

**Impacts of Long Term Forest School Programmes on Children's Resilience,  
Confidence and Wellbeing**

**Sarah Blackwell**

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## **Abstract**

Promoting children's wellbeing, confidence and resilience should be the cornerstone of every educational policy, if we are to empower our learners to achieve anticipated developmental outcomes. Forest School programmes are child centred and are deliberately designed to promote the holistic development of the child. The aims of this study is to establish the impacts of long term forest school programmes on children's resilience, confidence and wellbeing. Using illuminative evaluation, this research study analysed articles, research studies and case studies on outdoor learning and then evaluated the impacts of long term Forest School programmes on children's resilience, confidence and wellbeing. The study established that long term Forest Schools programmes had positive impacts on children's resilience, confidence and wellbeing. The notable findings of Forest Schools programmes on children's resilience were improvement on key resilient indicators, such as self efficacy, persistence, and problem solving skills. The notable impacts of long term Forest School programmes on children's confidence were marked propensity to take risks, heightened levels of self belief, positive attitude, independence and increased tendency of taking initiative. In relation to children's wellbeing, long term Forest Schools programmes were found to have positive impacts on children's physical and mental health in addition to improving their social and cognitive competence. The study found that promoting wellbeing in children enhances their confidence and resilience.

## 1.0 Introduction

In the past two decades, Forest Schools have been gaining popularity in United Kingdom and developed economies. The Forest Schools model of programmes and mode of delivering pedagogical content to learners emerged from a Scandinavian approach to outdoor learning in the late 1950's but has taken on a British context and is firmly embedded within that rich culture and longevity of practice of personal development in the outdoors and its educational consciousness within the British shores. Since then, Forest School programmes have spread across Europe, China, North America, Australia, South Africa, UAE, Russia, New Zealand and other Scandinavian countries. Forest School programmes are strongly inclined to traditional natural play, movement and fresh air<sup>1</sup>. The programmes are founded on the philosophy of encouraging and inspiring individuals of all ages to enjoy the benefits provided by natural play, through outdoor experiences, which results to growth in self-confidence and independence<sup>2</sup>. In essence, forest schools are founded on creative and solid learning principles, aimed at motivating both adults and children to develop a more sustainable future and enhancing academic performance at the same time<sup>3</sup>.

Involvement in engaging and inspiring activities in the outdoor environment provides ideal opportunity for learners to develop intrinsic motivation, social skills and better, controlled psychological balance. Research studies by Blackwell and Nawaz<sup>4</sup>, Taylor and Kuo<sup>5</sup> have

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<sup>1</sup> T. Maynard, 'Forest schools in Great Britain: an initial exploration', *Contemporary Issues In Early Childhood*, vol.,8.,no.,4.2007, p320

<sup>2</sup> S. Blackwell, 'Forest schools; if you go down to the woods today,' *Horizon*, 31, Autumn 2005, p11.

<sup>3</sup> Ibid, p.11

<sup>4</sup> S. Blackwell, and Nawaz, H. 'Perceptions about Forest Schools: Encouraging and Promoting Archimedes Forest Schools', *Academic Journals*, vol.9.no15, 2014, pp.498-503.

<sup>5</sup> F. Taylor, and Kuo, F. E., 'Children With Attention Deficits Concentrate Better After Walk In The Park,' *Journal of Attention Disorders* Online First, volx., no.,x., 2008, pp1-8.

demonstrated that Forest Schools promotes achievement in children of all ages who regularly participate in woodland activities with trained practitioners. Through controlled play and self directed learning in the woodlands, children becomes more knowledgeable about the natural environment, learn team building skills and cooperation with their peers and they also become more empowered to use their own initiative to solve individual challenges.

