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A Teacher's Repertoire: Developing Creative Pedagogies

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Abstract

Promoting creativity in schools involves the development of characteristics such as self-motivation, confidence, curiosity and flexibility. It can be argued that the development of the first three of these probably relies on the last, all of which need to be supported by a "flexible learning context." However, this cannot work without a structure which can be used as a scaffold (Vygotsky, 1978) either to go beyond and enhance learning, or to work within a framework, flexible enough to accommodate individual learning styles. Such pedagogy is intricately related to the curriculum. In the context of the newly introduced Curriculum for Excellence in Scotland, this paper discusses the experience of an interdisciplinary approach to pedagogy funded by the Scottish Arts Council. The approach was developed within the initial teacher

education (ITE) programmes at the University of Aberdeen and elaborates on the relationship between curriculum, pedagogy and creativity.

Introduction

Arts as a Tool for Learning Across the Curriculum (ATLAC) is an initiative aimed at developing an interdisciplinary approach to learning within the initial teacher education programmes at the University of Aberdeen. This paper begins with a description of the background of this project against the policy backdrop and international context. The conceptual framework discusses the interdisciplinary approach and its relationship with the concept of creativity. The initiative is described, and selective findings from the first year of the project are discussed.

Different forms of expressive arts were used to extend and reinforce subject knowledge as well as to develop transferable life-long learning skills amongst student teachers. In offering such experiential learning opportunities, a further aim was to extend the student teachers' pedagogic repertoire. While each of the arts is a discipline in its own right, for the purpose of this initiative the arts were used alongside other subject disciplines as the medium to create an interdisciplinary learning context. The intention to develop the aforementioned skills included two notions: creative teaching and teaching for creativity. While focusing on learning the interdisciplinary pedagogy explored ways of "creative teaching," the outcomes of which aimed to develop creativity amongst learners in the classroom, which includes both pupils and teachers. This paper primarily reports on the former notion; that is, the creative teaching aspect of the ATLAC approach to pedagogy, with an awareness of the latter in the discussion about the learning outcomes.

Background

The ATLAC approach was introduced and evaluated within the major innovative project *Scottish Teachers for a New Era* (STNE) led by the School of Education, University of Aberdeen. This six-year project commenced in 2005 and is funded by The Scottish Executive, The Hunter Foundation and the University of Aberdeen.

ATLAC, funded by the Scottish Arts Council (SAC), was introduced as a two-year action research initiative within the ITE programmes at the University of Aberdeen in October 2007. This was a collaborative action research project in partnership with Aberdeen City Arts Education Team (AET), contributing tutors, student teachers and artists. As such, partners adopted different yet complimentary roles including participation in the workshop preparation

and delivery as well as research. Aberdeen City Arts Education Team adopted a facilitative role in the organising process.

In addition to the STNE project there is a further large-scale project underway within the School of Education: the *Inclusive Practice Project* (IPP). The IPP intends to develop a model of inclusive practice within the ITE programmes. While the principles of STNE are primarily focused on the new Bachelor of Education (BEd) programme and the IPP on the Post-Graduate Diploma in Education (PGDE) programme, the intention is that all the programmes in the School will learn from each of these initiatives and the principles from both will become embedded across the School. This, therefore, was an opportune time for ATLAC to be introduced to the programmes to examine how well such an approach could contribute to the inclusive practice philosophy and the broader aims of the two initiatives. These projects in the School are also aligned to one of the (former) Scottish Executive's aims where classroom environments require "time and space for innovative and creative teaching and learning" (Scottish Executive, 2004, p. 16).

The Scottish education system has recently introduced a redesigned curriculum - *Curriculum for Excellence* - which focuses on the "holistic" development of pupils through promoting learning in four capacities - confident individuals, successful learners, effective contributors and responsible citizens (Scottish Executive, 2004). It is anticipated that the aim of ATLAC to increase creativity in the teaching and learning process through cross-curricular links, will in turn impact on pupil learning, which the new curriculum seeks to develop.

ATLAC created scope for tutors in initial teacher education to investigate the impact of working alongside various forms of expressive arts, with the aim of *increasing creativity in the teaching and learning process* through enhanced cross-curricular links. The specific aims are to:

- Increase creativity in lesson planning and delivery using expressive art forms across the curriculum - for the student teachers undertaking teacher training programmes
- Develop opportunities for learning in partnership involving student teachers, artists and tutors
- Acquire knowledge and skills embedded within the four capacities of *Curriculum for Excellence* (Scottish Executive, 2004) through interconnected components of learning
- Contribute towards developing an inclusive approach within the Scottish Education system.

Against this backdrop, it is important to examine the policy emphasis on creativity and interdisciplinary learning in the fields of early, primary and secondary education, and to set creativity within an international context.

The International Context and Scotland

In order to meet the challenges which will enable our future citizens to respond positively to change, to live their lives productively, and "use their knowledge and skills to make an impact on the world around them" (Seltzer and Bentley, 1999, p. 10), education systems across the world are being revisited and reframed. Over the last decade the increased status of creativity in education has become an international narrative and is reflected in educational policy documentation "in almost every country in the world" (Bamford, 2006, p. 11). The endorsement of creativity was led by UNESCO's policy initiatives in Arts education. In 1999 the organization's official position was in the promotion of two main approaches to Arts education – learning in the Arts and learning through the Arts, the latter described as an inter-disciplinary approach using creative and artistic pedagogies to promote learning in a range of subject areas. Extensive global research indicates positive impact of the use of learning *through* the Arts on overall academic attainment, reduced school disaffection and the promotion of positive cognitive transfer (Bamford, 2006). Learning in the Arts is the systematic and sustained learning for each of the art forms and can result in improved attitudes to learning, personal satisfaction and wellbeing and enhanced cultural identity (ibid.). The promotion of arts education was re-affirmed at the 2006 World Conference on Arts Education *Building Creative Capacities for the 21st Century* and in its proceedings (UNESCO, 2006) and through the formation of the International Society for Education through Art in the same year.

While Anne Bamford's 2006 study of arts curricula in over 35 countries and organisations documented the impact of Arts education programmes on children's education, an international study revealed that many countries share the same beliefs and priorities for creativity education (Ewing, 2010). It is now an international trend to integrate creativity into curriculum frameworks (Le Metais, 2003). A survey of European education policies found that all promote creative capacities in young people (Taggart, Whitby and Sharp, 2004), while the European Year of Creativity and Innovation 2009 continued to promote creativity and innovation in different sectors of human activity, so as to better equip the European Union for future global challenges. Like others, Asian countries are emphasizing the importance of creative citizens and are making changes to their curricula (Cheng, 2011). In Hong Kong for example, creativity is one of the three most prominent generic skills to be developed in an integrated way across all subject curricula (Curriculum Development Council, 2002). UNESCO's Second World Congress on Arts Education (2010) demonstrates the ongoing commitment to Arts education for 21st century learners.

