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Pupil involvement in planning topics using KWL grids: opinions of teachers, student teachers and pupils

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Abstract

Pupil involvement in planning is one way in which teachers listen to the 'pupil voice'. This paper focuses on pupil involvement in planning class topics using KWL grids. The opinions of teachers, teacher education students and primary school pupils in Northern Ireland were sought on this using questionnaires and interviews. The vast majority of teachers and student teachers responded positively, many commenting that the pupils had reacted favourably, enthusiastically or with enjoyment, and that they seemed to be more motivated, responsive and interested in topics in which they had some 'ownership'. Negative opinions expressed by teachers included arguments about difficulties in incorporating pupil ideas into their planning as well as practical concerns about using a KWL grid with younger or less able pupils. More fundamental were fears about loss of teacher control, teacher authority being undermined, and 'interference' in teacher planning. One of the outcomes of the study is a list of recommendations for good practice when using KWL grids.

Key Words

Pupil voice; pupil planning; KWL grids; cross-curricular topics

Context for the Study

This research took place in Primary schools in Northern Ireland. The Northern Ireland Curriculum (CCEA, 2007a), revised in 2007, is structured in terms of 'Areas of Learning' rather than subjects, and has a strong emphasis on cross-curricular 'connected' learning, as well as on active learning, 'Thinking Skills and Personal Capabilities' and Assessment for Learning (AfL). All of these emphases mean that primary schools in Northern Ireland are fertile ground in which the 'pupil voice' in general and KWL grids in particular can flourish. This research aims to investigate the opinions of teachers and teacher education students about the use of KWL grids as part of cross-curricular topic work, asking for their recollections about the effective use of such methods which involve pupils in planning topic work, as well as some of its challenges. In addition small groups of pupils were asked for their recollections of previous KWL work and their thoughts on how this helped them to learn. One outcome of the study is a list of 14 recommendations for the effective use of KWL grids in topic planning.

Changes in Attitudes to 'Pupil Voice'

The idea of 'pupil voice' is now used widely in education literature. It can be seen as nested within the broader principle of 'pupil participation'. Flutter (2007) describes this as a term which embraces strategies which offer pupils opportunities for active involvement in decision-making within their school as they are invited to discuss their views on school matters, including, for example, pupil involvement in school councils as well as on pedagogical issues (for example see Mitsoni, 2006). Within this paper, the aspect of 'pupil voice' being addressed is pupil input into the planning of the topics in which they are engaged.

Research on pupil involvement in planning is many decades old. For example, as long ago as 1936, Draper wrote about 'progressive', child-centred approaches to planning units of work where children contributed their own ideas. Rehage (1951) stated that educational literature of the previous two decades contained many references to pupil-teacher planning. He reported on a study comparing teacher-directed procedures with pupil-teacher planning in eighth grade (13-14-year-olds) social studies classes in Chicago. However it was the ratification of the United Nations Convention on the Rights of the Child (UNCRC, 1989), specifically Article 12 (see Lundy, 2007; Noyes, 2005), which has prompted an increase in interest in 'pupil voice' in general. 'Pupil voice' is a concept which has enjoyed a growing currency since the turn of the millennium (see, for example Catling, 2014; Dunn, 2015; Levy and Thompson, 2015; MacBeath, Myers and Demetriou, 2001; Rudduck and Flutter, 2000; and Tisdall and Punch, 2012). However, recently Fisher (2014) has suggested that while the 'pupil perspective' held a central position in the policy of the UK Government in the first decade of the 21st century, it could be argued that the commitment to this perspective diminished under the coalition government which came to power in 2010 and under the subsequent Conservative government. Fisher also noted that Ofsted inspections appeared to have become '*less child-centric*' (p. 391).

Rudduck and Flutter (2000) discussed the work of Meighan (1988) who argued around the time of the introduction of the first National Curriculum for England and Wales that there were spaces for pupils to have some input. Meighan distinguished between a 'consultative curriculum', which is based on an imposed programme but builds in regular opportunities for learners to be consulted, a 'negotiated curriculum', where the amount of power sharing increases, and a 'democratic curriculum', where learners write, implement and review their own curriculum. The model being discussed in this paper is very much the first of these – the 'consultative' model. Rudduck and Flutter stressed that what matters to pupils is that they feel that they have a stake in the work which they carry out in school and are respected enough to be consulted. This kind of approach makes explicit to the children from the very start of a topic that they have a part to play in their education – that they have something to contribute. Clark (2015), in setting out a series of statements contrasting a 'traditional curriculum' with a 'formative curriculum', described how in a 'formative curriculum' the pursuit of student questions and interests is valued in an environment where the teachers have a dialogue with students, helping them to construct their own knowledge. This is an example, as discussed by John (2006, p. 495), of ' *...a challenge to the impression ... that teaching is a scripted performance as opposed to a complex engagement with children*.'

The idea of pupils asking questions rather than always simply responding to teacher questions was described by Palmer and Pettit (1993) as an important aspect of primary teaching, especially in cross-curricular topics; they argued that giving children opportunity and time to think, ask questions and apply the knowledge they have gained was a vital part of pupils beginning to take more control over their learning. Pupil involvement in planning is one of the characteristics of constructivist learning environments described by Matheson (2008) who emphasised the need for teachers to introduce and explain new concepts using knowledge which children already possess, building bridges to new understanding.

Catling and Martin (2011) and Catling (2014) have discussed the importance of listening to pupils' voices in the context of their geographical learning. They argued that there is good evidence through studies of children's geographies that their understandings of their worlds, while not being fully developed, are more sophisticated, diverse, structured and useful than many teachers grant them credit for. Catling and Martin contended that children construct their own 'ethno-knowledge' or 'ethnogeographies' of places, spaces and environments from their own life experiences, and that their understanding and knowledge are 'powerful', and should be more highly valued and taken more frequently into teachers' pedagogy to be engaged with in joint ventures.