Forest Schools are not buildings, institutions or organizations but local woodlands, green spaces, natural playgrounds or spaces where children spend at least a half a day on regular basis<sup>6</sup>. The programmes are characterised by regular and repeated access to the same natural space, and emergent, experiential, inquiry- oriented and play based learning<sup>7</sup>. This approach provides the learners with opportunities to establish progressive relationship with the environment, the educator and peers. Thus, activities undertaken in the Forest Schools vary and influenced by both internal and external factors, such as the weather, season, interest of the children, the community, landscape, the tools used among other factors. In most cases, learners have to walk, even if it is a short distance, to their Forest School sites and the mere act of walking is a learning activity in itself as the children observe the woodlands for new changes and converse about different observations they make along the way<sup>8</sup>. At the site, the usual settings are required, although they are done in a different setup depending on the woodland, site, or stakeholder requirements. The activities are learner centred and are designed to address the diverse needs of the child. The educator sets small and achievable tasks, within the capabilities of each child, and collaborative activities such as games are incorporated to promote development of teamwork skills. To build self esteem and confidence of the learners, the instructor engages them in activities such as lighting fires hide and seek and other activities, which enhance the development of intra and interpersonal skills as well as improving on

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<sup>6</sup> S. Blackwell, 'Forest schools; if you go down to the woods today,' *Horizon*, 31, Autumn 2005, p11

<sup>7</sup> Z. MacEachren, 'The Canadian Forest School movement,' *Learning Landscapes*, vol.17, no.1, 2013, p 219.

<sup>8</sup> S. Blackwell, 'Forest schools; if you go down to the woods today,' *Horizon*, 31, Autumn 2005, p11

practical and intellectual abilities. The sessions are based on themes, such as exploration and nature investigations<sup>9</sup>.

Forest School programmes encompass all subjects and disciplines, and any given session, activity or experience involves science, maths, physical education, literature, art, among other disciplines in the curriculum<sup>10</sup>. Thus, Forest Schools programmes are designed such that they incorporate all disciplines, without being necessarily curriculum driven<sup>11</sup>. Unlike the normal lesson planning undertaken in the ordinary classroom setting, a trained Forest School practitioner and educator plans the lesson at the end of the session. Another defining characteristic of Forest School learning is that real time observations and experiences forms the basis of determining the learning outcomes, rather than the predetermined conceptual frameworks in books and other learning materials used widely in the ordinary classroom setting<sup>12</sup>.

In the woodland or green space setting, children may use conventional tools to undertake various assigned or self directed activities. However, it is important to introduce the more risky elements gradually and ensure that adequate safety measures are put in place. The gradual introduction and the enforcement of structured safety procedures promote self confidence in children as they learn how to use various tools and they also enhance their motor skills while handling them. Effective Forest Schools sessions should enhance the holistic development of the child. Thus, it should be sensitive to the capabilities and interest of every child, and the sessions should be flexible to discourage monotony and boredom. The educator or practitioner

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<sup>9</sup> Ibid, p.11

<sup>10</sup> H. Andrachuk. et al. 'Forest and nature school in Canada: A head, heart, hands approach to outdoor learning,' [http://www.forestschoolcanada.ca/wp-content/themes/wlf/images/FSC-Guide\\_web.pdf](http://www.forestschoolcanada.ca/wp-content/themes/wlf/images/FSC-Guide_web.pdf), 2014, (Accessed on 25 May 2015, p.13

<sup>11</sup> S. Blackwell, 'Forest schools; if you go down to the woods today,' *Horizon*, 31, Autumn 2005, p11

<sup>12</sup> H. Andrachuk. et al. 'Forest and nature school in Canada: A head, heart, hands approach to outdoor learning,' [http://www.forestschoolcanada.ca/wp-content/themes/wlf/images/FSC-Guide\\_web.pdf](http://www.forestschoolcanada.ca/wp-content/themes/wlf/images/FSC-Guide_web.pdf), 2014, (Accessed on 25 May 2015) p.13

should evaluate and reassess the experiences, sessions and opportunity for activities frequently to ensure that all needs of every child are met. Evaluation of children or young person's performance is undertaken at the end of the session. This could involve asking the children to narrate their diverse observations, drawing and sketching, play acting the experiences and reflecting on the activities they have done during the session. Research has demonstrated that Forest Schools programmes encourage parental and community participation in the child's learning process more than the traditional indoor learning. Blackwell<sup>13</sup> noted that as the children always leave with an indelible memory of what they have learnt in the outdoors, and they share it with parents, guardians and other members of the community or society. This encourages communication, community involvement and participation in the learning process, which promotes the child's self confidence further.