Its role in Scottish education culturally, economically and socially, has also been acknowledged in a range of curricular guidance, reports and policy initiatives (IDES Network/Learning and Teaching Scotland, 2001). Hargreaves (2001) argued that we must enhance the capacity of contemporary learners to engage in creativity otherwise our capacity for inventiveness and entrepreneurship will remain unexploited and detrimental to individual and societal futures.

Echoing the same notion, the report *All Our Futures: Creativity, Culture and Education* published by the National Advisory Committee on Creative and Cultural Education (NACCCE, 1999) was influential throughout the UK. It emphasized that all children and young people can benefit from developing their creative abilities and all areas of the curriculum can contribute - inclusive positions that were reiterated in *Creativity Counts: Portraits of Practice* (IDES, 2004a) and *Emerging Good Practice in Promoting Creativity* (HMIE, 2006a).

Earlier, the discussion paper *Creativity in Education* (Learning and Teaching Scotland, 2001) highlighted the importance of encouraging problem solving and experimentation alongside reflection and analysis. This paper also emphasized teaching for creativity with the need for pupils to develop self motivation, flexibility, confidence, resilience and risk taking as well as collaborative work. Teachers were advised to model creative behaviour, facilitate, mentor and empower their pupils. Subsequently, the action research project *Creativity Counts: A Report on Findings from Schools* (2004b) advised on key pedagogical approaches and shared assessment practices.

The status and promotion of creativity in the United Kingdom has thus seen a significant increase in recent years (Department for Education and Skills, 2001; HMIE, 2006a and b, 2009; Learning and Teaching Scotland, 2007; Qualifications and Curriculum Authority, 2004; Scottish Executive, 2004, 2006; The Scottish Government, 2008). It has also been emphasised in the recently introduced *Curriculum for Excellence* (Scottish Executive, 2004) where one of its seven principles for curriculum design articulates:

> [T]hey (pupils) should be active in their learning and have opportunities to develop and demonstrate their creativity. (p. 14)

This redesigned curriculum aims to help learners develop capacities to become confident individuals, successful learners, responsible citizens and effective contributors, who are able to "think creatively and independently" (p. 12). The Cultural Commission (Scottish Executive, 2005) supports these capacities emphasising "that education in and through the

medium of arts and culture can play a strong role" (p. 53) in equipping learners with the skills and dispositions for contemporary living.

How Good is our School? The Journey to Excellence (HMIE, 2006b) reinforced the importance of developing creative skills, with creativity featuring in six of the ten dimensions for excellence in schools. It suggested schools should aim to set up conditions for creativity and innovation to flourish; for it to be embedded in development plans and observed in all areas of the curriculum and school organisation. The curriculum should also be structured to reflect creative thinking at all levels, including the provision of a wide range of artistic and cultural opportunities. Creative learning and teaching approaches which help to provide imaginative contexts, open-ended learning experiences and opportunities for personal development were also encouraged.

Nurturing creativity of pupils and teachers, and developing creative approaches to teaching all aspects of the curriculum through partnerships between schools and cultural organisations continues to be endorsed in contemporary educational thinking:

> Those involved in planning the curriculum, including partners, should be conscious of the positive role which experiences and learning connected with culture, art, music and drama can have in providing a basis for developing the four capacities and for providing innovative approaches to learning across other areas of the curriculum. (The Scottish Government, 2008, p. 14)

While much of the preceding literature emphasises the importance of arts in developing skills and attributes linked to creativity, other literature (Catterall, 2009; Ewing, 2010) has also commented on the impact of arts education in the cognitive and affective domains. The extensive global research in the United States of America, Canada, Europe and the United Kingdom gives credence to the positive learning which results when it is embedded in the Arts (Bamford, 2006; Ewing, 2010; PCAH, 2011). For example, Catterall, Chapleau and Iwanaga (1999) showed that, regardless of their socio-economic background, pupils with high levels of arts education experiences scored higher in standardised achievement tests and gained higher grades than those pupils with little or no arts education experiences. One of Bamford's (2006) main findings indicated "There was significant and consistent evidence that arts-rich education contributed to improving children's achievement both within the arts and more generally across education" (p. 104) with 71% of quality arts programmes leading to positive outcomes on academic achievement, while other case studies revealed social, attitudinal and behavioural benefits. More recently the President's Committee on the Arts and the Humanities (PCAH, 2011) commented, "...The practice of teaching across classroom subjects in tandem with the arts, have been yielding some particularly promising results in

school reform and closing the achievement gap" (p. vi). Alongside pupil benefits, arts as a tool for learning has also been found to be the catalyst for linking up schools, families, community partners and funders (ibid.). ATLAC was conceived with similar aims in mind, whereby different forms of expressive arts paved the way to learning.

Interdisciplinary Approach

One of the key ideas underpinning the ATLAC initiative is the idea of *interdisciplinarity* and the views of knowledge that differing disciplines bring to a particular issue, topic or learning context. Petrie (1992) in his review of interdisciplinary education provides a background to the development of the ideas of interdisciplinarity and its role in education. He points out that the idea has been around for a long time with "Dewey (1916, 1933, 1938) [having] implicitly attacked a narrow formulation of the disciplines as the basis for education in his elaborate theory of the role of experience in learning" (p. 299). Starting with three lines of thought Petrie goes on to examine knowledge, the way it is understood and the link between theory and practice. Working through the ideas of multi-, inter- and trans-disciplinary work, he moves from the essentially fragmented and sometimes disjointed nature of disciplinarity to the additive nature of multi-disciplinary engagement, the integrative aspect of interdisciplinarity and "the idea of the desirability of the integration of knowledge into some meaningful whole" (p. 304) exemplified by transdisciplinarity.

Ideas about and a focus on interdisciplinarity have emerged in parallel with an increasing awareness of networks and systems and the idea that for a more complete understanding of any system to be developed, it is necessary to allow for an appreciation of multiple perspectives or multiple views of knowledge. Klein (2004) defined interdisciplinary study as "a process of answering a question, solving a problem, or addressing a topic that is too broad or complex to be dealt with adequately by a single discipline or profession" (p. 2).

The discourse on interdisciplinary work often makes reference to the ideal of creating a more "holistic" knowledge (e.g., Ivanitskaya, Clark, Montgomery and Primeau, 2002; Klein, 2004), although there are limitations to the interdisciplinary approach. As Ivanitskaya et al. state: "Interdisciplinary approaches, while arguably less effective than traditional approaches for building the depth of single-subject knowledge, emphasis higher-order thinking (e.g. analysing, applying, generalizing) and seek meaningful connections between and among disciplines" (p. 97). The skills developed by an interdisciplinary approach chime well with the prediction made by Hargreaves (2000) that educational systems and schools will come under increasing pressure, in the new knowledge economies, to focus much more on meta-cognitive abilities and skills and to develop "the ability to work and learn effectively in teams; the ability to create, transpose and transfer knowledge; the ability to cope with ambiguous situations, unpredictable problems and unforeseeable circumstances; the ability to cope with

multiple careers - learning how to 're-design' oneself, locate oneself in a job market, choose and fashion the relevant education and training" (p. 2).

