

An Investigation into the Implementation of a Cross-Curricular Approach in an Irish Primary School Classroom

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Abstract

The development of cross-curricular links between subject areas has been a key underpinning of Irish Curricular Policy for the last 40 years. Recent curriculum developments such as the 'National Strategy to Improve Literacy and Numeracy' and the 'New Primary Languages Curriculum' have advocated the implementation of cross-curricular links, stating the importance of increasing levels of integration throughout the curriculum. The focus of this paper is to share the findings of a study that examined affordances and constraints associated with the implementation cross-curricular approach in an Irish Primary School Classroom, whereby all subject areas are united or linked to a central theme. This four-week study examined whether the cross-curricular approach facilitated bridge building between subject areas, allowing pupils to transport knowledge from one discipline area to another. It also sought to analyze whether the cross-curricular approach increased pupil's level of agency within the classroom. Situated within the interpretivist perspective, this study employed qualitative research methods such as focus groups, field notes and participatory research methods. It reported that the cross-curricular approach increased the levels of agency of the pupils in this. In addition to this, the cross-curricular approach implemented facilitated bridge building between subject areas, allowing pupils to transport knowledge across discipline areas.

1. Introduction

Much of what occurs in education, especially in schools, is divided up into small, workable pieces and presented to pupils. Subject divisions are instituted to make information easier to interpret, allowing the pieces to become increasingly ordered and classified. However the result can be like a jigsaw puzzle, where it is difficult to place the smaller pieces together, as they are not viewed in relation to the other pieces.

Pupils may recognize the pieces but not perceive the bigger picture. Cross-curricular approaches begin by building and cultivating links, through the implementation of rich learning activities that encourage pupils to connect their learning with other discipline areas, making them more meaningful and fruitful. This paper is based on a qualitative study that examined the experiences of students and their response to the cross-curricular approach to learning. It seeks to critically evaluate the affordances and constraints associated with the cross-curricular approach, documenting the learning and behavioral outcomes generated by its implementation.

2. The Cross Curricular Approaches in International Research and Policy Context

It is important to consider international enactments of cross-curricular approaches because they provide feedback on their enactment in other contexts, illustrating which form of the cross-curricular approach may suit a particular educational setting. The subject of cross-curricular pedagogies has been debated for the last fifty years, with a resurgence occurring over the past two decades. Fragmented teaching schedules, doubts regarding curriculum relevancy and lack of relationships and links between subjects have been indicated as reasons for an increase in the demand for cross-curricular approaches in the American Education system [1].

In recent times, schools and education systems have distanced themselves from teaching facts and concepts in isolation, moving towards a more constructivist view of learning. Drake [2] suggests that demands for a cross-curricular approach is linked to schools increasing desire to prepare pupils for the speed and complexity of the 21st Century, which requires individuals to have the capacity to draw from numerous fields and solve problems which include interrelated components.

2.1. Cross Curricular Approaches

A variety of terms and definition are found in academic literature to denote a thematic approach to curriculum design namely, integrated teaching, interdisciplinary curriculum and thematic approaches among others. Although subtle differences are apparent between each approach, strong similarities can be found in their universal criticisms of subject bound curriculum delivery as de-contextualized and fragmented [3] and their assumption that applying skills and competencies across numerous areas of study is beneficial to the development of the learner.

Humphreys [3] provides a basic definition of the integrative approach as “an integrated study is one in which children broadly explore knowledge in various subjects related to certain aspects of their environments”. The skills or knowledge acquired are practiced and utilized in other areas of study. Shoemaker [4, p.5] provides a more classroom related definition, defining the integrated curriculum as “Education that is organized in such a way that it cuts across subject-matter lines, bringing together various aspects of the curriculum into meaningful association to focus upon broad areas of study. It views learning and teaching in a holistic way and reflects the real world, which is interactive.”

The cross-curricular approach involves combining units of work from different subject areas that contribute in purposeful ways to the unit’s whole. The themes or topics as a whole must be strengthened by connections in other subject areas, and the connections should not focus solely on content but also on the skills and concepts. The rationale of the cross-curricular approach is to construct meaningful bridges between subject areas.

2.2. The Cross-Curricular Approach used in this study

The thematic approach used in this study ensured that all subject areas revolve around one central theme. The four themes chosen for this study are China, Soccer, Water and Harry Potter. Outlined in Figure 1 is a small synopsis of two thematic units used within this study. Due to the thematic nature of the approach, the cross-curricular approach is often referred to as the thematic or integrated approach within this study.