## **2.0 Literature Review**

### ***2.1 Principles of Forest Schools***

The concept of Forest Schools is founded on the work of various educational theorists who investigated the role of play, nature and environment on development of positive learning outcomes in children. John Amos Comenius (1592-1670) postulated the importance of holistic learning in achievement of children, a concept that forms the basis of Forest school programmes. In his work, Comenius believed in development of positive child- teacher relationship characterised with love for the child to win the learner's confidence and observation of nature and respecting its laws as the basis of ensuring successful learning. Moreover, Comenius advocated for development of school programmes that address the diverse needs and aptitudes of children as well as respecting their spontaneity and dignity. Comenius emphasised that children should study in nature, where he emphasised on learning through sensory stimulation and pictures rather than instructions<sup>14</sup>.

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<sup>13</sup> S. Blackwell, 'Forest schools; if you go down to the woods today,' *Horizon*, 31, Autumn 2005, p12

<sup>14</sup> Western Oregon University, 'Pioneers in Education', <http://www.wou.edu/~girodm/foundations/pioneers.pdf> (accessed 10 June 2015)

Locke's theory of empiricism and scientific method has a major influence on Forest Schools programmes. Locke's theory just like Comenius emphasise on the importance of sensory experience in learning, pupil interaction with the environment and learning through doing. Locke stressed on the importance of having a positive physical and social environment such as fresh air, play, recreation and exercises to promote learning and development in children<sup>15</sup>. Forest Schools programmes, just like Locke's theory emphasise on enhancing the social and physical environment of the learner to promote learning.

Piaget's theory of cognitive psychology is founded on the importance of incorporating environmental exploration to facilitate cognitive development and learning in children. Piaget believed that as children explore the environment, they become architects of their own cognitive development<sup>16</sup>. Although Piaget emphasised giving personalised instructions to students, he recognised the importance of setting an informal learning environment, where children could explore, experiment and manipulate objects to learn and discover about their environment. Forest school programmes incorporate these components by allowing unrestricted child play in the woodlands and emphasising on child directed activities

Forest School philosophy incorporates Maria Montessori theory of learning, which places great emphasis on the influence of prepared environment on children's learning. Maria Montessori(1870-1952) believed that children have an inner drive to work at what interests them, without the need of being ordered around by teachers or seeking rewards. Montessori curriculum emphasises on three major experiences and activities namely practical, sensory and formal skills and studies<sup>17</sup>. To achieve these desired skills, the curriculum stresses repetitive exercises, movement and routine which are major components of Forest School programmes which set out boundaries of a physical as well as a social dimension.

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<sup>15</sup>ibid

<sup>16</sup> ibid

<sup>17</sup> M.Montessori, *The discovery of the child*. New York, Ballantine Books, 1972, p.40



## **2.2 Learning approaches in forest schools**

Forest Schools approaches are child centred and they aim at developing the child holistically and transform their understanding of themselves, others and the world around them. The curriculum focuses on the following learning approaches;

### *2.2.1 Inquiry based emergent and experiential learning*

This approach is based on the premise that children are inherently born with curiosity to explore and experience their surrounding environment, inquire about the experiences and then learning by doing things on their own<sup>18</sup>. While using this approach, the educator/instructor's main role is to support the child's explorations and activities in the natural setting to promote learning. Using this approach is therefore aimed at nurturing the child's natural curiosity about their environment. Since the learners questions are used to initiate learning, the practitioner's role is to encourage the learners to ask and explore their own questions about their surroundings<sup>19</sup>. Inquiry based emergent and experiential learning is therefore focused on enhancing the interests of every individual child involved in the program, allow children to conduct their own investigations in uncontrolled environment and work on their own interests. Moreover, it is process based and applies self directed learning to enhance both academic and emotional engagement of the learner. Another defining element of this approach is that children are involved in small group activities, which enhance their social competency, teambuilding skills and problem solving capabilities<sup>20</sup>.