The question that may arise in relation to interdisciplinarity is - which disciplines need to be engaged in such enquiry? Clearly, this depends on the type of enquiry that is being undertaken and the purpose of that enquiry. Interdisciplinary learning as defined by Ivanitskaya et al., (2002) is "one in which two or more disciplines are brought together, preferably in such a way that the disciplines interact with one another and have some effect on one another's perspectives " (p. 135). Thus while some interdisciplinarity may involve disciplines that are identified as belonging to a similar domain, such as the various scientific disciplines and mathematics, others may involve disciplines that are usually viewed as quite distinct and unrelated e.g. disciplines from the arts and the sciences. Best (1992) expresses the strong view that thinking of art as subjective is wrong and that those who suggest that art is a discipline solely of subjectivity and feeling do art a disservice. He suggests that "artistic feelings necessarily involve understanding or cognition," "interpretive reasoning" is of central importance to the arts and, "reasoning can change understanding, and with it, feeling" (p. 2).

Pedagogy, Cognition and Creativity

Traditionally school-based education has focused primarily on cognitive abilities and their measurement; however, there is a growing recognition of the importance of other dimensions in the holistic development of children and young people. For example the Delors' report (Delors, 1993) commissioned by UNESCO emphasises the importance of four pillars of learning: Learning to do; Learning to be; Learning to know and Learning to live with others, but also emphasises that these do not stand alone and we must start to think about education in a more all-encompassing fashion. Further work by UNESCO (1999, 2006, 2010), mentioned earlier, recognises the importance of creativity in this process, but we argue that creativity cannot be considered in isolation and must be linked with cognition and pedagogy in order to be true to their inter-relationship.

Although creativity is traditionally associated with expressive art forms, the definition extends beyond these disciplines. Characteristics that define creativity include novelty or originality (Cropley, 1999). This is viewed as a core pre-requisite in describing a creative process or outcome. Some argue that the sense of novelty must be linked with something purposeful (Sternberg and Lubart, 1995) and imaginative. Originality can be expressed through writing, painting, building, thinking or even simply doing things in a manner that is distinct. The school of thought which explored the concept in relation to intellect claimed that divergent thinking is more capable of fostering creativity in a learning context. According to these researchers (Hudson, 1966), closed reasoning or convergent thinking, despite producing conventional responses, lacks the power of imagination and is therefore less capable of

innovation as opposed to discovery. It is however, important to consider whether divergent and convergent thinking combined can produce a more creative outcome. In other words, if the two types of thought processes play a complementary role in a learning context, automatically the 'interconnected' logic of understanding becomes a vehicle to developing deeper knowledge.

Interdisciplinary learning's role in developing "holistic knowledge" with regard to creativity can be viewed from another angle. A child's learning needs to cover different types of skills which may be broadly categorised as *cognitive*, *social,* and *affective*.

Cognitive: critical thinking, meta-cognition, information processing, etc.

Social: language (verbal, non-verbal), collaboration, cooperation, etc.

Affective: empathy, attitude, values, etc.

To elaborate on these categories some theories of intelligences must be discussed.

Craft (2000), while discussing the concept of "creativity," refers to its relationship with the domains of intelligences. Although curiosity is perhaps the most important factor in creativity (Powell Jones, 1972), different types of intelligences as described by Gardner's (1993) "theory of multiple intelligences" provide the means to explore and express our thought processes. According to this theory, the nine types of intelligences include: linguistic, logical-mathematical, spatial, musical, bodily-kinaesthetic, interpersonal, intrapersonal, naturalist and spiritual, and existential intelligences. These categories are not dissimilar to that of Handy's (1993) classification, who observed the following within the discipline of organisational psychology: factual, analytical, linguistic, spatial, musical, practical, physical, intuitive and interpersonal. The similarities between the categories of the two lists are apparent and more obvious than the subtle differences. Handy created the "practical" category with a specific focus on the skills and abilities that help us to take actions on the basis of our intellectual judgement, whereas, "spiritual and existential intelligence" (often involving higher order thinking) is not considered as an important part of cognitive skills development in this list. Goleman's (1996) "emotional intelligence theory" adds yet another dimension and deeper focus on what Gardner described as "interpersonal" and "intrapersonal" intelligences. According to Goleman, "Emotional Intelligence is a master aptitude, a capacity that profoundly affects all other abilities, either facilitating or interfering with them." (p. 80)

Emotional Intelligence theory involves the following five characteristics and abilities (Goleman, 1996):

> Self-awareness: Knowing emotions, recognising feeling as they occur and discriminating between them;
>
> Mood management: Managing feelings developed in context and react appropriately; Self-motivation: Handling feelings and directing 'self' towards a goal;
>
> Empathy: Recognising feelings in others and tuning into their verbal and non-verbal cues; and
>
> Managing relationships: Involves interpersonal interactions, conflict resolutions and negotiations.

Craft's (2000) focus on the theories of intelligences argues that creativity can stem from a number of combinations of these intelligences at various degrees. A creative learner, being consciously or subconsciously aware of the learning process, is capable of combining different types of skills from cognitive, affective and the social domains. The goal and the conditions of the learning context, leading to a certain degree of motivation guide the learner to be creative about learning. The outcome (shape and depth of knowledge) of this process varies according to the influencing factors.

Recent neurocognitive studies have demonstrated the brain "prioritises emotionally tinged information for conversion to long term memory" (PCAH, 2011, p. 23), thus motivation, fun, excitement and enjoyment appear to be key factors in learning. In its vision for raising standards in primary schools, the Department for Education and Skills similarly prioritised these factors (DfES, 2003).

Understanding "how to learn" is a key to the success in any learning situation. This aspect (learning how to learn) involves characteristics such as: curiosity, confidence, intentionality, self-control, relatedness, capacity to communicate, ability to cooperate etc. Interestingly, all these characteristics are also the guiding factors for many lifelong learning skills and invariably, a part of the domain of emotional intelligence. The four broad capacities (p. 3) of *Curriculum for Excellence* (2004) embed the possibilities of developing knowledge, skills and abilities in the above areas. However, to deliver this curriculum within the "holistic" framework, interdisciplinary learning plays a key role, as does creativity.

Intervention

For the purpose of the ATLAC initiative, in the Bachelor of Education programme, there are seven different forms of expressive arts: dance, visual art, drama, music, film-making, story-telling, art and design. These forms were used to devise cross-curricular pedagogies in combination with seven specific curricular areas: mathematics, language, religious and moral education (RME), science, social subjects, technology and health and wellbeing. Similarly, for the Post-Graduate Diploma in Education (PGDE) ATLAC elective module dance, art and design and visual art were used in combination with the themes enterprise, confident individuals, and health and wellbeing. The philosophy behind the ATLAC approach was to develop a systematic way of exploring a learning context which encouraged curiosity and imagination, engagement and motivation, as well as learning in curricular areas.

