

Creative Curriculum for Primary Design and Technology (D&T): An Opportunity Lost or Seized

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Abstract

English National Curriculum for Design and Technology for the first-time featured D&T as a subject area (D&T). Most colleges have to offer it as a separate course due to a lack of support and familiarity among the majority of professors. Since the professors were well-versed in D&T, they could incorporate it into a topic of interest to their students. Starting in the year 2000, the Department of Education and Skills began classifying issues under broad headings, such as Excellence or Fun. The Rose study, a subsequent National Curriculum review, may use topics or themes to teach subjects. In addition to the phrase 'the Creative Curriculum', new vocabulary was developed at the same time, and while it does not have a single definition, it was generally interpreted to signify that schools should be more creative in designing a curriculum that was suited for their pupils. When D&T was included into a creative curriculum, a lack of impartiality was instantly apparent. In the drive to include disciplines into a creative curriculum/theme/topic approach, design and technology were overlooked. As a result, products that would typically be considered improper may be quickly discovered. D&T was tested in a small-scale study to examine what happened when it became a part of every school subject. Surveys and semi-structured interviews were completed by 47 primary school teachers who participated in award-winning D&T courses. An unpublished dissertation reveals the conclusions of a teacher's extensive case study. The outcomes of this research will highlight how difficult it may be for instructors to preserve their personal integrity when including creative curriculum or cross curricular teaching into their lessons.

Keywords: Creative curriculum, primary, single subject, cross curricular, technology education

INTRODUCTION

Government guidelines on how to implement the whole English National Curriculum have not existed from the beginning of its existence [1]. Reading and math were required, but other parts of the National Curriculum were left up to the discretion of individual schools, as outlined in the standards. It is possible for schools to pick from a wide range of curriculum alternatives, such as different

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disciplines and skill-based curriculum as well as themes or topics and learning areas. Schools may teach design and technology in both ways, depending on the non-statutory instructions that are offered to all schools. This is a possibility. National Curriculum Council advises schools to create more systematic planning techniques, including the finding of cross-curricular connections. The amount of curriculum time required for each subject may not be feasible to reduce in order to integrate and teach adequately. The National Curriculum was rewritten such that there were no more recommendations on how the subject should be taught. Concerns regarding the

emphasis on numeracy and literacy rather than a balanced curriculum have led to a rise in the number of schools concerned. This was backed up by the publishing of Excellence and Enjoyment. Topics or themes might be used as a way to teach subjects after the Rose Review [2–8]. In the Cambridge Review, undertaken at the same time, it was said that "simply rebranding curriculum components as skills, themes, or areas of learning does not solve the basic issue of what primary education is about, nor does it make the primary curriculum more manageable in practice".

Teachers came up with a new moniker for the National Curriculum, "the Creative Curriculum", to characterize the school's implementation of it. Term research demonstrates that it is more than just an organizational method of organizing curriculum material. An inclusive curriculum should include challenges and risks; it should include practical ideas that support social, cognitive, physical, and critical thinking development; and it should aid in the development of a variety of critical thinking skills, finding a balance between teacher-led and child-led learning. According to a majority of respondents, instructors perceived this line in a different way than pupils. Schools might be more imaginative in the creation of their courses, according to their belief that they could. According to more than 100 primary teachers who attended CPD courses between 2016 and 2019, a creative curriculum is linked to a shift away from single-subject teaching and toward the introduction of themes or topics. Although we do not designate it a class, we refer to it as the "creative curriculum". Many professors are increasingly adopting broad themes like "Transportation" instead of concentrating on specific subjects such as Math or Science, which allows students from diverse backgrounds to learn from one other. Children will be more likely to participate in the activities if they are presented in a more engaging manner, we hope.