### 2.2.2 Play Based Learning;

This approach leans towards Piaget cognitive psychology theory. According to Andrachuk et al,<sup>21</sup> play based learning focuses on the development of the whole child and it addresses the psychological, physical and social developmental needs of the learner. Playing in the outdoors

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<sup>18</sup> Ibid, p.40

<sup>19</sup>H. Andrachuk. et al. 'Forest and nature school in Canada: A head, heart, hands approach to outdoor learning,' [http://www.forestschoolcanada.ca/wp-content/themes/wlf/images/FSC-Guide\\_web.pdf](http://www.forestschoolcanada.ca/wp-content/themes/wlf/images/FSC-Guide_web.pdf), 2014, (Accessed on 25 May 2015) p.23

<sup>20</sup> Ibid, p.23

<sup>21</sup> Ibid p.30

is a multisensory process and requires the learner to use all her/his senses. The child also enhances her/his social skills in collaborative play and it gives them opportunities of knowing their strengths and limitations, in addition to making them happy. Children are in total control of their play as long as the practitioner affords that opportunity during each session. They direct and determine the content and the intention of the play by following their own ideas, rules, instincts and interests in their own way for their own reasons<sup>22</sup>.

### 2.2.3 Place Based Learning

The aim of this approach in respect to Forest Schools is to promote children's long term connection to a particular natural place by encouraging direct experimental engagement with that specific locality. This approach is based on the hypothesis that when children form a connection with a particular place, they develop a sense of ownership, desire and responsibility to take care and protect it from undesirable elements of destruction. According to Sobel<sup>23</sup>, place based learning basically involves reintegration of the individual to his/her home ground and restoration of the essential links between the person and his/her place. In forest school program, place based learning is of critical importance as it promotes emotional connection between the learner and the environment, which is an important aspect of ensuring sustainable learning and positive environmental identity and practices.

### 2.2.4 Story Telling

Story telling forms an integral part of Forest Schools learning because its programmes are child centred and are aimed at developing the physical, psychological and social elements of learners. Different types of narratives, such as legends, riddles, folktales and personal encounters are highly encouraged in many forms of nature schools including Forest Schools programmes. From a literature point of view, storytelling has been existence since time immemorial and it serves to teach, entertain, engage, warn, inform, counsel and stimulate

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<sup>22</sup>B. Hughes, *Evolutionary Playwork*. New York, Routledge, 2013 ,p.62

<sup>23</sup> D. Sobel (Ed.), *Place-based education: Connecting classrooms & communities*. Great Barrington, MA: Orion Society, 2013, p.2

critical thinking skills in learners. In the Forest School environment, oral narratives are important in helping learners articulate their emotions, describe their experiences promote their listening and attention skills in addition to stimulating their creativity. Ordinarily, storytelling is done face to face by one child at a time while the others stay still to listen. Children learn diverse skills from storytelling, such as developing self confidence, communication skills and ability to understand the order of events in a plot. Children also learn new vocabularies and how to use different words in their speech. Other important skills acquired through story telling include language and memory skills. Andrachuk et al<sup>24</sup> noted that when children recall their diverse experiences, they are able to remember their history which helps them boost their self esteem and promote their cognitive and psychological development. Story telling has been found to be a therapeutic and empowering activity that helps learners face their fears and enhance their capacity to take risks<sup>25</sup>. Children are also able to develop and practice empathy as they listen to different narratives.