While the first year (2007-08) of the initiative was primarily focused on developing the interdisciplinary approach and investigating different pedagogies for the BEd and the PGDE programmes, the second year (2008-09) contributed to exploring the concept of "teaching for creativity." Artists who already had extensive experience of working with schools were identified by the regional Arts Education Team and invited to participate in the initiative. Following a series of awareness raising meetings between the artists, tutors and student teachers, seven parallel workshop sessions were organised and planned. During these planning meetings the artists and tutors worked collaboratively to produce a formal plan for the student teachers' experiences (see summaries in Appendix A and B). Artists were subsequently involved in the shared delivery of the workshops. Each workshop was planned to be of a two hour duration with artist and tutor sharing facilitation of the process. Building on the awareness-raising sessions the student teachers were quickly introduced to underlying principles. Starting with the learning intentions for the subject discipline the student teachers, tutors and artist worked collaboratively to generate ideas for creative engagement with the learning intentions, followed by reflection on this process at the end. For example in Health and Wellbeing the student teachers were given free scope to create a sculpture which would demonstrate the inter-relationship of physical, emotional, mental and social health to our wellbeing. In this way, visual art was used to illustrate holistic health. Tutors and artists met after the workshops to discuss student feedback and their own reflections in order to ease the embedding of this pedagogy into the programme.

Methodology

ATLAC was conceived as an action research initiative facilitated by the tutors involved. Proponents of action research often advocate a collaborative activity, which enables the participants who are *involved* in the "change" process as well as *affected by* it, to share and develop a common understanding of the practice being researched (Carr and Kemmis, 1986).

Working within this framework, ATLAC created an opportunity for the tutors, student teachers and artists to collectively decide upon the nature of the intervention into the respective ITE programmes while being able to participate, observe, monitor and reflect on its progress.

A mixed method approach was adopted incorporating both qualitative and quantitative methods. Mixed methods has come to the fore in the past twenty years largely as a way of addressing the limitations of solely using either a quantitative or a qualitative approach in isolation and to provide additional information to answer questions that each method alone could not do (Teddlie & Tashakkori, 2009). Each method used in educational research is based on particular *knowledge* claims (Cresswell, 2003) or philosophical tradition, in other words the assumptions that researchers have "about how they will learn and what they will learn during their enquiry" (p. 6). The quantitative is founded on positivism or post-positivist stances (Shadish, Cook & Campbell, 2002) which is essentially deterministic in that causes determine effects or outcomes, while qualitative research is based on constructivism (Lincoln and Guba, 1985) where individuals "develop subjective meanings of their experiences" (Cresswell, 2003, p. 8). While these two philosophical positions might be construed as being contradictory, the pragmatist orientation, with which mixed methods is most often associated, (e.g. Biesta & Burbules, 2003) takes the stance that "instead of methods being important, the problem is most important and researchers use all approaches to understand the problem" (Cresswell, 2003, p. 11). However, other mixed methodologists take a more transformative perspective (e.g. Mertens, 2007) which focuses on social justice and equality issues and a recognition that realities are "constructed and shaped by social, political, cultural, economic, and racial/ethnic values" (p. 212). From this perspective Mertens suggests that "a qualitative dimension is needed to gather community perspectives at each stage of the research process, while a quantitative dimension provides the opportunity to demonstrate outcomes that have credibility for community members and scholars" (p. 212)

Such pragmatic and transformative perspectives are very much in line with the action research orientation used in this study. Action research, it has been suggested can be used to empower individuals and give them a sense of control over their situation (e.g. Ponte, 2002). With ATLAC there was very much a sense that using the arts in a cross-curricular way also enabled individuals to engage with learning in a way which they might otherwise be disinclined to do with more traditional approaches. Thus there was an alignment between the methodological approach used for the research and the philosophical and transformative, inclination of the ATLAC process.

The action research initiative began with queries in two specific areas: firstly, (in a more generic sense) investigating creative ways of learning and teaching through enhanced cross-

curricular links; and secondly, exploring the impact of incorporating the ATLAC approach within ITE programmes. With Programme Directors fully engaged an open invitation was extended to all faculty in order to raise awareness of the ATLAC initiative. Following this tutors were invited to participate. In collaboration with the artists meetings were arranged with the volunteer tutors to discuss and co-construct the intended workshops. Around 30 PGDE student teachers opted to participate in the ATLAC module elective whereas all student teachers (120) in BEd3 were involved in the workshops built into the core programme. Thirty-one student teachers across the two programmes volunteered to participate in the associated research running in parallel with the ATLAC activities. With the help of the student teacher volunteers, primary data were gathered through interviews and observations. Complementary data such as lesson plans were also gathered as well as further focus group interviews the following year. The range of data gathered was used for triangulation purposes.

Interviews

Thirty-one interviews were conducted with BEd3 and PGDE student teachers, and the ten tutors and seven artists who were involved in the delivery of the ATLAC workshops. Semi-structured interview schedules were prepared and shared with selected participants for refinement of the final questions. Interview schedules used are given in Appendices C, D, and E. The interview schedules were designed to elicit interviewees perceptions of their experiences and the extent to which they felt that ATLAC succeeded in meeting the aims specified earlier.

Observations

During student teachers' school placement experience, thirty-one semi-structured classroom observation data was gathered by tutors. Within BEd3 the observations were undertaken in early stages (four-six year olds) classrooms while in PGDE these varied from twelve-eighteen year olds. These semi-structured observations focused on three key areas (pupil engagement, curricular links and pedagogies employed) to determine the extent to which ATLAC principles were being integrated into classroom practice. Observation of the student teachers was undertaken on a voluntary basis. Over the same period student teachers were being formally assessed on classroom practice and therefore, in order not to overburden them, it was decided to carry out only one ATLAC observation per student teacher over a period of about one hour. The observation of each student teacher was undertaken by programme tutors who had extensive experience of conducting formal classroom observations for assessment purposes and who were therefore skilled in this process. These tutors were briefed on the purposes and procedures of the ATLAC observations to arrive at a common understanding of the criteria used in the observation schedule given in Appendix F.

Complementary Data

Apart from these two primary data sets, complementary data were gathered through examples of student teachers' lesson plans and pupils' work (see for example Appendices G-I), reflective notes and pupils' views gathered by the student teachers.

Focus Group Interviews

In addition, during the second year cycle, three focus group interviews were conducted with the former BEd3 student teachers now in their 4th year (ATLAC volunteers), tutors and artists to gather their views on the ATLAC approach - its capacity to develop skills in the four capacities of *Curriculum for Excellence* (2004) and possible contribution to enhancing creativity in the teaching and learning process. Interview schedules are given in appendices J-L.

Discussion

The first year data analysis process primarily involved evaluating all data gathered through interviews and observations to establish the key themes. While key themes used in the analysis were derived from the literature, further aspects emerged during the data analysis. Themes discussed below focus on curriculum, pedagogy and creativity; inclusive practice, and partnership.