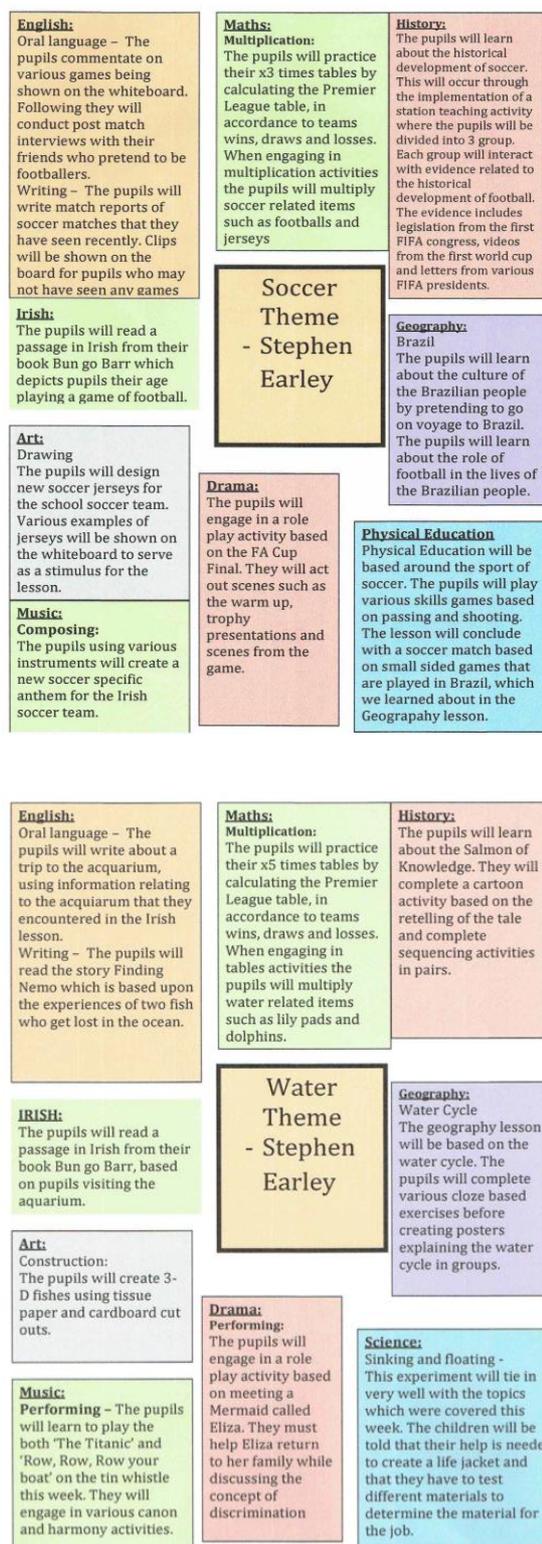


Figure 1. Example of the cross-curricular approach

3. Literature Review

3.1. Defining Learning, Knowledge and Curriculum

In order to fully understand the various facets, objectives and functions of the integrated curriculum we must take a wider look at ‘curriculum’ as a whole.

Murphy and McCormick [5] propose that any curriculum undergoes three level of analysis, namely the specified, the enacted and the experienced curriculum. The specified curriculum refers to its objectives and material of instruction. The enacted curriculum recognizes the importance of the environment or context of instruction. Finally the experienced curriculum recognizes that learning is a social process, acknowledging the role of pupil agency, and that what is experienced is mediated by the pupils and the quality of their experience in the learning environment. Murphy [6] cited in Murphy and McCormick [5] develops this point by stating that the theory of learning that is being supported in the classroom directs all levels of the curriculum from the specified to the experienced:

Theories of how student’s learn and develop determine: *what* is selected for inclusion in the curriculum, *how* it is taught, including which classroom resources, organization and pedagogical strategies are judged to be appropriate; and the *nature* of the teacher’s role and relationship with learners.

To gain an understanding of curriculum it is essential that practitioners acknowledge the influences that manipulate and regulate the curriculum at all three levels. Pivotal to these influencing factors are the particular views of learning and knowledge that are supported in the classroom, two of which are explored in the forthcoming sections.