KWL Grids

KWL grids are a learning tool where the pupils are asked to list what they know (K) about a particular topic, what they want to know (W), and at the end of the topic, what they have learnt (L). The 'K' and 'W' columns set the scene for the subsequent work by requiring from the pupils some thought about what they already know about the subject in question and some prediction about what they might find out from the material to be studied. The 'L' section focuses the pupils' attention at the end of a unit of work on what has been learnt, and in some circumstances on how that learning has taken place. KWL grids were first developed

as a teaching strategy in the USA by Ogle (1986, 1989) and Carr and Ogle (1987). Rather than being used as a group or class planning technique, as they are in the focus of this paper, KWL grids were originally used by teachers as a 'scaffolding' technique to encourage individual readers to tackle the content of non-fiction text, structuring and focussing the research process, as an aid to developing pupils' reading and comprehension skills and as a way of helping them to record their learning. Subsequently, other researchers such as Shelley, Bridwell, Hyder, Ledford and Patterson (1997) and Wray and Lewis (1997 and 1999) have reported on successful implementations of the approach. Wray and Lewis described two major benefits for pupils of the use of KWL grids: firstly that the work begins with the reader's knowledge, reducing the likelihood of pupils copying large chunks of the text in future work; and secondly, that children readily recognise the usefulness of the strategy and have been observed subsequently using their own KWL grids independently in their own research. Wray and Lewis found this approach particularly useful for pupils with reading problems, increasing their motivation to read.

Used as a structural or graphic organiser for whole class topic planning, KWL grids are a simple but logical support which helps pupils organise their thinking and helps them see more clearly something of the process of planning the topic (Naylor, Keogh and Goldsworthy, 2007).

'K' – Activating Prior Knowledge

When a new topic is being introduced, in the vast majority of cases pupils bring to that topic some prior knowledge, however limited or even erroneous that knowledge might be. Wray and Lewis (1997) described various ways of foregrounding knowledge in a process which they called 'activating prior knowledge', elsewhere called 'elicitation' (Grigg and Hughes, 2013; Wray and Lewis, 1995). Wray and Lewis (1997) argued that, in order for real learning to take place, we have to ensure that learners are able to draw upon knowledge they already have about a subject, so the question, 'What do we **K**now about this topic?' is the obvious one to ask. They stated that, '*Learning which does not make connections with our previous knowledge is learning at the level of rote and is soon forgotten'* (p. 31). Similarly, Ogle (1989) suggested that if teachers ignore the assumptions of their students, little learning can be expected. This view of pupil learning as a process of interaction between what is known and what is to be learned is a central aspect of social constructivism, following among others Vygotsky (1962) and Bruner (1990). It describes how when we encounter new ideas we try to link these with prior knowledge which is in some way related to the new ideas. It places strong emphasis on ways in which prior knowledge is structured in the learner's mind and on ways in which this knowledge is activated and brought to the forefront during learning. Theories such as this, generally known as schema theory (Taba, 1962), suggest that new information is associated with and linked in the brain to similar information. Unlinked or isolated pieces of information tend to be easily forgotten (for example see Caine and Caine, 1997; Mayer, 1983; Pritchard, 2014; Rumelhart, 1980). This conception of learning sees it as a social process, as a situated process and as a metacognitive process (Wray and Lewis, 1999).

Teachers frequently begin a new topic by leading a discussion in which they ask 'What do we already know about this topic?' Ogle (1989) described the KWL technique as a visual model of the steps which teachers may engage in orally but which pupils often do not understand as being integral parts of their learning. The KWL method can act as a recording device for an oral discussion – one which can be reviewed later. The 'K' section of a KWL grid is one method of creating a tangible, shared record for future reference of what might otherwise be ephemeral. In addition to recording what pupils know, a KWL grid also provides the teacher with information about what the pupils do not know, as well perhaps as some of their misconceptions, and this knowledge is useful for planning purposes. Wray and Lewis (1999) suggested that if misconceptions are corrected by the pupils themselves, rather than by the teacher, this will have much more impact. Frequently in a 'K' discussion, disagreements over the information being shared may occur as one pupil contradicts another's statement. A skilful teacher can use these disagreements to help with the next element in the KWL process – the generation of questions. These kinds of disagreements can be viewed as a positive aspect of group learning as they stimulate pupils' thinking. The posing of alternative ideas and explanations and the resultant questions based on these ideas create what Piaget (1975) and subsequently Perrett-Clermont (1980) have described as 'cognitive conflict' (or dissonance) – a disequilibrium in the minds of pupils which can result in purposeful enquiry.

Sometimes in response to teacher questions about what pupils know about a particular topic, the answer 'nothing' might be heard. Lewis, Wray and Mitchell (1995) discussed how this kind of response can occur when direct questions on some topics seem remote from the pupils' immediate experience. They suggested that the pupils may not recognise what it is of their own experience that may be relevant to the topic under discussion – they don't know what they know! Many pupils will need help in the form of additional teacher questioning or the provision of further resources to allow them to 'key into' what they already know.

'W' - Asking Questions

While in the first stage in the KWL process the focus is on what learners already know, the second stage helps the pupils to set out how they can build on this previous learning by asking questions such as 'What do we **W**ant to find out?' Questioning is a creative process. Encouraging pupils to ask specific, personally generated questions is a vital part of getting them to engage in their learning, developing a personal commitment and increased motivation. Children becoming questioners is an important aspect of them becoming independent learners (Woodward, 1992). As with the 'K' section, recording children's questions makes explicit their understandings, their thought processes and their misconceptions. This is an important element of what might be broadly called 'the enquiry process' or 'enquiry thinking' (see for example Pickford, Garner and Jackson, 2013). Murdoch (2014) discussed the reasons why some pupils find it difficult to respond to the invitation to ask questions. One of these reasons is they are not used to doing so. In the traditional classroom questions usually come from the teacher, and for pupils not used to having their voice, their opinions and their interests heard, having the opportunity to contribute in this way can be disconcerting. In the 'enquiry classroom', asking questions is viewed not as evidence of confusion or ignorance but as a valuable element in the learning

process. Murdoch went on to say that raising questions can be risky in that it can make pupils feel vulnerable, but the issue may again simply be that they 'don't know what they don't know'! Because of this the classroom environment needs to be stimulating and nurturing - a 'safe place' in which questions can be asked and in which questions are valued.