The evidence was triangulated by the observation data and additional secondary sources of data. In twelve of the eighteen BEd3 classrooms observed, tutors found the student teachers were using the ATLAC approach in their lessons. Similarly, a slightly higher proportion - in ten of the thirteen PGDE classrooms observed, the student teachers were found to be using the ATLAC approach. It is important to bear in mind that any difference in pedagogical approaches observed in the ATLAC and non-ATLAC classrooms will only highlight 'possible correlations' between the actual findings and ATLAC's aims. It is difficult to make a direct connection between the two as a number of interventions were being introduced alongside ATLAC into the revised BEd programme and learning itself is complex (Davis and Sumara, 2006)

A number of findings based on predominantly qualitative data were derived from the data sets. The semi-structured observation schedule provided a small amount of quantitative data in relation to the estimated level of pupil motivation and the student teachers' roles in the classrooms. These findings are discussed below using the three aspects identified earlier.

Curriculum, Pedagogy and Creativity

In two-thirds of the school placements observed the ATLAC approach was being implemented including: language with art and design, drama and visual art; maths and science with visual art, art and design; RME with dance and visual art and so on (Das, Siguake, Aderibige and Gray, 2009). Specific subject knowledge was reinforced by learning about the topic through one or more forms of expressive art. It was also suggested that some forms of art may be more suitable than others to reinforce a topic within a subject area. Student teachers and tutors reported that the ATLAC approach readily facilitated the understanding of subject content through interdisciplinary learning as suggested by Ivanitskaya et al., (2002).

> "It has really made me think about cross curricular learning …"
> (PGDE student teacher interview)

> "…ATLAC offers us this different opportunity, cross curricular and exciting ...to seek a new perspective on old issues." (BEd3 Tutor interview)

It was highlighted that the enhanced scope of creativity promoted a "sense of adventure," "openness to new ways of learning," and "willingness to take risks," (IDES Network/Learning and Teaching Scotland, 2001; The Scottish Government, 2008, Seidel, Tishman, Winner, Hetland and Palmer, 2009) perhaps calculated ones, but nevertheless helped the student teachers to develop skills to cope with the complexities of a learning context (Klein and Newell, 1997).

In general, student teachers viewed the ideas explored in the workshops as examples and not as prescriptive tools. Although two student teachers asked for specific resources (e.g. website references or ideas booklet etc.) for help, most recognised the fact that in order to facilitate a creative learning environment they had to learn to think creatively themselves (IDES Network/Learning and Teaching Scotland, 2001; PCAH, 2011).

> "…Using the ATLAC method, I had to engage more with the curriculum…"
> (BEd3 student teacher interview)

In most cases ATLAC initiated an "active" learning context where pupils were engaged with the process of learning by "doing.'" While this created opportunities for learning for all kinds of learners in the classroom, the engagement also impacted upon the level of motivation. The estimated level of pupils' engagement and responsiveness in all the classrooms except one was generally high or moderate. Similarly in nineteen of the twenty-two ATLAC classrooms the estimated percentage of pupils "on task" was generally high. This suggests that the

ATLAC approach was impacting positively on children's learning as other research cited earlier indicates (e.g. Bamford, 2006; Ewing, 2010; PCAH, 2011).

The "fun" factor of "active" learning which contributes to shaping an enjoyable learning environment was pointed out as an important element (Deasy, 2002; Fiske, 1999; IDES Network/Learning and Teaching Scotland, 2004a and b). Pupils found it engaging:

> '…I feel that it encouraged children to take more control of their own learning ... it united the children and got them to use their strengths as a group and work well together.' (BEd3 student teachers' note)

In two classrooms (one PGDE and one BEd3) student teachers reported that due to the need to follow a structured plan for lesson delivery, ideas for using ATLAC were not welcomed in the schools. It appeared that some class teachers may have had doubts whether this interdisciplinary approach would shift the focus from the targeted subject learning intentions to other cross-curricular learning. This highlights the debate about the role of interdisciplinary learning in education: whether it is only to support subject knowledge; or develop other "generic" life-long learning skills such as "higher order problem solving" or a combination of both. Such challenges are recognised in the literature (e.g. Deasy, 2002; NACCC, 1999; Seidel et al., 2009) and represent obstacles that remain to be overcome:

> "… She wanted me to show what I could do and once I'd shown her [the teacher], it was too many ideas and not enough structure for her…"
> (PGDE student teacher interview)

Although the number of instances (two) that recorded such a conflict of interest as a "constraint" is low, nevertheless the evidence and literature (e.g. Office for Standards in Education, 2003) urges us to be aware of a possible problem that is the inability of teachers to "let go" of established practice. This could be assisted through Continuing Professional Development (CPD) courses for teachers and other key providers. Office for Standards in Education (2003), Bamford (2006) and PCAH (2011) see this and a mechanism for the sharing and extending of good practice as crucial to the success of learning *through* the Arts.

Evidence showed that ATLAC created wider opportunity to impact positively on pupil learning within the four capacities of *Curriculum for Excellence*. These capacities essentially imply there are skills to be gained in the cognitive, affective and social domains as advocated by Hargreaves (2000). However, appropriate learning contexts need to be created to be able to develop and monitor such pupil learning outcomes. The ATLAC approach effectively

created learning contexts enabling children to participate in activities where a wide range of skills are used:

> "…It got the whole class talking instead of just one person putting up their hand and coming up with an answer." (BEd3 student teacher interview)

This echoes a comment from the tutor interview data:

> "…Because if they are willing to take risks, if they are not fettered by 'this is the right way to do things,' you are more likely to be helping out and helping each other... so lots of team work going on. Sharing ideas and learning from each other…" (BEd3 Tutor interview)

Triangulating this view, an artist's comment succinctly summarises:

> "…It seems to be very process-driven rather than very outcome driven…a really good outcome is something that reflects a good process…which…I believe in the art world, if your process is good then your outcome will be good." (Artist interview)

Issues

During one of the workshop sessions, one of the artists mentioned that attaching specific curricular areas with specific forms of art may have created boundaries for the practices in the classroom. This was identified as a possible weakness of the ATLAC input structure. However, some of the findings discussed earlier suggest otherwise. In the classroom observation data, although a tendency was noticed to opt for the combinations of specific subjects with specific art forms illustrated in workshops, there is evidence that the student teachers used various combinations. On the same note, a strength identified was that of its (the ATLAC approach) generic nature of practice. The approach allows flexibility to accommodate the various learning needs of the pupils and the capacity to explore the learning context.

Lack of time and space in the classroom was pointed out as a barrier in using the ATLAC approach in lessons, however, it was suggested that in general, better organisation can take care of these type of problem. A group of Her Majesty's Inspectors (HMI) from the Office for Standards in Education undertook a small-scale survey (2003) to identify good practice in the promotion of creativity in schools and also found timetabling to be a barrier. It was also pointed out that thorough planning is required to prepare for a lesson in which the ATLAC

approach is used where the interconnections between the different components of a lesson need to be clearly established at the planning stage (Das et al., 2009).

By the same token, if the lessons have targeted learning outcomes both in the curricular and expressive arts areas, a careful balance needs to be maintained to ensure that the enjoyment factor of the "active" learning context does not become the only focus of a lesson.