3.2. Learning

The form of learning that is supported in the classroom mediates the curriculum on all three levels, namely the specified, enacted and experienced. This section will discuss two contemporary but conflicting views of learning, namely the ‘socio-cultural perspective’ and the ‘acquisition model of learning’ in an effort to describe the form of learning that underpins the integrated curriculum.

The Socio-Cultural Perspective on Learning

The socio-cultural perspective of learning often referred to as the situated approach, rejects the assumption that learning occurs in a linear manner, instead acknowledging that it occurs in variety of contexts in a number of ways. It recognizes that

learning involves procedures of identity formation, pupils don’t simply acquire knowledge, rather they adopt the form of particular learner in a particular community. Learning is seen as a process of participation, evidence of which is Wenger’s community of practice theory [7]. Communities of practice cultivate and promote a communal series of beliefs and perceptions. They include behaviors and practices that are common amongst its members. Learning occurs as members become more accustomed to the communal set of values allowing them to move from the periphery of the community to a more central position. Learning is recognized as a process of participation as pupils claim more agentic and empowering positions within the community of practice. Lave and Wenger [8, p. 29] support this assumption by stating that “the person’s intentions to learn are engaged and the meaning of learning is configured through the process of becoming a full participant in a socio-cultural practice.”

The Acquisition Model of Learning

Sfard [9] suggests the acquisition model is distinguished from the socio-cultural view of learning, supporting the epistemological presumption that knowledge can be recognized as an entity. Concepts are perceived as units of knowledge that the learner can accumulate, redefine and connect to construct superior cognitive structures.

The phrases ‘accumulation’ and ‘acquisition’ suggest that the acquisition approach perceives the human mind as container that can be filled with various concepts and materials. Once acquired, the knowledge collected by the pupil can be applied or transferred to contrasting contexts [9].

Throughout this paper, links will become apparent between the cross curricular approach and the socio-cultural view of learning. The cross-curricular approach subscribes to the socio-cultural view of learning, perceiving learning as a process of participation in a cultural activity. It refutes the theoretical foundations of the acquisition approach critiquing the premise that learning is fixed and occurs in linear manner. Knowledge is not just confined or restricted to individual disciplines, rather knowledge is viewed as a dynamic entity that can be drawn from and utilized in a wide variety of disciplines.

3.3. Knowledge

The two contrasting views of learning that have been considered also portray different interpretations of knowledge. It has been established that the cross-curricular approach aligns with the socio-cultural view of learning. Consequently the socio-cultural perception of knowledge will be outlined in this

section as it underpins much of the functions and objectives of the cross-curricular approach.

Knowledge is developed through participation

Knowledge in the socio-cultural perspective is perceived as fluid, shifting and context dependent, capable of adapting to a number of environment and contextual variables. The socio-cultural or the situated view of learning proposes that knowledge is socially constructed through participation in cultural activities [10]. Conversely prevailing positivist educational theories assert that knowledge is independent of contextual, cultural and environmental factors. Socio-cultural concepts of knowledge oppose such viewpoints, proposing that the social aspect is dialectically pertinent with the individual and that both contextually and culturally mediate one another.

One gains knowledge as one develops by way of social interactions with peers within their community of practice. Knowledge is bound up in the utensils, symbols and skills related to the cultural activities that take place within any given community of practice. Participation in these activities increases the individual's awareness and understanding of such cultural artifacts allowing them to over time transform their level of participation within the community, ultimately moving from the position of peripheral participant to central participant within the community of practice [7]. By engaging in cultural activities, learners are not only shaped by culture and prior knowledge but also define, modify, and remodel culture, knowledge, and what is considered knowledge.

The socio-cultural perspective subscribes to the perception that knowledge is socially constructed through participation in communities of practice. The cross-curricular approach aligns which such constructivist principles as its thematic nature creates communities of practice within the classroom characterized by high levels of movement from the periphery to the centre of the community. This movement is generated by an increase in pupil agency that allows pupil to make such a radical transition from the periphery.

Knowledge Transfer

Central to this study is the concept of knowledge transfer as advocates of the cross-curricular approach propose that it facilitates high volumes of knowledge transfer between discipline areas throughout the curriculum. However Murphy and McCormick [5] state that to embrace the concept of knowledge transfer is to align oneself with the symbol processing view of learning, which is closely related to the acquisition metaphor for learning. They suggest that those who adopt a socio-cultural or situated view of

learning reject the concept of knowledge transfer as they support a more contextual interpretation of generalized knowledge. The notion of transfer is what partitions both conflicting views of learning and that ultimately the argument comes down to which perspective of learning is embraced in the classroom.