It is surprising that instructors did not utilize the creative curriculum study results to inspire their own curriculum development. As a result, the phrases "innovative curriculum", "subject or theme approach", and "curriculum planning" are all used interchangeably in this context. The nature of the issue must be established in order to determine whether the integrity of D&T is maintained throughout curriculum design. In this study, it is not possible nor appropriate to conduct a full examination of studies into the nature of D&T [8, 9]. For students to comprehend the nature of D&T and to make their own judgments on the quality of D&T in their school, a clear, easy-to-understand model based on research is essential. The essence of D&T has not altered since the first National Curriculum paper on D&T was published. It was characterized in the 2005 National Curriculum for Design and Technology as a mix of skills and knowledge and understanding. D&T components were identified by teachers using the 2010 National Curriculum's definition of 'user', 'purpose', and 'function' to help teachers identify six essential features to look for when judging good D&T practice; a group of primary specialists used National Curriculum documents and researched into the nature of D&T to develop the model. The teachers judged their own understanding and perceptions and quality of D&T against this model.

THE STUDY OF RESEARCH METHODOLOGY

Schools that adopted a more creative curriculum were evaluated based on whether or not instructors grasped the essential nature of D&T before and after the transition in planning. Creative curriculum/theme or topic approach looked to be centered on Transportation or Celebrations as random terms, and the content seemed to be based on those titles. Researchers discovered that instructors often chose titles because they already had a stockpile of activities or resources that they felt would go well with them. No one in the classroom was able to connect the skills and materials that constituted the foundation of the planning process with a specific job description.

They all taught Design and Technology (D&T) at their elementary schools. A 10-day-long D&T course with a range of rewards had been approved by their respective founders. When it came to the D&T programme at their schools, they were all in charge of implementation, but not in charge of managing the entire curriculum. Non-probability sampling was used because of the requirement to

keep the sample size reasonable and the fact that normal probability sampling approaches could not poll instructors at primary schools in general. ‘Purposive sampling’ was the non-probability sampling method used. Each participant’s background was carefully considered and their responses were vetted to ensure that the data gathered would be representative of those in charge of D&T in their individual schools. The sample size of 47 teachers was within the suggested range for a small-scale study sample. The researcher had to cope with time constraints, no additional researcher engagement, and limited resources while reviewing the findings. Sequential mixed methods research was employed in the study. Surveys were used to acquire quantitative data on teachers and their schools, how D&T was taught, and how successful teachers thought the delivery was. Students were invited to fill out questionnaires both before and after class. Depending on how the course was taught; this may take anywhere from 4 to 6 months to complete [10, 11]. We conducted semi-structured interviews with four to six teachers at the start and end of each session, using a questionnaire that included more open-ended questions. This allowed the interviewer to get a sense of how instructors felt about the study and ensured that the questions were asked in a similar or comparable manner, which helped guarantee that all of the interviews were conducted by the same interviewer. Previously unreleased MA dissertation by a teacher who taught a D&T course at one of the participating schools provided more information [12, 13].

In order to ensure that the questionnaire and interview questions were free of ethical difficulties, simple to comprehend, and supported the study’s goal, teachers who were not part of the sample group piloted them. The design has a few minor tweaks. First, a questionnaire was developed to gather information on teachers and schools, as well as questions regarding curriculum delivery and D&T delivery, as well as questions about the instructors’ expertise and opinions about their school’s D&T programme. Each teacher signed a consent form agreeing to participate and knowing that they could leave the study at any time. All school administrators were made aware of and gave their consent to the teachers participating in the study. Teachers, children, and schools would remain anonymous, the study would not cause harm to any participants, and teachers could access the research’s main findings.

FINDINGS AND DISCUSSION

Professors addressed the users (10) and purpose (8) just a handful of times; function (7) and creativity (6) were acknowledged, but originality and authenticity were not. It is logical that most teachers equated D&T with their own because they were in charge of D&T at their school. The instructors’ schools’ D&T programmes are examined. 39 schools had already adopted the innovative curriculum, theme work, and topic approach to D&T delivery before this research was even completed! Statistics showed that even if the names vary, the procedures were quite similar. Once they had decided on a theme, such as celebrations or transportation, schools began searching for related subjects [14–16]. Only three professors said they would teach a subject if it did not match the curriculum. Those at the other eight schools received their D&T training via the Qualification and Curriculum Authority (QCA). Before making any adjustments to the remaining four schools, they planned to execute the thematic approach in four of them first (Table 1).