> "Actually I think a little of it was carried away with like building the house and it was a lot more time consuming than looking at the actual science part, so maybe you need to find a better healthier balance between the two." (BEd3 interview)

Inclusive Practice

The ATLAC approach appealed to different types of learners - visual, auditory, kinaesthetic as well as less confident, nervous/shy and learners with additional support needs. Stereotypical views suggest that dance might not appeal to boys:

> "…Everybody said to me 'Oh! The boys won't want to dance'..." (PGDE interview)

> However, evidence suggests otherwise.

> "…The boys were fantastic because it's physical and they don't have any kind of inhibition..." (PGDE interview)

> "…It got everyone involved... children want to get more involved because it's more practical, it's more fun, it's not just sitting at their desk doing all written work." (BEd3 student teacher interview)

Similar observations were noted by Fiske (1999), Office for Standards in Education (2003) and Stevenson and Deasy (2005).

The ATLAC approach was used by the student teachers to teach various age groups of children ranging from nursery one (age three) to secondary one (age twelve). In many instances, the activities were differentiated according to the needs of individual pupils. Often group work scenarios helped to achieve learning intentions through collective effort.

Partnership

Partnership working as another inclusive dimension of the research was commented on positively by all involved. Student teachers reported that they picked up a diverse range of creative pedagogical skills during the workshops. Not only subject knowledge was acquired, but also transferable skills such as collaborative working and problem-solving. Partnerships had helped them to see how the art forms can be used to extend and reinforce learning in different subject areas as well as appreciate the expertise of the partners which complemented each other.

> "... Working with the different artists was good, because we got to see how they approached something…it sort of made you think oh, how could I sort of benefit from somebody else's learning." (BEd3 student teacher interview)

Some mentioned that being able to work with fellow classmates in small groups also contributed to better in-depth learning.

> "…When you go out into school ... you're on your own…we were co-constructively building on our sort of understanding of what we were doing." (BEd3 student teacher interview)

The artists generally thought of their roles in the workshops as "facilitators" and sometimes as a "guide" to the student teachers. Interestingly, a similar pattern was noticed within the observation data with two thirds of the student teachers adopting a facilitative role in the classroom during the ATLAC lessons.

Six of the twenty-two student teachers observed opted for the role of an "instructor" preferring to follow a rigid structure of "transmission" mode of learning (Martin, 2007) and were often found "supervising" tasks during the group/pair work scenarios. Those who acted as a "facilitator" relied on the "transformative" (Martin, 2007) mode of learning and created scope for exploration in the 'active' learning contexts.

The tutors and artists reported that collaborative planning helped them to explore how the workshops could be shaped. One tutor and artist pair identified rigorous planning as a key to facilitating the workshop sessions. They also mentioned that being able to share the planning with them might have contributed more to the student teachers' understanding of shaping a lesson using the ATLAC approach. As ATLAC adopted an action research approach in partnership with the artists, the planning process essentially required a joint effort providing scope for exploring effective creative pedagogies. As one of the tutors rightly expressed:

> "You know, the collaboration, the cooperation, the working together with an artist I found very beneficial because there is a kind of synergy which emerges …" (BEd3 tutor interview)

While the partnerships discussed here were amongst the tutors, artists and student teachers, our literature review also identified the important role of arts in education in the engagement of other partners such as parents and the local community, benefitting all involved in a variety of ways (Adkins and McKinney, 2001; Office for Standards in Education, 2003; PCAH, 2011)

Conclusions - Implications for Beginning Teachers

The challenges facing education systems and teachers continue to intensify. They are perhaps most acute for newly qualified teachers who are just beginning to gather their repertoire of classroom practices and learning to attend to many professional issues simultaneously. The policy discourse summarised in this paper illustrates that recent initiatives and curriculum guidelines are part of the Scottish government's ongoing commitment to developing the creative abilities of young people, a situation mirrored in global education systems. In addition creativity is recognised by business as the most important leadership quality and also helps employees deal with complex situations (IBM, 2010).

The findings indicate several considerations. In planning for the workshops, student teachers as well as tutors and arts professionals, highlighted the importance of thorough yet flexible planning for interdisciplinary learning. This is understandable as the certainty and formulaic method of traditional planning may stifle the desired processes and outcomes of an interdisciplinary approach. The paradox of working confidently in a classroom where structure and order is necessary to create an effective classroom, alongside the ability to think divergently, take risks, question certainties and work with the unexpected is demanding. In a creative teaching context, experienced teachers identified "[T]he need to balance planning with improvisation" (Learning and Teaching Scotland, 2001, p. 43) as the cultivation of creativity will inevitably make classrooms more fluid and messy where outcomes are less predictable.

The fun aspect within active learning was emphasised by the student teachers as one of the strengths of the ATLAC approach. Historically, there has often been an unnecessary separation of fun and learning, with "work" partnering "learning" rather than "fun." Yet fun can have a positive effect on learning where stress and social inhibitions are reduced, and intrinsic motivation is enhanced. Having fun is a natural state, is situational and voluntary. These dispositions create a positive classroom ethos and learning environment (Bisson and Luckner, 1996). The point here is that while fun is important for learning, it has to be

partnered with other teacher and pupil contributions. Factors such as responsiveness, clarifying the outcomes for children, setting high expectations and providing time for reflection are other necessary prerequisites for learning. To be effective, the fun learning activities have to be recognised and utilised for their learning potential by the pupils. At the same time, recognition and utilisation of this learning potential must also be acknowledged by teachers to support subject knowledge and/or develop life-long learning skills. This may be a particularly challenging task for beginning teachers as striking a balance between fun and effective learning, coupled with room for "improvisation," requires a mastery of skills. However, as mentioned earlier, thorough planning can aid the development and understanding of the whole process. Also, an interdisciplinary pedagogy such as ATLAC can promote an "interconnected" approach to teaching and learning in the classroom which encourages room for exploration and innovation.

We would suggest that interdisciplinary studies bring benefit to teachers' professionalism as well as pupils' learning and concur with the view that "all areas of learning are important and interconnected" (Duffy, 2009). "Interdisciplinary studies can provide relevant, challenging and enjoyable learning experiences and stimulating contexts to meet the needs of learners. Revisiting a concept or skill from different perspectives deepens understanding and can also make the curriculum more coherent and meaningful from the learner's point of view" (The Scottish Government, 2008, p. 21) The ATLAC approach took advantage of professional discussion, sharing good practice and collaborating with partners who were able to enhance learning as well as support opportunities for learners' wider societal and community involvement.

In preliminary findings of an associated project (Das et al. 2009) BEd3 student teachers identified ATLAC as one of their most significant learning experiences on the BEd programme. Having experienced working in partnership through interdisciplinary learning, these student teachers are positioned and dispositioned to take this forward.