Murphy and McCormick [5] dismiss the notion of transfer, suggesting that the phrase does not best capture the re-application and recycling of knowledge that takes place in the classroom. Alternatively they propose that the word transportation may more accurately illustrate the concept. Secondly, Murphy and McCormick state that our focus should not be placed on how best to define the approach, rather practitioners should examine what particular cues signal the use and application of knowledge in other contexts.

3.4. Curriculum

The exploration of knowledge and learning in the previous section provides guidance on how practitioners should approach curriculum considerations. The previous sections argued that supporting certain perceptions of knowledge mediate the construction of the enacted, specified and experienced curriculum.

Murphy and McCormick [5] state that the situated approach rejects the premise that knowledge is to be divided up into disciplines, instead it promotes the view that knowledge is culturally valued within communities of practice. They stress the importance of acknowledging the idea of cultural authenticity. In order to successfully engage the community of practice in a cultural activity it must be both authentic and purposeful. Secondly a second form of authenticity needs to be acknowledged which is that of *personal authenticity*. If the activity is not personally meaningful to the individual, no learning will follow.

The integrated curriculum generated by the cross-curricular approach critiques the idea of knowledge being divided into individual disciplines or domains, instead proposing a more holistic view of knowledge and learning where disciplines overlap and fuse together to create integrated units of learning. Consequently the cross-curricular approach creates learning environments characterized by high levels of cultural and personal authenticity. Learning activities are more meaningful and purposeful to pupils as they are linked to a central theme. Pupils begin to recognize that what they learn in every subject area contributes to a greater understanding of a larger theme or concept. Disciplines merge together to create more holistic thematic experiences ensuring that the learning activities that the pupils engage in are

purposeful and meaning, resulting in high levels of cultural and personal authenticity.

In conclusion, to analyze the cross curricular approach according to the categorizations outlined by Murphy and McCormick [5] at the beginning of this piece, it is evident that the cross-curricular approach advocates a shift away from disciplines as the source of knowledge or input for the specified curriculum. Instead both cultural and personal authenticity combined to create a focal point for the specified curriculum and the enacted curriculum. For the specified curriculum, communities of practice serve as a form of cultural authenticity, and for the experienced curriculum, pupils complete meaningful and purposeful tasks due the integrated nature of curriculum, generating cultural and personal authenticity. The enacted curriculum mediates both forms of the curriculum through the selection of holistic learning activities that emphasize the integrated nature of the approach.

3.5. Advantages of Cross-Curricular Approach

Cromwell [11] explores how the human brain processes and organizes information. It appears that the brain organizes new knowledge based on previous experiences and that meaning was developed as a consequence of those experiences. His research suggested that holistic experiences are remembered and recalled easily. Research by Caine and Caine [12] expand this notion by connecting neuropsychology and teaching methodologies. They reinforce Cromwell's [11] research by stating that searching for meaningful patterns is a basic process of the brain. Rather, the human may attempt to resist learning units and facts presented in isolation. These research examples indicate that the brain favors the cross-curricular approach due to its potential to create patters across a wide variety of subject areas.

Hayes [13] suggests that cross-curricular approaches generate connections and links between content explored in subject areas and pupils experiences outside of school, making education more relevant, relatable and meaningful for pupils. The cross-curricular approach transports knowledge and skills from one situation to another, providing pupils with a more meaningful and relevant curriculum to capture their interests.

There is a small body of research related to the effects an integrated curriculum has on pupil attitudes that suggest that the thematic approach leads to an increase in habits and actions that are linked to agency such as motivation, attitude and self-direction. Duranti [14, p.453] provides a working definition of agency that includes three basic properties:

- 1) control over one's own behaviour
- 2) producing actions that affect other entities as well as self
- 3) producing actions that are the object of evaluation.

MacIver [15] indicated that the thematic approach improves pupils' attitudes and work habits, behaviours that match Duranti's categorization of agency as actions that affect other entities as well as self. Jacobs [16] reported that the implementation of the cross-curricular approach is associated with improved student self-direction, higher attendance and higher levels of motivations, behaviours that align with all three of Duranti definitions of agency. Although these studies do not directly mention the effects that the thematic approach had upon pupil agency, they indicate that the thematic approach yields improvements in pupils attitudes, self direction and motivation, all of which are encompassing aspects of pupil agency according to Duranti [14].