At the same time, the skill of asking good questions needs to be explicitly taught. Questions can be effectively generated as part of a class discussion where one pupil's comment or question can trigger others. Children often come up with closed questions – 'what?', 'where?', 'when?'.Listing the five 'Ws' (and 'how?') can be helpful.

'L' - Reviewing Learning

The final section of the KWL exercise, the 'L' section – 'What have we **L**earnt?' - takes place at the end of a unit of work and encourages the pupils, either individually or as a class or both, to reflect on the learning which has taken place. Frequently the teacher will refer back to the K and W sections on a wall display and lead a discussion about any previous knowledge which has been either confirmed or refuted, before discussing which of the questions posed have been addressed. In addition, an 'H' section can be used – '**H**ow did we find out about …'? - where sources of information are reviewed.

Evidence of Effectiveness: 'Ownership', Motivation and Teacher Development

Some research was carried out by the 'inventor' of the KWL approach (Ogle, 1986) to determine if it is effective when applied to reading non-fiction text. Teachers who were questioned reported that their pupils recalled more successfully the material which was taught using the KWL approach compared to the material when the approach was not used. In addition, the pupils developed in their ability to generate questions and categorise both their prior knowledge and the questions which they asked, producing more sophisticated category lists in later work. The most important gain reported was that many pupils began to use the technique independently, without prompting.

Fisher (2002) stated that when children plan, do and review their work, it gives them increased feelings of involvement in their actions and experiences, resulting in a greater chance that motivation will be high and that effort will increase. Similarly, Brennan (1998) concluded that when pupils had a greater say in aspects of their school work they displayed higher levels of involvement, motivation, responsibility for their own progress and greater pride in their work. In addition, McBeath, Frost, Pedder and Frost (2008), Maitles and McAlpine (2012) and Edwards and Gilbert (n.d.) found that when the teachers whom they studied planned topics *with* rather than *for* pupils, they reported a number of positive outcomes: enhanced teacher-pupil working relationships, increased pupil 'ownership' of the topic, increased pupil enthusiasm, empowerment and a sense of being valued. Pritchard (2014, p. 47) argued that: '*Learners who are actively engaged in the learning process will be more likely to achieve success'*. Once learners are engaged in this way, they develop a sense of being in control, and this has been shown to improve self-esteem and motivation (Laevers, 2000; Maitles and McAlpine, 2012). Catling (2013) reported the outcomes of a small-scale study of teachers' perspectives on their experiences of 'curriculum making' during a project

organised by the Geographical Association. Most of the teachers initially saw the involvement of pupils in planning as a 'risky' approach since they were unclear where it might lead; however they began to see the pupils as '*active curriculum agents'* (p. 439) and that they as teachers needed to develop confidence in the children's capabilities and recognise what the children could bring to the planning of geography-based topics, especially their local knowledge. In being involved as partners in planning, children's agency had emerged and increased, alongside teachers' developing confidence in both the children and in themselves. In this way, listening to the pupil voice, as well as being beneficial for pupils, can be a powerful tool in helping teachers to improve their own practice (Flutter, 2007). She suggested that establishing a meaningful dialogue between teachers and pupils through the use of pupil voice strategies is an important element in the art of teaching.

Two more pieces of research illustrate positive outcomes for both teachers and pupils. Firstly, Barnes and Shirley (2007) described an action research project where they worked with teacher education students and Primary school classes. Eighty per cent of the participating students reported that shifting the balance by handing over to pupils some elements of planning the projects' themes had been a success and had been highly instructive for them as prospective teachers. Secondly, Shandomo (2009) discussed the use of a KWL exercise with 6-8 year-old pupils from Buffalo, New York State at the outset of a project on Zambia in which the pupils made direct contact by letter with Zambian school children. The pupils created a class KWL grid as a way of recording what they knew about Africa in general and about Zambia in particular, as well as listing the questions which they wished to ask their Zambian counterparts. Letters were sent to and received from their pen pals and the differences and similarities in the lives of the two sets of children were explored and recorded in the 'L' section. Shandomo concluded that the KWL exercise and the letter writing allowed the American pupils to overcome initial stereotypes, acquire a broader view of the world and increase their social and cultural awareness.

Teacher Concerns.

Not all teachers agree that giving pupils a voice in any aspect of school life is a positive step. Some see such initiatives as another erosion of their authority. In attempting to dispel teacher concerns of this kind, Alexander *et al*. (2010, p. 154) in the Cambridge Primary Review's final report stated that, '*Suggesting that children should have a voice does not negate the importance of teacher voice*…'. Wray and Lewis (1997) noted three main concerns on the part of teachers with whom they worked: that their pupils were not used to or were not good at creating questions; that the pupils would only ask silly questions; or that they would ask 'red herring' questions which either prolong the topic or take it off course. Ogle (1986) discussed how the teachers in her study reported that pupils were initially not good at creating new questions because they were unfamiliar with that kind of thinking. She described how, with experience and guidance, this ability improved (see also Shelley, Bridwell, Hyder, Ledford and Patterson, 1997). The asking of difficult or impossible or 'silly', trivial questions might be seen by teachers as an opportunity for pupils to learn important lessons about creating questions and about the nature of knowledge.

Pupil Planning in the Northern Ireland Curriculum

Northern Ireland has had a prescribed curriculum since 1990, but it has gone through two major revisions in the intervening decades. The most recent version of the Northern Ireland Curriculum (NIC) (CCEA, 2007a) was described by Greenwood (2013) as the most radical curriculum in the UK or Ireland in terms of its approach to cross-curricular learning: the curriculum is not structured in traditional subjects, but in 'Areas of Learning'. For example, one of these areas is called 'The World Around Us' and includes the subjects geography, history and science, but teachers are encouraged to make additional connections across all of the Areas, where this is appropriate and meaningful. The curriculum also has an explicit focus on thinking skills, Assessment for Learning approaches and active teaching and learning methods. In one of its introductory sections, the NIC makes specific reference to pupil involvement in planning:

> *Motivation can be increased when children have opportunities to make choices and decisions about their learning, particularly when their own ideas and interests are used, either as starting points for learning activities or for pursuing a topic in more depth*. (CCEA, 2007a, p. 9)