#### 2.2.5 Loose Parts

Using loose parts is another important pedagogical approach used with Forest School learners. This technique basically involves assembling detachable, uniquely natural materials into different shapes and structures in the woodland setting. Since the use of loose materials does not involve following any illustrations, children are provided with opportunity to use their creativity effectively<sup>26</sup>. In a Forest School setting, nature provides the richest range of loose materials ranging such as sticks, pebbles, seeds, soil, berries and cones among others. To support children using loose materials, it is important to supply them with the typical woodland

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<sup>24</sup> H. Andrachuk. et al. 'Forest and nature school in Canada: A head, heart, hands approach to outdoor learning,' [http://www.forestschoollcanada.ca/wp-content/themes/wlf/images/FSC-Guide\\_web.pdf](http://www.forestschoollcanada.ca/wp-content/themes/wlf/images/FSC-Guide_web.pdf), 2014, (Accessed on 25 May 2015) p.32

<sup>25</sup> Ibid,p.32

<sup>26</sup> H. Andrachuk. et al. 'Forest and nature school in Canada: A head, heart, hands approach to outdoor learning,' [http://www.forestschoollcanada.ca/wp-content/themes/wlf/images/FSC-Guide\\_web.pdf](http://www.forestschoollcanada.ca/wp-content/themes/wlf/images/FSC-Guide_web.pdf), 2014, (Accessed on 25 May 2015) p.34

tools and equipment such as mallets, knives, ropes, and buckets. For documentation purposes, the practitioner can provide them with pencils, paper, charcoal, natural dyes, paints and crayons.

### ***2.3 Impacts of Forest Schools on children***

Researchers have documented numerous benefits of outdoors learning to the children's physical, intellectual and social development. These findings are of great significance, following revelations that children involvement in outdoor experiences has declined significantly in developed countries, with children in United States recording an average of less than half an hour of play time daily<sup>27</sup>. In Britain, Maynard<sup>28</sup> reported that the decline in children outdoor play has been accompanied by a declining emphasis on play outside the class room setting within the educational institutions, especially in nursery classes. Some of the factors associated with declining play time in outdoors include parents concerns about the child's safety, especially in regard to increasing incidents of child abuse by strangers, traffic accidents and organised crime in urban areas. As result, children play mainly revolves around recreational and passive indoor activities, such as computer games, video and television<sup>29</sup>. This trend of a more sedentary lifestyle has resulted to negative developmental outcomes in children, poor social and emotional competence and has played a major role to the increasing child obesity epidemic in developed countries.

The Forest Schools programmes offer more depth to the school curriculum and enhance learning outcomes of the learners, an observation that has been recognised by educational

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<sup>27</sup> J. Levi, Segal, L., Laurent, R., & Kohn, D, ' F as in fat: How Obesity Threatens America's Future: Trust for America's Health, Robert Wood Johnson Foundation,'<http://healthyamericans.org/report/88/>, 2011. (Accessed on 25 May 2015).

<sup>28</sup> T. Maynard, 'Forest schools in Great Britain: an initial exploration', *Contemporary Issues In Early Childhood*, vol.,8.,no.,4.2007, p.321

<sup>29</sup> *Ibid*,p.321

policy makers across the world<sup>30</sup>. Munoz<sup>31</sup> found a close connection between health of learners and outdoor exposure. Different research studies have demonstrated that learning in the outdoors has positive impacts on the health of learners. The notable health benefits include lowering of blood pressure, stress and cholesterol levels<sup>32</sup>. Learners in the Forests Schools are able to discover themselves and the environment surrounding them in a better way than those in classroom setting. For instance, children can experiment with a wide variety of activities and natural objects while outdoors without the fear of being criticised for being noisy or untidy<sup>33</sup>. Outdoor environment provides children with adequate space of moving around freely. According to Fjortoft<sup>34</sup>, free movement in children is the most natural and crucial method used by children to learn. Free movement also contributes positively to development of critical physical attributes such as stamina, agility, psycho-motor coordination and muscle strength. Maynard<sup>35</sup> found that free movement in children enables them to develop better control of their bodies, especially in relation to the development of more refined motor control. This skill is required to handle delicate movements such as manipulating a pencil while writing, staying calm and being attentive for longer periods.