3.6. Disadvantages of Cross-Curricular Approach

Advocates of the subject focused approaches to teaching and learning, state that the strictly defined boundaries associated with subject areas provide a more accurate explanation and sense of order about the complexities of the world [17]. Alexander, Rose and Woodhead [17, p.21] state that to deny pupils access to subjects was to "deny them access to some of the most powerful tools for making sense of the world which human beings have ever devised".

However these criticisms are not particularly applicable to the cross-curricular approach used in this study as the approach does not advocate the dissolution of subject areas. Rather the cross curricular approach recognizes the importance of the conceptual structures that subjects provide and intends to link them together to create more impactful and meaningful learning experiences for pupils. Breaking down the rigid barriers that Alexander, Rose and Woodhead [17] suggest should partition subject areas allows practitioners to generate cross-curricular links between them, providing pupils with a more realistic and rational view of the world, where knowledge and facts are not strictly compartmentalized into fixed frameworks.

4. Research Methodology

The research study was situated in the Interpretivist paradigm as it recognized that reality and the individual researcher cannot be separated, by situating the researcher in the research setting in close proximity to it's participants. Walsham [18] suggests

that there are no correct or incorrect theories in the interpretivist paradigm, where constructs are developed by analyzing phenomena in their natural surroundings and context. This study supported Walshman's premise by examining the cross-curricular approach in its' natural context of the classroom. The interpretivist approach is focused on observing and understanding the environment from the participant's perspective, drawing on meaning orientated methodologies such as focus groups on observation. Walsham [18] argues that the aim of interpretivism is to gain an understanding or an interpretation of human behavior as opposed to generalizing and establishing causes and effects. Interpretive studies are generally conducted using qualitative forms of research such as focus groups, interviews and observations. The qualitative research methods used in this study include focus groups, field notes and participatory research methods with children.

4.1. Research Questions

Outlined below are the research questions that shaped this study.

Main Research Question:

What are the possibilities and constraints of CC planning and teaching?

Subsidiary Questions:

- 1) What are the affordances that allow bridge building between different curricular areas?
- 2) Does CC planning increase student's sense of learner agency and self – perception?

4.2. Research Setting and Participants

The research setting of the research study was a primary school classroom in Ireland. This is a spacious, modern classroom where the tables are organized in such a way that facilitates co-operative learning activities. The participants in this study were a third class in an all-boys primary school of mixed ability, totaling 28 pupils. The pupils were aged between 8 to 9 years old. In order to conceal the identity of the pupils in this study, pseudonyms were used to distinguish the pupils. The duration of the study was 4 weeks.

4.3. Focus Groups

Focus groups were employed in this study to elicit the affordances and constraints associated with the cross curricular approach. Focus groups were selected and recognized as a key research tool due to the large

quantities of quality interaction that they generate between respondents illustrating their view, values and beliefs regarding a concept or topic. The high levels of interaction that focus groups stimulate would allow respondents to re-evaluate and reconsider their own perceptions and understandings.

Questions were supplemented with the use of visual aids that allow young participants to express themselves more effectively [19]. The visual aids implemented in this research study were examples of the pupils work related to their experiences of the cross-curricular approach. These were utilized to allow the participants to express their thoughts and perceptions more effectively, while aiding their understanding of the concepts at the heart of this study such as the cross-curricular approach and pupil agency, terms that are not directly comprehensible for the pupils of their age.

4.4. Field Notes

Field notes were utilized in this study to elicit the impact that learning via the cross-curricular had upon pupils. According to Groundwater-Smith et al. [19] observed behavior is a more accurate indicator of whether a child likes something as opposed to their responses to questions.

4.5. Participatory Research Methods with Children

There is an increasing bank of literature advocating the role of pupils as 'active participants in research as opposed to passive and static participants. Groundwater-Smith et al [19] propose that participatory research strategies allow young participants to personify such roles by ethically placing them at the heart of study and affording them a voice that is listened to and heard by adults. Groundwater-Smith et al. [19] stresses that participatory research methods allow researchers to capture findings that adults have a tendency to overlook due to the inherent differences between their thought processes and those of young participants.