The use of KWL grids is one of a large number of such 'active' methods advocated within an NIC booklet called 'Active Learning and Teaching Methods for Key Stages 1 and 2' (CCEA, 2007b). Other 'thought gathering' or 'information gathering' methods listed are 'Carousel', 'Opinion Finders' and 'Post-its Collection'. Allowing pupils some involvement in planning sits well within a curriculum which has the emphases listed above. When pupils are allowed to any extent to influence the direction of a topic, with their suggestions being genuinely accepted, it is highly likely that these suggested ideas and approaches will not always fit within traditional subject boundaries. Dadds (1993, p. 255) stated that:

> '*In its open-endedness and flexibility, topic work has proved to be the area of the curriculum where many have been best able to develop group work, independent learning, children's interests and starting points, and the involvement of children [and parents] in the planning process.'*

Methods

This research adopted a mixed methods approach with data gathered from a variety of sources: (1) individual and small group interviews with teachers and a member of the Northern Ireland Education and Training Inspectorate; (2) questionnaires completed by teachers; (3) interviews with teachers carried out by teacher education students; (4) reflective questionnaires completed by teacher education students; and (5) interviews with groups of primary school pupils aged between 9 and 11 years.

Firstly, responses concerning pupil involvement in planning were gathered from teachers using small group interviews as part of PhD research reported fully elsewhere (Greenwood, 2012 and 2013). The interviews were semi-structured in format and took place in nine different Primary schools with groups of teachers, usually three in number, who taught a range of year groups. The discussions covered a variety of aspects associated with the

introduction of the new curriculum, but the main focus was on a greater emphasis in the new curriculum on 'connected learning' – integrated or cross-curricular approaches to teaching and learning. However, related elements such as greater scope for pupil input in planning cross-curricular topics were also discussed. An interview was also carried out with a member of Northern Ireland's school inspectorate – the Education and Training Inspectorate. The pertinent section of this interview focussed on the Inspectorate's expectations in terms of teacher planning when allowing pupil involvement, in that this kind of planning produces many 'unknowns'. In addition, an interview was carried out with a recently qualified teacher who had used KWL grids in a novel way involving an ICT-based discussion forum.

Secondly, the responses given in the teacher interviews formed the basis of a questionnaire which was sent to all Primary schools in Northern Ireland, targeting Primary 5 and 6 teachers (pupils aged 8-10 years). In total 224 useable questionnaires were received from 168 different primary schools – 19.8% of the total number of primary schools in Northern Ireland. The questionnaires also focussed on 'connected learning', but one of the areas of questioning elicited teachers' opinions about pupil involvement in planning. The teachers were asked to respond to the following questions: 'Have you used any of the pupil planning ideas from the Assessment for Learning (AfL) material, for example KWL boards?' 'If Yes, please give examples of what you have used and how the pupils reacted'; 'What is your opinion on this kind of pupil involvement in planning?'. A wider discussion of the findings from these interviews and questionnaires concerning 'connected learning' can be found in Greenwood (2013).

Thirdly, teachers were interviewed by teacher education students as part of an assignment on the leadership and coordination in Primary schools of the Area of Learning in the Northern Ireland Curriculum called 'The World Around Us' (WAU). A different group of students interviewed teachers about the use of 'Thinking Skills and Personal Capabilities' in their schools. In both of these sets of interviews, responses to a specific question about pupil involvement in planning and the use of techniques such as KWL grids were sought and obtained. In total 25 teacher responses were received from these two groups of students.

Fourthly, between 2010 and 2015 teacher education students studying for their BEd degree in Primary teacher education at Stranmillis University College in Belfast were asked by e-mail to complete a short, open-question questionnaire if they had used, or seen teachers using, pupil planning approaches such as KWL boards. In total 33 questionnaires were returned by 31 different students (two students returned questionnaires in two different years).

Finally, it was felt that it was vital that the pupil voice should be heard in a piece of research on pupil involvement! Four small group interviews were carried out in two different primary schools with pupils aged between 9 and 11 years. The groups each had five or six pupils. Permissions were obtained from the two schools' principals as well as the parents of the participating children. The children were volunteers and were told that they could withdraw from the group interviews at any point; none did – they seemed to enjoy the discussions! The questions which were to be discussed were sent to the schools in advance. These involved

asking the pupils to think back on KWL grids that they had created in their classes in recent months and to explain what they thought they had learnt by using them.

In using each of these data gathering techniques, all ethical considerations as advocated by the BERA guidelines (2011) were taken into account, specifically anonymity and confidentiality and the right to withdraw.

Results and Discussion

The sections below set out a summary of the responses in interviews and questionnaires by teachers, student teachers and pupils.

Teacher Interviews and Questionnaires - Positive Attitudes

As part of the questionnaire survey, teachers were asked to indicate if they had used pupil planning techniques and what their opinions were about this aspect of the revised Northern Ireland Curriculum. Of the 224 who responded, the vast majority - 212 (94.6%) indicated that they had used pupil planning, with 12 (5.4%) replying in the negative. When giving their opinions about pupil planning as well as their classes' reactions to its use, the majority of responses were positive. Over 100 (46.6%) of the respondents stated that the pupils had reacted positively, favourably, enthusiastically or with enjoyment; a frequent comment was - '*the pupils loved this'*. Over 30 of these teachers used the phrase '*good idea'* or '*great starting point'* as part of their description of their feelings towards pupil involvement in planning. Other descriptors and the number of times they were used were as follows: *'excellent'* (11); *'very good'* (5); *'useful'* (11); *'very useful'* (7). Alternative positive words or phrases used by smaller numbers of teachers were *'wonderful'*, *'brilliant'*, *'extremely important'* and *'fantastic'*. In addition four teachers said that the pupils had more '*ownership'* of or increased interest in the topics if they had been involved in their planning, while three other teachers said that pupils enjoyed seeing how much they had learnt. Echoing the findings of Fisher (2001) and Maitles and McAlpine (2012), the comments below illustrate some of the reasons why a large number of teachers viewed this aspect so positively:

> *Pupils enjoy active involvement and the power they have to drive the topic.* (Year 5 teacher)
>
> *KWL- children really enjoy having ownership of learning, leading the direction and carrying out independent research.* (Year 6 teacher)
>
> *KWL- children enjoyed taking part in this; they impress themselves with what they already know!* (Year 6 teacher)