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<sup>30</sup> S. Blackwell, and Nawaz, H. 'Perceptions about Forest Schools: Encouraging and Promoting Archimedes Forest Schools', *Academic Journals*, vol.9.no15, 2014, p.498

<sup>31</sup> A. Munoz, 'Children in the outdoors: a literature review. Sustainable Development Research Centre,' <http://www.apho.org.uk/resource/item.aspx?RID=93474>, 2009,(accessed on 25 May 2015)

<sup>32</sup> D.Bowler, Buyung-Ali, L. M., Knight, T. M and Pullin, A. S., 'A systematic review of evidence for the added benefits to health of exposure to natural environments.'*BMC Public Health*, vol.10., no.,1, 2010, p. 456.

<sup>33</sup> T. Maynard, 'Forest schools in Great Britain: an initial exploration', *Contemporary Issues In Early Childhood*, vol.,8.,no.,4.2007,p.321

<sup>34</sup> I. Fjortoft, 'Landscape as playscape: the effects of natural environments on children's play and motor development,' *Children, Youth and Environments*, vol.,14., no.2, 2004, pp.21-44.

<sup>35</sup> T. Maynard, 'Forest schools in Great Britain: an initial exploration', *Contemporary Issues In Early Childhood*, vol.,8.,no.,4.2007,p.322

The wild and free natural space in the Forest Schools environment also enables the children to be creative in developing their own games of play, such as fantasy games, especially among young boys who fantasise playing superhero roles, such as chasing, running and mock fights in a real setting, so a more contextualised approach to learning ensues. The physical experiences undertaken in Forest School settings provides an ideal platform for satisfying our human need for thrill and challenge. In a research study examining the behaviour of children, Hinkley, Crawford, Salmon, Okely and Hesketh<sup>36</sup> found that children always seek physical challenges in their play, an observation attributed to the children's need for extending their physical abilities and their independence. This observation is also linked to the children's inclination to taking risks and eagerness to learn on how to deal with various hazards, which are understood to be important life skills.

A number of research studies have been conducted relating to the effect of the natural environment on children's resilience, confidence and wellbeing. However before analysing the research studies, it is important to examine the meaning of resilience, confidence and wellbeing in the context of children and the youth.

### 2.3.1. Resilience

Resilience is the ability of an individual to adapt to change and stressful situations successfully, in a healthy and constructive manner<sup>37</sup>. Resilience does not necessarily mean that a person is not vulnerable to stress, but has the capacity to cope with the adverse events<sup>38</sup>. In human

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<sup>36</sup> T. Hinkley, Crawford, D., Salmon, J., Okely, A. D., and Hesketh, K., 'Preschool children and physical activity - A review of correlates', *American Journal of Preventive Medicine*, vol. 34., no.5, 2008, pp.435-441.

<sup>37</sup> K. Oliver, Collin, P., Burns, J., and Nicholas, J., 'Building Resilience in Young People through Meaningful Participation,' *Australian E-Journal for the Advancement of Mental Health*, vol., 5., no., 1, 2006, p.1

<sup>38</sup> *Ibid*,p.1

growth and development process, transition from childhood to adulthood present unique challenges to a significant number of children, while others make smooth transition without too many problems. For those who lack resilience to make a smooth transition to adulthood, some develop mental health problems that could have lasting effects on their adult lives<sup>39</sup>. It is therefore important to equip children with adequate skills to enhance their resilience and make them more adaptable to the various challenges in life.

Empirical research studies have demonstrated that resilience can be enhanced through a contact with the natural environment. A study conducted by Horseman<sup>40</sup> in a Forest School in the United Kingdom found that students who had low levels of resilience and emotional wellbeing improved their resilience and emotional fortitude after participating in the Forest School program. A child who initially cried repeatedly after a fall changed and started picking herself up and continued playing after participating in their schools Forest School program<sup>41</sup>.