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Appendix A. Tutor and Artist Summary Workshop Plan and Evaluation:
Health and Wellbeing and Visual Arts

<table>
<tr><td colspan="2">Curricular areas and links to national guidelines:

Health and Wellbeing:
Understand and develop my physical, emotional, mental wellbeing and social skills

Expressive arts:
Recognises and nurtures my creative and aesthetic talents. Inspired by a range of imaginative stimuli, working with others, I can express my ideas, thoughts & feelings through creative work in the expressive arts.</td></tr>
<tr><td colspan="2">Student teacher illustration

Inert Image 1, hands, here Inert Image 2, basket, here</td></tr>
<tr><td>Learning intention:
To consider the interrelationship of physical, emotional, mental and social health to our wellbeing.</td><td>Classroom strategies:
Using the resources and materials provided make a 'sculpture' to demonstrate holistic health. Consider - choice of materials and resources, colour, dimensions, connections, highlighting important factors, presenting all aspects of health.</td></tr>
<tr><td></td><td>Evaluation:
o On task, group cohesion
o Deep learning
o Engaged and motivated
o Positive classroom ethos
o Tutor professional development</td></tr>
</table>

*Appendix B***.** Tutor and Artist Summary Workshop Plan and Evaluation: Language and Visual Arts

<table>
<tr><td colspan="2">Curricular areas and links to national guidelines:

Literacy and English:
I enjoy exploring events and characters in stories and other texts and I use what I learn to invent my own, sharing these with others in imaginative ways.

I explore sounds, letters and words, discovering how they work together, and I can use what I learn to help me as I read and write.

Expressive arts:
I have had the freedom to use my voice, musical instruments and music technology to discover and enjoy playing with sound and rhythm.

Inspired by a range of stimuli, I can express and communicate my ideas, thoughts and feelings through activities with art and design.</td></tr>
<tr><td>Learning intentions:
Gaining knowledge of poetry forms - Kennings, Haiku, Acrostics, Rhyming Verse.
Identifying and considering opportunities for developing functional writing from abstract art.
Confidence in effective listening collaboration and compromise.
Develop skills in a variety of presentation methods</td><td>Classroom strategies:
Blindfold painting then recording words and phrases inspired by it. Emphasis on language generated by multi-sensory nature of experience.
Discussion about poetry writing.
Presentation of poems and other forms of response to the abstract visual artefacts.</td></tr>
<tr><td></td><td>Evaluation:
○ Confidence and engagement,
○ Positive experience
○ Inspired as a result of engagement with the artistic experience
○ Creative and imaginative
○ Many different ideas</td></tr>
</table>

Appendix C. ATLAC Interview Schedule for Student Teachers

1. Could you tell us about your experience of ATLAC as a teaching method during placements?
   Prompts:
   Use of ATLAC in various subject areas
   Use of ATLAC across all age groups
   Constraints

2. In your opinion, what are the benefits/disadvantages of using the ATLAC approach in creating a learning environment in the classroom?

3. Could you specifically link your experience of using the ATLAC approach to observed pupil learning outcome, with regard to the four capacities of *A Curriculum for Excellence*?

4. Did the ATLAC approach help in enabling you to promote inclusive practice in the classroom? If yes, could you give an example?

5. Would you say that the experience of using the ATLAC approach contributed to shaping your emerging professional identity as a teacher? If yes,
   Prompts:
   Deeper curriculum knowledge
   Evidence-based practice

6. What are your views about the ATLAC-input week at MacRobert?
   Prompts:
   Workshop content
   Workshop structure
   Tutor-artist-student collaboration
   Timing

Any further comments/views?

Thank you very much for your time and reflections.

*Appendix D***.** ATLAC Interview Schedule for Artists

Personal and professional background

1. What is your art/and education background?
2. How would you describe your own interest in art?
3. How long have you been working with other professionals (and in what capacity)?

   1-5 years 6-10 years 11-15 years 16-20 years 21-25 years

Views on ATLAC within Initial Teacher Education

4. In your experience, what are the strengths and weaknesses of using the ATLAC approach in the delivery of a specific curriculum area?
5. In your opinion, did the student teachers acquire a deeper level of understanding of a subject area by using the ATLAC approach? Please explain.
6. With regard to the four capacities of *A Curriculum for Excellence*, how do you think pupils may benefit from being taught using the ATLAC approach?

About the process of intervention

7. How effective was the tutor-artist-student collaboration during the workshops?
8. How did you perceive your role in the workshop sessions?
9. Did the decided format of intervention work well for student teachers' learning?
   Prompts:
   Workshop content
   Workshop structure

Any further comments/views?

Thank you very much for your time and reflections.

*Appendix E***.** ATLAC Interview Schedule for Tutors (BEd and PGDE)

Personal and professional background

1. What is your art/and education background?
2. How would you describe your own interest in art?
3. How long have you been teaching in Higher Education?

   1-5 years 6-10 years 11-15 years 16-20 years 21-25 years

Views on ATLAC within Initial Teacher Education

4. In your experience, what are the strengths and weaknesses of using the ATLAC approach in the delivery of a specific curriculum area?
5. In your opinion, did the student teachers acquire a higher level of understanding of a subject area by using the ATLAC approach? Please explain.
6. Did you notice an increased level of creativity in student teachers' lesson plans after their participation in the ATLAC workshops? Please elaborate.
7. During field visits if you came across a demonstration of the ATLAC approach in a lesson delivery, was this purely focused on the 'enjoyment' factor of the pupils or was there an equal balance of focus on curricular learning outcomes? Please explain.
8. With regard to the four capacities of A Curriculum for Excellence, how has/has not the ATLAC approach proven to be an effective method of teaching?

About the process of intervention

9. In the light of the experience of trying out the intervention this year, what are the aspects you may like to change/improve next year?
10. How did you perceive your role in the workshop sessions?
11. Did the decided format of intervention work well for student teachers' learning?
    Prompts:
    Workshop content
    Workshop structure
    Tutor-artist-student collaboration
    Timing

Any further comments/views?

Thank you very much for your time and reflections.

*Appendix F***.** Arts as a Tool for Learning Across the Curriculum (ATLAC)
Semi-structured Observation Schedule for Student Teachers

General Information

School: Date:

Student: Observer:

Class: Lesson:

Time (15 minutes slot):

Outcome-oriented Information

* Estimated level of pupil response (e.g. to questions, learning materials, adults in the classroom) (circle one):

High Moderate Low

* Estimated percentage of pupil 'on task' (circle one):

100 75 50 25 0

Curriculum-oriented Information

* Links between curricular (core) and co-curricular areas (forms of expressive arts) observed (circle one):

Explicit Implicit None

Example Example

* Links between cross-curricular areas (core subjects) observed (circle one):

Explicit Implicit None

Example Example

Pedagogy-oriented Information

* Type of questions used by the student-teacher (circle one):

Mainly open-ended Mainly close-ended

Example Example

* Student-Teacher's predominant role (circle one):

Observer Active Participant

Facilitator Instructor

If none of the above, please specify.