Table 1. Results of the questionnaire.

Age 20–30	30–40	40–50	50–60
15	15	12	5

According to a study of instructors, more than half of teachers’ schools’ D&T programmes need development, while others claim they are bad or even weak. D&T was often overlooked or put off until the conclusion of the semester by the majority of those questioned. Many of the examples given by staff to support their claim that an exemplary practice was accessible lacked a defined user or purpose. If, for example, they built a book or card with moving parts, a torch, or a vehicle, they had no idea who or what they were intended for. A lack of understanding of D&T was not a surprise.

D&T preparation in most schools was assessed and found to be connected to a product chosen by the school. Pupils were building Egyptian gems, Tudor homes, and Greek temples in a history-based theme. Most of the time, schools that implemented the QCA work scheme, i.e., taught D&T as a separate topic, defined both a user and a purpose in their planning.

RESULTS FROM THE COURSE

Observations of teachers on the qualities of D&T Through their participation in D&T-related activities, the instructors' opinions and comprehension of D&T were visibly growing over the course. They saw that many of their schools' D&T programmes were more like projects than initiatives. According to the majority, this technique had helped them, and certain members of their team better understand the notion of "something/s for someone".

Education and Training for Teachers

There was no assurance that teachers would be able to adapt the way D&T was taught as they gained more experience. Only four of the 39 schools assessed their practice in depth, with the subject leader at the head, and altered D&T activities to ensure that they were authentic when it came to innovative curriculum/theme/topic. According to 21 of the remaining 35 schools, D&T instruction will continue at least until the release of the new National Curriculum [17]. We do not have to worry about Offset's (the inspection agency) attention being focused on D&T.

Subject leaders found a number of difficulties while attempting to implement more effective procedures. Only a few teachers from the 14 schools who participated in the programme reported success with their colleagues. Inquired about the D&T implementation and how a few modifications may make a big difference in the performance of the system.

If the school's general curriculum planning, leader does not prioritize a D&T review, it will not have much of an influence.

D&T was reassessed at six of the eight schools now teaching D&T as a single topic, with two schools delaying a review until the new National Curriculum was announced. As a result, the vast majority of gadgets now know who they belong to and what they are used for.

Implications for Curriculum Development and Findings

Many people have shared their own personal experiences with CPD providers, but these findings are supported by data from a wide range of schools and instructors, so, I believe the findings are self-evident. Results were not affected by teachers' gender, age, or kind of school. Despite the fact that D&T was initially introduced to English schools in 1990, many primary school instructors are still unfamiliar with it. There was no national CPD programme at the time of its introduction; teacher training today has limited time for D&T, which is often centered on creating; teachers' participation at CPD is poor; and published materials do not effectively express the nature of D&T.

When it comes to creative/topic/theme-based D&T activities in schools without a solid grasp of the subject matter, this is especially true. Even if a review was prioritized by the school head or curriculum leader, adjustments were typically ignored by the subject leaders. Authentic tasks were offered by schools that taught D&T as a single topic. If D&T is not included into the curriculum, students will not be able to acquire critical and evaluative thinking skills. When developing a creative curriculum, this was not an issue, according to research. D&T and cross-curriculum practice is supported by another MA dissertation. If the teaching of D&T was not secure, changing to a theme approach is difficult; if the teaching of D&T was not secure, moving to a theme approach is difficult; if the teaching of D&T was not secure, moving to a theme approach is tough. It seems that many schools have adopted a creative curriculum, topic, or theme approach. The integrity of each subject is compromised when schools seek to tie themes to titles in an inappropriate way because they do not understand the nature of D&T.

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