considered to be high priority. This would shift teaching methods to those which emphasise the acquisition process, where pupils are more active and required to be self-regulators in their learning, which may require material resources, worksheets, new types of teacher questions which excite broad inquiry and searching and working collaboratory with other pupils. Teachers will be constrained to give more time to specific skills in order to meet pupils' different needs and to work with groups according to ability. In pedagogical terms, the use of time and space, the organisational structure of the classroom and the nature of pupil work relations and grouping all need to be considered.

Alexander (1992) pointed out that the curriculum consisted of the 'what' of education and teaching consisted of the 'how' and that the 'what' and 'how' are inseparable 'as that the teacher's classroom strategies are what transform curriculum from a mere bundle of inert ideas to experiences through which children learn (p. 59). In this sense, therefore, the 'how' and 'what' of education are one' (*Ibid.*). It is in these terms that we should understand the importance of professional development for teachers and their participation in matters of planning and creating a supportive learning and teaching environment if classroom practice is to be enhanced, whether in respect of integrated curriculum planning and implementation or any other. So we can recognise that there is an overlap between 'what' and 'how', changes happened in

one would enforce change the other. Bernstein's sociological analysis of this matter is expanded upon later and discussed in the following section.

As changing 'what' tend to enforce change in 'how', so changing 'how', or teaching methods, is likely to enforce change in classroom organisation and the timetable. Alexander (1992) discussed 'flexible teaching strategies' and the ways in which they might be successfully established in practice. He investigated different types of classroom organisation and the ways in which time is used and impacts upon practice within them. He considered how different types of classroom organisation, in terms of grouping pupils, gave teachers the flexibility to move freely in their classrooms, giving attention and supervision both to individual pupils and groups, including the class as a whole, providing an advantage which can be difficult to find in the traditionally organised classroom with its desks in rows. He called for further investigation to question the effectiveness of grouping, for 'the strategy of grouping has become an end in itself rather than a device adopted for particular educational purposes' (*Ibid.*, p. 67) as well as of classroom contexts, where both curriculum specific areas and grouping children were two teaching strategies used to maximise the opportunity of teacher-child interaction, as well as to encourage co-operation between pupils and flexibility in curriculum delivery.

All of these ways of picturing changing types of pedagogy also see it as associated with changing the structure of educational knowledge and suggest that teachers' roles would also be changed. Bernstein (1977) described the change in teachers' role as being from solution giver to problem-poser or creator. Just as content and pedagogy cannot be separated, neither can teacher nor pupil roles. Bernstein (1977) suggested that pupils were given greater choices which created a wide range of autonomy in de-contextualised learning processes:

'The pupil's role is less clearly defined. Of equal significance, his role conception evolves out of a series of diverse contexts and relationships. The enacting of the role of pupil reveals less his similarity to others, but rather his difference from others' (p. 72).

Bernstein's theory of curriculum and pedagogy

Bernstein developed his ideas over time to provide a sociological analysis which related processes of educational change to wider social factors. His earlier work (Bernstein 1971, 1973, 1977) raised crucial questions about schooling, curriculum and pedagogy analysed by using the terminology of classification and framing, to explain the various types and structures of curriculum and pedagogical practices. He attempted from the start to relate the analysis of micro processes of schooling to the macro level of analysis, the distribution of power and principles of social control. In the later work (Bernstein 1990, 1996), his analysis became more complex and abstract in an attempt to provide and develop a model which could be generalised and used in different social contexts. In this work he developed a theoretical model of what he called the pedagogic device, which he claimed was able to handle analysis at both micro and macro levels and to connect the macro level of knowledge and policy production to the micro level of school practice. This was considered important in order to understand education processes in the light of wider social, economic and political factors, to understand the production of specific types of pedagogic practices and associated changes in consciousness in the light of the structure of a particular

society and its distribution of power and its dominant cultural categories and forms of symbolic control.

In his ground-breaking paper, *On the Classification and Framing of Educational Knowledge*, in 1971, Bernstein introduced two types of educational codes, integrated and collection. Educational knowledge code refers to the underlying principles which shape curriculum, pedagogy and evaluation. He used the term classification as underlying principles that define the structure of different types of curricula and framing to the underlying principles which identify different types of pedagogies. Bernstein (1971) argued that there is no definite criterion to determine the relative status of specific type of curriculum structure. He pointed out that the form that this code takes depends upon the social principles which regulate classification and framing, 'there is nothing intrinsic to the relationships between contents... the *forms* of their transmission, that is, their classification and framing, are social facts' (p. 49). He also showed the impact of distribution of power and social control over the selection, organisation, transmission and evaluation of educational knowledge in classroom contexts.