One teacher found that some of the best questions raised and ideas put forward by the children came not at the outset of a topic, but further into the teaching of it:

> *KWL: although some pupils found it hard to identify 'K', some of the most useful questions arose out of class work as we went along, not at the beginning.* (Year 6 teacher)

Pupil involvement in planning topics or units of work was not specifically part of the question schedule for the small groups of teachers who were interviewed, but it was raised by teachers in the majority of the interviews as a very positive aspect of work within the Northern Ireland Curriculum. In five of the interviews teachers mentioned unprompted how much they were in favour of pupil planning using such techniques as KWL grids. One teacher said:

> *I didn't think about doing this before, but I like it; it gets the children to really think about what they are learning and why they are learning it. They are doing work at home without you necessarily having given it to them- bringing in stuff- additional motivation.* (Year 4 teacher)

Similar to the questionnaire responses, a number of teachers spoke about their pupils appearing to be more motivated, responsive and interested in topics in which they had some 'ownership'. A Primary 1 teacher tried to summarise the benefits of pupil planning for her very young pupils:

> *I feel sometimes I am putting words into their mouths but they feel it is their idea and then you find they are really very involved in it.* (Year 1 teacher)

While agreeing that pupil planning provided a less rigid, more flexible approach, some teachers in the group interviews expressed the opinion that it allowed less teacher control and required from teachers a high degree of adaptability and, in many cases, would require a lot more teacher training. The need for a good degree of 'post-planning' by teachers following pupil input was noted, as also was the fact that this approach will work with some topics rather better than with others. In six of the schools where interviews were carried out it was suggested that it will take time for the pupils to get used to this kind of involvement, but over the next few years, with practice, this should become a frequently used and very important aspect of pupil learning. The thought was also noted that more experienced teachers might find it more difficult than less experienced teachers to accept the potential loss of control over what was to be taught.

Teacher Interviews and Questionnaires – Less Positive Attitudes

A significant number of teachers responding to the survey questionnaire expressed some ambivalence, specific concerns or negative feelings, and some expressed serious doubts about this type of pupil involvement. Four teachers stated that they had been using KWL-type techniques for some time, with one saying:

> *KWL. No big reaction. This is not new!* (Year 5 teacher)

One teacher intimated that her pupils had become very accustomed to their participation in planning, now accepting this as the norm. However a number of teachers had found that their classes had taken some time to get used to this new way of working; others concluded that it was difficult to start pupil planning exercises in the upper school if it had never been done in previous classes:

Pupils needed a lot of prompting/ guidance- as they get used to being involved they will hopefully be more independent. (Year 5 teacher)

Similar to findings reported by Wray and Lewis (1997), amongst those teachers who were negative or ambivalent towards pupil involvement in planning were some who said that the idea was good in theory but that pupils needed a lot of teacher input:

KWL: children need strong guidance about what they should study; otherwise they often pick silly/ insignificant questions and miss out on important ones. (Year 5/6/7 teacher)

Other issues raised included some teachers' concerns about how effective this technique actually was for pupil learning, especially for weaker pupils. In addition, the difficulty of including everyone in pupil planning exercises, teacher control, resource implications (eight teachers) and time issues (seven teachers) were also mentioned. One teacher wrote thoughtfully about a lack of maturity and 'World Around Us' experience on the part of her pupils:

Depends very much on the ability of the children. Low ability or special needs children who perhaps have little experience of the world around them because parents do not offer an enriched environment have poor general knowledge and contribute very little as they don't know how. (Year 6 teacher)

Another teacher was especially negative:

KWL – children initially enthusiastic, then bored; limited educational value. Some of these techniques assume a maturity that children don't often have. (Year 5/6 teacher)

Five teachers said that they struggled to get good input from their pupils in attempting to introduce topics with KWL boards; however a teacher with a more positive view of the technique voiced the opposite opinion:

Encourages even the weakest child to have input into planning and to realise that they do have a basic understanding of a topic. (Year 6/7 teacher)

The teachers who were most adamantly against pupil involvement in planning said that it was not a realistic approach, that it was 'only paying lip service', or that it was not genuine or was rather contrived:

I think learning should remain at the teacher's discretion. We live in a society where 'everyone has to have a say' and 'choice' and that everything must be 'interesting'. Another example of teachers' authority being undermined. An interesting teacher makes learning interesting! (Year 5 teacher)

Slightly contrived. Realistically pupils may think they are planning but they aren't. I know what I want to do and steer them accordingly. A pointless exercise. (Year 6 teacher)

A respondent with a particularly negative attitude to other aspects of the revised curriculum was vehement in her criticism of pupil planning:

> *Children are exactly that … children. They should not be treated as adults by trying to give them a responsibility beyond their maturity. Far too much time is being given to Assessment for Learning to the detriment of teaching and learning.* (Year 5/6 teacher)

The kinds of negative teacher opinions quoted above reflect conclusions reached by McEvoy and Lundy (2007) and by Lundy (2007) who, writing about barriers to the implementation of Article 12 of the United Nations Convention on the Rights of the Child, suggested that adults' concerns included scepticism about children's ability to have a meaningful input into decision-making as well as concerns that giving children more control will undermine authority and destabilise the school environment. Such teacher reactions to the use of pupils' ideas were characterised by McIntyre, Pedder and Rudduck (2005, p. 167) as 'uncomfortable learnings'.