Due to their potential to generate unbiased and noteworthy findings, one participatory research method was used in this study; namely pupil led YouTube presentations. McGarrigle and Donaldson [20] state that to best capture children's thoughts and perceptions, researchers must examine their understandings of the world from their perspective, through ways that conventional research methods have failed to do so. The use of YouTube presentations as a research instrument in this study aligns with such a view by allowing me to record the pupils experiences of the cross-curricular approach from their

perspective. The pupils, imitating their favorite YouTubers, made a short ‘pretend’ YouTube presentation regarding the cross curricular approach, informing their ‘pretend’ viewers of their thoughts and perceptions of learning via the thematic approach.

5. Findings

5.1. Cross-curricular Approach Created Links between Subject Areas

The use of themes and integrated areas of study as the sources of knowledge for the integrated curriculum on a specialized level ensured that knowledge encountered in one subject area can be transported to another. The research data generated by this study supported this premise as the pupils’ responses proposed that the thematic approach developed strong connections between subject areas. The pupils stated that the thematic approach linked every subject together rendering them more meaningful and enjoyable, generating high levels of cultural and personal authenticity.

“Kieran: Yeah and they are easier, since they are based on the same theme. You know a lot about what were gonna learn before we start it.

Christopher: Yeah and it makes what we do in school more interesting because everything is linked.

Darren: Yeah everything is linked and that makes it more interesting and exciting.

Christopher: The way they are connected makes them more enjoyable because you can see how they are connected to other lessons.

Darren: Yeah defo.

Christopher: Yeah it makes them mean more.”

These sentiments were reinforced by data originating from participatory research instruments. The participants stated that connections were apparent between subject areas and that cross-curricular approach affords them opportunities to transport knowledge encountered in one subject in another.

“I can use everything I learnt in Geography in English

There are a lot of connections between Music and PE today.

John: Everything we learn about them is linked. That means that stuff I learn in Geography I can use again.

Christopher: Yeah any subject. Because they are all about the theme, we use stuff from any subject in any other one.”

It is apparent that the cross-curricular approach provided the particular cues that Murphy and McCormick [5] suggest facilitate knowledge transfer or transportation in the classroom. The weekly theme that integrated the various subjects functioned as a cue. The thematic content in each subject area indicated to the pupils that thematic related knowledge encountered in previous subjects could be transported to other subject areas to help the pupil achieve the learning objectives of other lessons situated within thematic unit. This suggested that the cross-curricular approach has true links to the socio-cultural approach as it views knowledge as fluid, every changing and context independent. The integrated curriculum when viewed on the experienced plane, allows pupils to transport knowledge discovered in one subject area to another, through the use of integrated activities that occur on an enacted plane of the curriculum. It rejects the premise of the acquisition metaphor that knowledge occurs in a linear fashion devoid of context.

However it is worth noting what exactly the knowledge that pupils were transporting from subject to subject entirely consisted of. It appears that the majority of the knowledge being transported was primarily factual as the pupils appeared to be recalling basic facts and ideas. These facts generally consisted of information related to whatever theme was being implemented that week. While the pupils seemed adept at recalling factual information regarding the theme, they are also capable of applying or ‘transporting’ it to other areas of study. For example one pupil stated that he was “able to imagine how the Chinese fought the Mongols because of what we did in PE”, demonstrating that he was able to transport information encountered in PE, a kinesthetic based discipline and re-apply it in a primarily academic based discipline such as History

5.2. Cross Curricular Approaches lead to an Increased Sense of Learner Agency

The previous section established that the cross-curricular approach generated strong cross-curricular connections between subject areas, allowing pupils to apply knowledge specific to certain disciplines in a variety of contexts. The integrated nature of the approach ensures that every lesson revolves around one central theme or concept. As a result the pupils were gradually developing a sense of ownership in relation to the theme, which in turn increased their levels of response to theme related lessons. The pupils claimed that they were more inclined to participate in lessons relating to the cross-curricular approach as they have developed a sense of familiarity towards the theme that was being explored.

“Harry: Well because you already now a lot about what were gonna learn because it’s theme stuff you pay more attention because you already know some of the answers. Like it just feels like it might be a bit easier.

James: It’s just more familiar.

Patrick: I’d put my hand up more during the theme type things because if it’s to do with the theme we already know a lot about it. I’d be more confident that I’m talking about the right thing.

James: It’s just all all the subjects are about something that we know a lot about so you feel a lot smarter.

Tom: And more confident.”

When the pupils encountered a new lesson situated in the cross-curricular approach, it appeared that the pupils have a heightened sense of belief or confidence, as they have encountered the theme numerous times previously. The theme was embodied in a new subject, allowing the pupils to use their theme related knowledge to supplement the discipline specific knowledge required to successfully achieve the learning objectives of the lesson.