* Pupils' work pattern (circle one):

Shared (pairs/groups) Individual

Example Example

* Promoting enquiry-based approach (circle one):

Allowing time for pupils to reflect on learning Yes/No

Offering strategies for reflection Yes/No

Example

* Impression about the classroom culture (ethos)

*Appendix G***.** Student Teacher Summary Lesson Plan and Evaluation:
Maths, Language and Visual Art

<table>
<tr><td colspan="2">Curricular areas and links to national guidelines:

Expressive arts:
Recognises and nurtures my creative and aesthetic talents. Inspired by a range of imaginative stimuli, working with others, I can express my ideas, thoughts & feelings through creative work in the expressive arts.

Maths:
In games I can describe positions.

Literacy and English:
I enjoy exploring events & characters in stories & use what I learn to invent my own, sharing these with others in imaginative ways.</td></tr>
<tr><td colspan="2">Pupil illustration

Inert Image 3, pupils, here</td></tr>
<tr><td>Learning intention:
Children will learn positional maths language (over, under, through, next to, around, in front of, behind) by orally expressing their story using transitional art materials. Children will learn to work with a partner.</td><td>Classroom strategies:
Teacher modelling and storytelling then paired work to make a scene from the story. Children tell their own story with their partner using positional language.</td></tr>
<tr><td>Evaluation:
It was interesting to see how this activity gave some children more confidence. One girl (L) in particular who is quite unsure when filling in maths worksheets was really able to shine at this storytelling activity. She used the most positional language in her story and appeared totally confident. All the children enjoyed this activity and were eager to tell their stories.</td><td>o Confidence
o Engagement and motivation
o Learning intelligences</td></tr>
</table>

*Appendix H***.** Student Teacher Summary Lesson Plan and Evaluation:
Language and Music

<table>
<tr><td colspan="2">Curricular areas and links to national guidelines:

Health and Wellbeing:
I am aware of and able to express my feelings and am developing the ability to talk about them.

Literacy and English:
Within real & imaginary situations I share experiences and feelings, ideas & information in a way that communicates my message.

Literacy and English:
I enjoy exploring events and characters in stories & texts, sharing my thoughts in different ways.

Expressive arts:
I have had the freedom to use musical instruments to discover and enjoy playing with sound & rhythm.</td></tr>
<tr><td>Learning intention:
Children will learn about feelings and use musical instruments to express them</td><td>Classroom strategies:
o Class discussion about feelings using the storyline incident of newcomers arriving in the garden.
o Group work using music to illustrate a range of feelings</td></tr>
<tr><td></td><td>Evaluation:
o Creative and confident
o Positive independent learning and group work
o Self aware
o Informed decision making
o Imaginative communication</td></tr>
</table>

*Appendix I***.** Student Teacher Summary Lesson Plan and Evaluation:
Science and Expressive Arts (Music and Dance)

<table>
<tr><td colspan="2">Curricular areas and links to national guidelines:

Expressive arts:
I have had the freedom to use my voice, musical instruments and music technology to discover and enjoy playing with sound and rhythm.

I have had the freedom to choose and explore ways that I can move rhythmically, expressively and playfully, discovering how to control my body and how to use space and resources creatively.

Sciences:
I have observed living things around me for a period of time and recorded information on them. I can demonstrate my curiosity about living things and my environment.</td></tr>
<tr><td>Learning intention:
Use music and dance to develop knowledge and understanding about how plants grow.</td><td>Classroom strategies:
o Using the growth of flower bulbs as the context, children produce a “show” using music, dance and song</td></tr>
<tr><td></td><td>Evaluation:
o Motivation and engagement through a ‘hands on’ approach
o Learner led
o On task
o Less negative behaviour
o Group cohesion
o Inventive</td></tr>
</table>

Appendix J. ATLAC Student Teachers' Focus Group Interview

1. How would you define the ATLAC approach in a few words? (Can you draw a visual/conceptual map?)

2. Which year groups did you teach? Did you have a chance to use the ATLAC approach in some lessons? If yes, which subject areas were taught using this approach? Did you find it easier to use ATLAC for certain subject areas than others? Why?
   If no, what were your reasons for deciding not to use this approach in lessons?

3. To what extent do you think the ATLAC approach contributed to pupils' achievement in the four capacities of A Curriculum for Excellence: confident individuals, effective contributors, successful learners and responsible citizens? Could you give some examples? What do you think the pupils in your class felt about the ATLAC approach?

4. How easy or difficult was it to identify the visible learning outcomes in the four capacities? How did you collect evidence on these, if any?

5. In the context of classroom learning, what does the concept 'creativity' mean to you?

6. Did ATLAC help to promote creative learning skills for the pupils? If so, how? Do you think such learning skills may have contributed to 'deeper curriculum knowledge' for the pupils? If yes, could you please elaborate?

7. In your experience, did the ATLAC approach help to promote inclusive practice in the classroom? What are the factors which may have influenced (enabled or hindered) the process of shaping such a learning context?

8. Looking back, what were the strengths and weaknesses of the ATLAC workshops that you participated in earlier this (academic) year?
   Prompts: content, structure of delivery, collaboration/partnership

9. The ATLAC approach required certain skills such as, integrated and thorough lesson planning. Could you recall any incident where such skills (or lack of) may have had implications for the outcome of your practice?

*Appendix K***.** ATLAC BEd4 Artists' Focus Group Interview

1. How would you define the ATLAC approach in a few words? (Drawing a visual/conceptual map)

2. To what extent do you feel the ATLAC approach has the potential to develop opportunities for pupils' learning in the four capacities of A Curriculum for Excellence: confident individuals, effective contributors, successful learners and responsible citizens?

3. In the context of classroom learning, in your views, what does the concept 'creativity' mean?

4. Do you think ATLAC may have helped to promote creative learning skills for the pupils? If so, how?

5. Looking back, could you please share your experiences of the ATLAC workshops which took place earlier this (academic) year?
   Prompts: content, structure of delivery, collaboration/partnership

6. Any other comments?

Thank you very much for sharing your views.

Appendix L. ATLAC BEd4 Tutors' Focus Group Interview

1. How would you define the ATLAC approach in a few words? (Drawing a visual/conceptual map)

2. Did you have a chance to observe the BEd4 student teachers during placement? If yes, have you come across any lesson where cross-curricular links were used as a teaching method? Please elaborate.

3. To what extent do you feel the ATLAC approach may have created opportunities for pupils' learning in the four capacities of A Curriculum for Excellence: confident individuals, effective contributors, successful learners and responsible citizens?

4. What are your thoughts about collecting evidence of learning in the four capacities?

5. In the context of classroom learning, what does the concept 'creativity' mean to you?

6. Do you think ATLAC may have helped to promote creative learning skills for the pupils? If so, how?
   Do you think such learning skills could contribute to 'deeper curriculum knowledge' for the pupils? If yes, could you please elaborate?

7. Looking back, what were the strengths and weaknesses of the ATLAC workshops which took place earlier this (academic) year?
   Prompts: content, structure of delivery, collaboration/partnership

8. Any other comments?

Thank you very much for sharing your views.

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