Inspectorate Attitudes to Pupil Planning

A member of the Northern Ireland Education and Training Inspectorate (ETI) was interviewed and was asked to comment on the issue for teachers of, on the one hand, allowing pupils to contribute to the planning of topics, yet at the same time feeling they need their planning paperwork 'complete' to show inspectors. By way of example, two teachers' responses from the questionnaire survey were quoted to the inspector within the interview:

> '*… inspectors are looking for evidence of structure in the teaching of what is now a more unstructured curriculum. This is causing serious problems for teachers*.' (Year 5 teacher)

> *How can teachers plan each year for a topic that children devise? How can we change written planning every year?* (Year 5 teacher)

However, another teacher during the group interviews spoke concerning her understanding about Inspectorate attitudes to pupil involvement. She trusted that her planning paperwork:

> *'...did not have to be sorted out by tomorrow. The Inspectorate will not be expecting to see completed work, just demonstrate that work is in progress.'*

The inspector responded by stating that the ETI do find these conflicting perceptions in schools about planning on paper. She said that teachers should have schemes laid out as starting points but be willing to alter them in response to pupil suggestions. Discussing pupil ideas a couple of weeks before a topic starts formally and putting those ideas into their planning in the interim is one way in which teachers might try to achieve a compromise. She said that teachers need to be professional and flexible in this regard. She continued by saying that in schools the Inspectorate are seeing a greater emphasis on medium-term planning - two-weekly planners and four- to six-weekly planners depending on age groups and different schools. One suggestion for teachers is the use of more structured work for the first lessons within a topic, followed by more exploratory work towards the end of the topic, some of

which could allow children to follow their own interests. The inspector stressed that reflecting on the success of pupil planning is a vital aspect of teachers' evaluations of the topics they have taught. In her opinion these kinds of procedures are factors that separate 'very good' or 'outstanding' practice from practice that is merely deemed to be 'good' or 'sound'. In lessons illustrating best practice the children have been totally engrossed in their learning, they have made good progress, and the school can demonstrate that progress. Inspectors have opportunities to talk to the children when they visit schools and are able to ask them about their involvement in and enjoyment of a particular topic, asking, for example, *how* they learned, not just what they learned.

Student Teacher Interviews with WAU Coordinators and Thinking Skills Coordinators
As part of a College assignment, Year 3 BEd student teachers devised as a class a schedule for an interview with the World Around Us coordinator in each of the schools in which they were placed for teaching practice. Similarly, Year 2 students created an interview schedule to be used with a teacher in each of their placement schools who was interested in developing 'Thinking Skills and Personal Capabilities' (TSPCs), a statutory part of the Northern Ireland Curriculum. One of the questions addressed in both interviews was whether or not there was any pupil involvement in planning in their school. If there was, the teacher was asked to give an example of a topic where this had been done. In the majority (15) of the 25 interviews reported on here, the teachers responded that KWL grids or charts were created at the start of every new topic. Another five teachers used the words '*most'*, '*usually'* or '*frequently'* to describe the amount of pupil involvement in planning in their schools. One teacher said:

> *Every class creates a KWL board at the beginning of every topic. The teachers refer to it explicitly throughout the topic and leave it entirely up to the children regarding what they want to know.*

Another responded:

> *Every topic…. We might not necessarily use a KWL but we will use some kind of planning board.*

The comment of another teacher indicated that this type of pupil involvement had become second nature in her school:

> *All teachers use KWL boards and they all use those boards effectively and have done so for years. Every topic is started with what they know; it is part of our practice that we do automatically now, and as far as I know everybody does it. If you go into anybody's classroom you will see a KWL board. It highlights what the pupils don't know and it gives them an interest.*

A large number of the interviewees were positive about how this kind of work had been received by the pupils:

> *Yes, I use the KWL at the start of every topic. I used it for my 'Garden' topic. Children were able to come up with a lot of really good ideas and questions about the garden.*

Some teachers spoke specifically about why they thought that pupil planning was effective:

Pupils are often more interested if they feel they have chosen what they are learning, making this method very successful.

I feel that this form of planning works well and has proven to be very successful because it promotes pupil involvement and enthusiasm as it gives the children a sense of ownership about their work while ensuring that all areas of the curriculum are covered.

It's important to us in this school that the children are involved in their own learning, in order to make it relevant to them.

It is a great technique as the children will go and look at it and say 'we now know the answer to that question'.

As we go through the topic the children will say 'Oh we found out the answer to that!' and they move it to the 'what we know' section. This engages them and makes them feel like they are in control of their learning.

One teacher indicated the importance of using a KWL activity to activate pupils' prior knowledge when beginning a new topic:

One example is teaching the First World War: pupils had previously learnt about the Second World War in primary five so were able to use their previous knowledge from that. Also, with Remembrance Day being in the media, pupils were able to use what they had seen and heard to generate ideas for the 'K' section and to create questions for the 'W' section.

Another teacher elaborated on the way in which a KWL grid on display was used during and at the end of a topic:

As they are learning the children gradually add what they have learnt to the KWL board. When the topic is completely finished we review the board as a whole class and evaluate the learning.

The teacher below revealed that, when asking for pupil input, she had a flexible approach to her planning:

KWL grids also allow teachers to change or add in activities that pupils would like to learn about. At the end of the topic pupils always comment on what they learned and what they would like to do differently. It gives pupils responsibility for their own learning.

However another teacher indicated a very different attitude among the staff in her school, talking about 'interference' and a fear of not covering the required learning:

No - although as an introduction I ask children what they already know about a topic, I don't use a KWL board. I and the other P5 teachers plan what we are going to teach and

so if we were to ask children what they would like to learn it could interfere with what we have planned and we might not get all the learning covered.

Echoing findings by Wray and Lewis (1997), other slightly negative responses centred on practical difficulties of working with young children:

We have used KWL for a number of years but found that the children can't phrase what it is that they know about a topic and also cannot phrase what they want to know. We also found that very rarely at the end of a topic do we complete what it is we have learnt because of time constraints.

The 'What I would like to find out' section of such boards is not appropriate for Primary 1; it has been unsuccessful with my classes in the past.

Perhaps it is more difficult for the children in Foundation Stage to explain exactly what it is they want to find out about a subject and their contributions in this section of the grid tend to require more adult input and scaffolding.

Student Teacher Questionnaires

A total of 33 questionnaires were returned by Year 2, 3 and 4 students studying for a BEd degree in Primary Education at Stranmillis University College. They were reporting on occasions when they had used pupil planning techniques with classes during periods of school placement. All year groups of primary school classes were reported on, with the most frequently taught class being Primary 7 (ages 10 and 11). Most of the topics being taught (28) fell within the 'World Around Us' Area of Learning, based on either geography or history or science, but in addition, an RE-based topic on 'Celebrations' and a numeracy-based topic on 'The 24-hour Clock' were reported on, as well as two Literacy-based topics and a generic topic on 'Dinosaurs'. The students were asked to describe the context (the series of lessons in which the pupil planning took place), what was carried out, what the reactions of the pupils were and what their own opinions were about the success or otherwise of the exercise. It is accepted that there may be an element of 'volunteer bias' (Heiman, 2002) in the sampling of these questionnaires, in that it is likely that students would want to report successful outcomes in their teaching to one of their lecturers; however it was seen that many of the students showed a good level of critical reflection on their practice, with some reporting negative outcomes.