According to Cahill et al<sup>42</sup>, resilience is an acquired and adaptive process, which develops from the interaction between risks and defensive elements across different levels of an individual lived experience. Resilient people use adaptive skills and other initiatives that enable them cope and surmount the stressing event successfully<sup>43</sup>. Contact with the natural environment has been found to have a tremendous impact on enhancing resilience in children by reducing

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<sup>39</sup> T. Maynard, 'Forest schools in Great Britain: an initial exploration', *Contemporary Issues In Early Childhood*, vol.,8.,no.,4.2007,p.330.

<sup>40</sup> L. Horseman, 'We are going down to the woods today. case Study of a Forest School project with Carr Manor Primary School Nursery', <http://kindlingplayandtraining.co.uk/wp-content/uploads/2011/08/Forest-School-Case-Study-Carr-Manor.pdf>, (accessed 10 June 2015)

<sup>41</sup> Ibid

<sup>42</sup> H. Cahill, Beadle,S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children And Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,'<http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)

<sup>43</sup> K. Oliver, Collin, P., Burns, J., and Nicholas, J., 'Building Resilience in Young People through Meaningful Participation,' *Australian E-Journal for the Advancement of Mental Health*, vol., 5., no., 1, 2006,p.2

the impact of stress. A study by Wells and Evans<sup>44</sup> found that close interaction with nature reduced the effects of stressful life events on the psychological wellbeing of children. The study found that children with close and constant contact with nature coped better with stressful situations than those with little contact with the natural environment<sup>45</sup>.

Research studies by Cahill<sup>46</sup>, Oliver<sup>47</sup> and Rutter<sup>48</sup> show a positive relationship between children's participation in decision making and development of resilience. While participating in decision making, young people initiate and share ideas with adults and peers where their skills and capacities are recognised. In Forest Schools programmes, learning and play is guided by the adult, but directed by the child. Every child explores his or her areas of interests, and when playing with peers, they are able to make their own decisions<sup>49</sup>. When children participate directly in their learning, they derive meaning, control and connectedness with the task at hand. Meaning implies doing something that one believes in and also that which has a greater purpose. Control implies that one is in a position of making decisions, being heard and possessing relevant resources, knowledge or skills ensuring the task is completed to the end anticipated as well as to a predetermined level of self-satisfaction. Connectedness is attained through working with others in teams and having a sense of belonging and positive relationship

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<sup>44</sup> M. Wells, and Evans, W., 'Nearby nature: a Buffer of Life Stress among rural Children', *Environment and Behavior*, vol.35, no.3, 2003, pp.311–330.

<sup>45</sup> Ibid

<sup>46</sup> H. Cahill, Beadle, S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children And Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,' <http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)

<sup>47</sup> K. Oliver, Collin, P., Burns, J., and Nicholas, J., 'Building Resilience in Young People through Meaningful Participation,' *Australian E-Journal for the Advancement of Mental Health*, vol., 5., no., 1, 2006, p.3

<sup>48</sup> M. Rutter, M. 'Resilience concepts and findings: Implications for family therapy,' *Journal of Family Therapy*, no.21, 1999, pp.119-224.

<sup>49</sup> B. Hughes, *Evolutionary Playwork*. New York, Routledge, 2013 ,p.163



with adults and the peer group<sup>50</sup>. Therefore for an individual to develop resilience, it is important to engage in tasks that are meaningful, to have control and autonomy in addition to feeling a sense of connection to one's community. These elements are adequately provided for through the development of the long term Forests Schools program.