The strength of boundary between contents (or classification) determines the form which curriculum takes, producing different types of collection and different types and degrees of integration. He discussed the consequences of establishing integrated codes in terms of weak classification and framing. The most important of these were that:

1. An integrated code may set up requirements for a different form of socialization between staff members, teacher and pupils and maybe between pupils themselves, appropriate to the changes in the structure of knowledge. This new type of teacher and pupil socialisation emerges as a result of changing the power relationship from vertical, a more hierarchical, to horizontal form, or symmetrical, or less authoritarian relationship, those lower down a hierarchy, teachers and pupils, being given more status, autonomy and choice, enabling them to exert some power to influence the 'what' and 'how' of educational knowledge. As a result of changing the power structure, new types of teacher and pupil interactions result, which also produce new educational identity. The 'new type of organisational structure' changes power relationship not just between teacher and pupils but also between staff members and among pupils themselves;
2. Integrated codes require a different concept of skills for both teacher and taught. '...whole varieties of skills reduces the significance of context-tied operations and increases the significance of general principles from which a range of diverse operations may be derived' (Bernstein, 1971, p. 67). These new skills required from teachers are related directly to the importance of using teaching methods which give pupils more control over their learning and result in new types of teacher/ pupil interaction; and
3. '(T)he less rigid social structure of the integrated code makes it a potential code for egalitarian education' (*Ibid.*), promising to allow all pupils to fulfil their personal and educational requirement. This type of education may best to be described as '*Learning (or education) for all*', designed to meet pupils' different educational and

learning needs, while regarding all as equal and sharing common characteristics. This notion is similar to what Bernstein (1990) argued later about invisible pedagogy:

‘Invisible pedagogies are less concerned to produce explicit stratifying differences between acquirers because they are apparently less interested in matching the acquirer’s text against an external common standard. Their focus is not upon a ‘gradable’ performance of the acquirer but upon procedures internal to the acquirer ...as a consequence of which a text is created and experienced. These *procedures of acquisition* are considered to be shared by all acquirer, although their realization in texts will create differences between acquirers... But these differences do not signal differences in potential, as all acquirers are judged to share common procedures’ (p. 71).

Later, in 1996, Bernstein stated that a main feature of the social logic of a competence model of pedagogy, previously referred to as invisible pedagogy, was, ‘an announcement of a universal democracy of acquisition. All are inherently competent and all possess common procedures. There are no deficits’ (p. 56).

Bernstein (1971) suggested that change to an integrated code might indicate a crisis in society’s basic classifications and frames, so that it might represent an attempt to declassify and alter power structures and principles of social control; ‘in so doing to unfreeze the structuring of knowledge and to change the boundaries of consciousness’ (p. 67). From this point of view, integrated codes are ‘symptoms of a moral crisis rather than the terminal state of an educational system’ (*Ibid.*).

In his article, *Social Class and Pedagogic Practice*, Bernstein (1990) distinguished between two generic types of pedagogic practice, according to three main principles, or rules, which regulate and act as their inner logic. These are rules of hierarchy, sequencing and pacing, and criterial rules. Differences in these three rules can produce and constitute completely different forms of pedagogic practice in terms of their degree of explicitness. Visible pedagogy was where hierarchy, sequencing and pacing and criterial rules are explicit, invisible pedagogy where they are implicit. In both forms of pedagogic practice, the rules of hierarchy are considered to be prior and dominant, regulating and establishing what regarded as appropriate conduct, order, character, and manner to produce a legitimate relationship between transmitters and acquirers. He calls these ‘regulative rules’ and the other two ‘instructional’, or *discursive* rules.

‘the inner logic of pedagogic practice as a cultural relay is provided by a set of three rules, and the nature of these rules acts selectively on the content of any pedagogic practice. If these rules constitute what can be called the ‘how’ of any practice, then any particular ‘how’ created by any one set of rules acts selectively on the ‘what’ of the practice, the form of its content’ (p. 63).

He went to say ‘(W)hen I refer to the inner logic of a pedagogic practice I am referring to a set of rules which are prior to the content to be relayed’ (p. 64). For example, if the curriculum is in a form of highly classified subjects, we expect explicit hierarchical, sequencing, pacing, and criterial rules to be explicit. These rules are prior to content, determining the shape of curriculum, or the ‘what’ of educational knowledge. Analysing for type of curriculum involved search for these three rules

which constitute the type of pedagogic practice. As Davies (1995) put it 'the study of curriculum has refocused within a broad conception of pedagogy' (p.189).

In a more updated paper, *edagogizing Knowledge: Studies in Recontextualizing*, in 1996, Bernstein provided an even more developed analysis refined through considerable empirical study. He contrasted two generic modalities of pedagogic practice: competence, or invisible and performance, or visible pedagogy. Contrast is made between these modalities of pedagogic practice in terms of eight categories which act as an inner logic or principles or main themes through which he organised his discussion. These categories are time, space and discourse; orientation to evaluation; pedagogic control; pedagogic text; pedagogic autonomy; and pedagogic economy. In this paper we may note that 'time', 'space', 'autonomy' and 'economy' are all highlighted as aspects through which we can see differences between modalities of pedagogic practice alongside 'content', that Bernstein (1996) had made the process of educational transmission, or 'how' the fundamental element, prior to 'content', or the 'what' of educational knowledge. Discourse with respect of educational content refers to its form, whether in terms of specialised subjects or themes, or projects which require the acquirer to be actively participative in the process of its acquisition.

It is worth mentioning that the brief discussion in this paper on *edagogizing Knowledge: Studies in Recontextualizing* has only been an overview of an extensive issue that requires more in depth discussion. This will therefore be followed up in a separate paper to discuss it more clearly.

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