All of the students reported that they had used a planning board of some kind. Only two did not specifically mention a KWL board. They described a number of different ways in which the pupil planning activities were carried out. Two students described 'Think, Pair, Share' discussions which led to a class KWL grid activity. Two others described group discussions around some pictures used as a stimulus. Another two used A3 pages to create spider diagrams on the topic in question. One wrote about how the pupils were given their own KWL writing frame before some of the points they made were transferred to a class KWL grid. One explained how the pupils took part in voting to generate a list of the most popular questions for the 'W' part of a class KWL grid. Some of the students who were teaching classes of younger children wrote about the stimuli they had used in advance of eliciting

pupil input or how they needed to provide assistance in recording responses: one read a story about the topic to the class; another asked the pupils to draw pictures about the topic and talk about them to the rest of the class; two students wrote about scribing the pupils' suggestions. One student explained how she encouraged the children to get their parents/ carers to help them formulate questions about the topic. Five of the students wrote about how they included a 'how do we know?' element at the end of the topic. In this the children were asked to record the various sources of information which had been used in their topic work as well as their comments on how useful each one was.

A simple content analysis of the 33 responses revealed the most frequently used words or phrases used by the students to describe the benefits to pupil learning which they felt they had seen: '*increased motivation'* (13), '*ownership*' (12), '*increased interest'* (11), '*enjoyment'* (10) '*successful'* or '*beneficial'* (5) and '*increased engagement'* (4). Many of these comments mirror the findings of Maitles and McAlpine (2012), Roller (2008) and Fisher (2002). A number of the students wrote at length about how successful they felt the various forms of pupil involvement had been. Responses where the students described positive experiences included comments on increased pupil interest, motivation and enjoyment:

> *Interest levels were high as the children understood exactly what they were expected to do and were keen to start the new topic…*
>
> *The pupils came up with many questions and they couldn't wait to find the answers.*
>
> *Many pupils who previously were known for being uninterested enjoyed sharing their opinions and often researched the topic at home in greater detail to report back to the rest of the class with great delight.*
>
> *Children returned to the planning board/KWL chart frequently, pointing out what they had found out and adding evidence of their learning e.g. a picture of a festival they had found out about at home and shared with the rest of the class.*
>
> *I personally thought that it was excellent to have the children involved to such a high degree within the planning. After the planning had occurred and the topic scheme was actually being put into place, the children worked well because the lessons interested them and they were involved and consulted continually throughout the process.*
>
> *Pupil interest was always high throughout the 'Volcanoes' topic and I was constantly bombarded by questions at the beginning of the day as to whether they would be learning about volcanoes that day. The class as a whole was thoroughly engaged from the outset and observation during the lessons illustrated their enthusiasm. Work produced also illustrated their enthusiasm and interest for what they were learning.*

One student recorded that initially she had been sceptical about using this kind of technique with very young children (four to five years old), but found that it was successful.

> *When the teacher suggested that I ask the children what they would prefer to do in a lesson I was a bit sceptical as obviously these were very young children and ultimately I*

knew I had curriculum requirements to meet which they would not understand; however the teacher used this practice with them regularly and they were serious and helpful in their suggestions.

Similarly, the two responses below show that the students were pleasantly surprised at how the pupil planning activity had gone:

I had never expected it to be so successful. I could see the benefits in it from a teaching point of view but I didn't think that the pupils would show any great enthusiasm towards it, so I was surprised to see them up looking at all the other pupils' sticky notes.

I think they really enjoyed the KWL boards – they loved talking about what they knew, and it was surprising to see what they actually did know! They bounced ideas off each other, and expanded on each other's questions. There were lots of nods and 'yes, yes - I wondered that too!' as people read theirs out, and they loved being able to tick questions off their KWL Board after each lesson. I think it did motivate them, and they definitely felt in charge.'

The two comments below illustrate how the students observed the pupils' changing reactions:

One boy remarked in the first lesson how we had fewer things in the K section than in the W section. I was able to use this point to explain that hopefully by the end of the series of lessons the balance will be reversed!

Initial reaction to the board was limited as not all children showed enthusiasm towards the topic. However, active participation in hands-on learning had a positive correlation with KWL updates. The children were highly motivated once they were aware that their input had real meaning.

The student below had obviously been thinking hard before the lesson series started about how to time the integration of pupil input:

I felt that it was important to give the pupils a couple of lessons first of all to generate what they know before asking what they want to know. In the past this has provided more positive results as the pupils are more aware of what the topic is and they have time to focus on it.

Some of the students reported on less positive experiences. Only one of the three comments below is about negative or ambivalent pupil reactions; the other two are about the student teachers' reflections on how teacher-led the activity proved to be difficult with very young pupils or about the extent of the impact of the pupil input on planning:

Writing their own questions was very challenging! I didn't think it made much of an impact.

The children did seem interested and motivated but it was still very much teacher-led.

... if I am honest, I had already my scheme mostly planned, so I really only used their suggestions to guide their own independent research and to answer questions I had not thought of.

Using an Online Discussion Forum

One of the teachers who took part in the student teacher interviews described the creation of a KWL activity using an online learning tool called 'Fronter', part of the 'MySchool' platform which is widely used in schools in Northern Ireland. As part of a topic called 'Violent Earth' with a Primary 6 class (9-10 years old), the pupils were able to contribute to a closed discussion forum, writing about what they knew about natural disasters and what they would like to know; other pupils were able then to join the discussion. The teacher felt that:

This generated interest far more than the traditional style of a whiteboard or sticky notes – children were able to contribute to the Fronter page at home or in school at all times of the day! It proved to be a brilliant way to engage the children with their topic.