The pupils suggested that the thematic approach provided them with a sense of empowerment and confidence. Patrick for example stated that he was more likely to “put my(his) hand up” in lessons related to the thematic approach as he felt that he was “more confident that I’m (he was) talking about the right thing.” Similarly Patrick stated the integrated nature of the approach had him feeling “more confident”.

The data emanating from the YouTube Presentations also documented pupils increased sense of agency in response to the cross curricular approach.

“I feel more confident answering questions that are about China.

I put my hands up more in History than I did before because I know a lot about the Great Wall now.

This is the smartest I’ve felt because I learned a lot about Harry Potter this week.”

These sentiments were supported by observations noted during the research study. The researcher noted that pupils who rarely participated in classroom discussion or who exhibited low levels of on task actions experienced a noted increase in both behaviors.

“Harry, James, Martin engaging in whole class discussion more regularly than usual.

Isaac and Peter putting their hands up more often than usual.

Anthony engaging in more effective on task behavior than usual.”

What is noteworthy is that all these observations occurred near the conclusion of the week. This suggests that the pupils’ sense of familiarity regarding the weekly theme was developing as the week progressed, peaking towards the conclusion of the week and culminating in more efficient and positive on task behaviors.

The heightened sense of agency that the pupils experienced allowed them to claim more agentic positions within the community of practice that existed within the classroom. It is evident that many of the pupils who were quoted in the extracts outlined, had previously been positioned on the periphery of the community. Their responses suggested that previously, they rarely would have participated in lessons or felt any sense of approval when it came to academic related activities, relegating them to the periphery. However the integrated nature of the cross curricular approach improved their self esteem and agency, allowing them claim more central positions within the community of learners in the classroom.

This increase in pupil agency noted in this study coincides with research devoted to the cross-curricular approach. MacIver [15] proposed that the thematic approach improved pupils attitudes and work habits while Jacobs [16] stated that exposure to the cross curricular approach positively impacted pupils levels of self direction and motivation. These findings mirror those of the research study where the cross-curricular approach improved pupils’ attitudes, work habits and levels of motivation, all of which are encompassing aspects of agency according to Duranti [14].

6. Conclusion

This paper began by describing the learning that occurs in the classroom as fragmented, detached and isolated. This description presented learning in the primary school classroom as disconnected and disjointed, where subjects were personified as pieces of jigsaw failing to link together due to an absence of any sense of correlation or interconnection. The implementation of the cross-curricular approach was proposed in order to transform the jagged jigsaw pieces in to relatable and connectable pieces, allowing the pupils to make meaningful connections between subject areas.

This paper sought to explore whether the implementation of the cross-curricular approach could generate such findings, paying particular attention to the affordances and constraints associated with the approach. In addition, this study sought to explore the effects that the cross-curricular approach had upon

pupils' sense of agency within the classroom. The use of thematic units as the source of knowledge or input for the integrated curriculum on the specialized plane, allowed pupils to create bridges between different curricular areas to transport knowledge from one subject area to another. By analyzing the curriculum on the enacted plane it's evident that thematic content of subject areas served as cues, indicating to pupils that they could recycle and re-apply knowledge encountered in other discipline areas. The pupils stated the integrated nature of the cross-curricular approach rendered school a meaningful and purposeful experience, suggesting the cross-curricular approach generated a sense of cultural and personal authenticity for the pupils, as subjects appeared more meaningful to them due to their integrated profile.

The findings also indicated that the pupils sense of agency within the classroom increased in response to the integrated nature of the cross curricular approach. As every lesson is intrinsically linked to the weekly theme, the pupils' responses suggested that they were developing a sense of ownership or familiarity towards the theme as the week progressed. When the pupils engage with a new lesson in the integrated curriculum, particularly in the later stages of the week, it appeared that they possessed an increased sense of agency or self-efficacy as they had engaged with this theme numerous times previously. The theme was now embodied in a new discipline, allowing pupils to transport theme related knowledge that they had encountered in previous areas to augment the discipline specific knowledge needed to realize the learning objectives of the lesson.

The increased sense of agency may have allowed pupils to claim more agentic positions within the community of practice established in the classroom. Pupils who it appeared were previously situated on the periphery, stated that they felt more empowered and were more likely to participate in lessons as they felt increasingly agentic engaging with areas of study that were situated in the context of the weekly theme.

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