Similarly, in an interview a recently qualified teacher described how he had used a Fronter discussion forum as part of a topic on 'The Titanic'. The pupils had contributed 'K' statements in an online discussion, had asked and attempted to answer each other's questions in the 'W' section of the work, and had contributed to an online conversation at the end of the topic, discussing what they had learnt and what they had enjoyed most about the topic. The teacher had created online quizzes and polls before, during and after the topic to stimulate discussion and investigate what had been learnt. He spoke enthusiastically about how using ICT in this way had motivated the children, stimulating their desire to explore the 'Titanic' topic further than might otherwise have been the case as well as developing the pupils' ICT skills.

Small Group Interviews with P6 and P7 pupils

Four small group interviews were carried out in two different Belfast primary schools with pupils aged between 9 and 11 years. The groups each had five or six pupils. The pupils were asked to try to remember KWL grids that they had created in their classes in recent months and in previous years, and to explain what they thought they had learnt by using them. The pupils were easily able to recall some of the topics which they had studied where a KWL exercise had been used; they listed topics such as 'World War 2', 'My Body', 'Minibeasts', 'Rainforests', 'Space', 'Japan', 'Victorians', 'Dynamic Earth' and 'Chinese New Year'. Many were able to recall specific questions which either they or others had asked and about which answers had been found. The main focus of the interviews was to explore if the pupils could explain why teachers thought that it was a good idea to use a KWL grid or involve pupils in planning topics in some other way. Many of their answers displayed a good degree of insight. The responses ranged from: '*it helps teachers to plan*' to '*teachers have a record of what we already know*' to '*teachers can see at the end of a topic how much we have learnt*' to '*it summarises the topic'*. One Year 7 child said: '*Teachers want to interact with pupils, and this is a good way for them to do that*'. In one of the interviews a child said: '*it helps keep children interested*', and another added: '*yes- it helps keep you focussed*'. One boy said that being allowed to choose *how* he was going to investigate a particular topic was especially

enjoyable for him. In all of the groups the children agreed that this kind of involvement was helpful for their interest and motivation. One child said that this kind of work had increased her confidence for future investigations. Finally, one pupil simply suggested: '*it's good to set targets'*.

Conclusion

Within this research, pupil involvement in planning was viewed positively by the vast majority of teachers and student teachers who responded in interviews and questionnaires. Frequently made comments were that the pupils had reacted positively, favourably, enthusiastically or with enjoyment. A significant number of teachers and student teachers thought that children seemed to be more motivated, responsive and interested in topics in which they had some 'ownership'. The 9-11-year-old pupils who were interviewed were able to recall topics in which KWL grids had been created and many seemed to have grasped why teachers use these kinds of techniques. Their thoughts concurred with most of the teachers and student teachers: they were clear that involvement in planning topics helped maintain their interest and motivation, keeping them focussed. Negative reactions from teachers ranged from 'no big deal' and 'this is nothing new' to arguments about difficulties in incorporating pupil ideas into their planning. Practical concerns about using a KWL grid with younger or weaker pupils were also expressed. More fundamental were fears about loss of teacher control, teacher authority being undermined, and 'interference' in teacher planning. The words of Alexander *et al*. (2010, p. 154), quoted earlier, should help to reassure teachers who hold these fears: '*Suggesting that children should have a voice does not negate the importance of teacher voice*…'. If pupil involvement in planning is carried out with integrity and in a balanced and thoughtful way, utilising some of the practical 'good practice' suggestions listed below, it should prove in most circumstances to be a very worthwhile teaching technique.

Good Practice when using KWL Grids

Below is a list of suggestions about good practice and successful approaches gleaned from the responses given by the teachers, student teachers and pupils who took part in this research.

1. In order to stimulate pupil thinking, teachers might announce one or two weeks in advance of starting the new topic that it will be beginning soon.

2. Teachers need to have schemes/units of work planned in advance, but as suggested by the member of the inspectorate who was interviewed, space in this planning can be left to incorporate pupil suggestions where appropriate. A teacher may carry out a KWL exercise in advance of the start of the new topic, perhaps as she/he announces the topic, as in point 1 above. The teacher could base subsequent planning on the knowledge or lack of knowledge displayed and use a number of the pupils' suggestions for lines of enquiry.

3. Many pupils may need initial stimuli when a KWL exercise is being carried out; these stimuli may be in the form of images, a video, picture drawing and a 'show and tell', class or group discussion activities or a story.

4. Especially for older pupils, teachers may lead some introductory, whole-class lessons on a topic before allowing the opportunity for individual or paired research by pupils on a specific aspect of the topic, so that pupils can pursue their own questions and interests.

5. Individual or group KWL grids could initially be created on paper before elements of them get transferred to a large, whole class version.

6. Especially for younger children, doing the 'W' section may be more productive after a couple of lessons in the series have been taught. This allows the children time to process new information and may improve their ability to create new questions.

7. Explicit teaching could take place on the different types of questions which might be asked – the '5 Ws' and how – and what makes a good enquiry question.

8. Parents may become involved if a homework activity is focussed on discussing the topic in question.

9. The teacher may need to act as scribe for younger or less able children as they may be able to recall information or ask useful questions about a topic, but not have the writing skills to record these.

10. If a large number of questions are generated, pupils might vote to create a list of the most important or popular questions.

11. When a class KWL grid has been created, pupils can be encouraged as individuals, groups or as a class to categorise, group, rank and reorganise the 'K' suggestions and then the 'W' suggestions under headings. In this way, 'knowledge re-telling' can become 'knowledge transforming' (Carr and Ogle, 1987; Bereiter and Scardamalia, 1987).

12. The KWL grid should be displayed clearly in the classroom and referred back to constantly during the topic. Ws could be moved to the K section as new knowledge is discovered as the topic progresses.

13. At this stage some of the Ks may answer some of the Ws, so these can be paired up. Alternatively, linking lines between them could be created on the grid, and the 'linking ideas' could be labelled appropriately.

14. It may be useful to include a fourth heading on the grid to indicate the pupils' ideas about how they think they will **find** the answers to their questions (KW**F**L) or, at the end of the topic, **how** they actually found the information that they did (KWL**H).**

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