Forest Schools programmes offer limitless opportunities for the development of resilience in children. For children to develop resilience, it is important to implement programmes that promote emotional, social, academic, cognitive, creative, physical and vocational competencies and those that encourage young children to enhance their self confidence, self esteem and self efficacy. The program should encourage children and young people to form positive relationships with other people, the surrounding natural environment and adults, and more widely, to include the educational setting as well as the local community. The program will promote character development by enhancing self-control and morality, in addition to nurturing caring and compassion to other people. For development of these attributes to take place, a favourable environment that fosters nurturing of meaningful and supportive relationships with others, while empowering the children, as well as communicating expectations for positive behaviour is essential. A research study conducted in United States on vulnerable children found a marked improvement on their resilience after they participated in a forest education program<sup>51</sup>. The children reported a 27% increase in their understanding of scientific concepts, improved teamwork and cooperation with peers and adults, and enhanced conflict resolution skills. In addition the children demonstrated an improvement in their self esteem, problem solving skills, environmental awareness and increased motivation to learn.

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<sup>50</sup> K. Oliver, Collin, P., Burns, J., and Nicholas, J., 'Building Resilience in Young People through Meaningful Participation,' Australian E-Journal for the Advancement of Mental Health, vol., 5., no., 1, 2006, p.1

<sup>51</sup> American Institutes for Research, *Effects of Outdoor education Programmes for Children in California*, Palo Alto, Ca: American Institutes for Research, 2005.p. 25-63.

For an educational program to build resilience in children and the youth, Oliver et al<sup>52</sup> opined that it should be structured in a manner that promotes social and cognitive competency in addition to enhancing social connectedness and participation. Social competency entails a variety of interpersonal skills that assist children and young people to properly regulate and control their actions, thoughts and feelings to achieve social and personal objectives<sup>53</sup>. Social competency is achieved when an individual becomes capable of applying interpersonal skills such as communication and conflict resolution mechanisms in any given social context. This entails the ability to recognise and interpret particular social cues precisely and learn how to respond appropriately to interpersonal challenges.

Cognitive competency involves development of skills such as decision making, solving problems, setting goals and planning<sup>54</sup> and evidence around child development shows that young people gain adaptive skills through experience rather than through instruction. A study conducted by Wells<sup>55</sup> found that exposure to natural environments increased cognitive competence of learners and improved their concentration. Acquisition of cognitive skills plays a critical role in enhancing resilience of a child and young people even as they make their transition to adulthood. Children and young people with cognitive competence are self driven and are capable of planning and directing their efforts to achieve personal goals.

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<sup>52</sup>K. Oliver, Collin, P., Burns, J., and Nicholas, J., 'Building Resilience in Young People through Meaningful Participation,' Australian E-Journal for the Advancement of Mental Health, vol., 5., no., 1, 2006, p.4

<sup>53</sup> F. R.,Catalano, Hawkins, J.D., Berglund, M.L., Pollard, J.A., and Arthur, M.W, 'Prevention science and positive youth development: Competitive or cooperative frameworks?'*Journal of Adolescent Health*, no.31, 2002, p.240.

<sup>54</sup> G.K. Oliver, Collin, P., Burns, J., and Nicholas, J., 'Building Resilience in Young People through Meaningful Participation,' Australian E-Journal for the Advancement of Mental Health, vol., 5., no., 1, 2006, p.4

<sup>55</sup> M.N. Wells, and Evans, W., 'Nearby nature: a Buffer of Life Stress among rural Children', *Environment and Behavior*, vol.35, no.3, 2003, p.321.

Developing social connectedness and participation is another critical approach of developing resilience in children and young people. This approach is founded on the premise that promoting connection between young people, children and their parents, promotes health and hence their resilience<sup>56</sup>. Social connectedness is not only limited to the child-parent bond, but also connection to other adults, such as educators and practitioners and support staff in nursery, kindergarten or school. Many research studies have demonstrated that individuals with effective community participation and connectedness report improved resilience levels and better mental health outcomes than those without community connectedness. Thus, educational programmes that are geared towards enabling children help other members within and outside their community play a critical role in helping children develop resilience. These children have been shown to report better academic performance, improved social competence, high levels of self confidence and healthy awareness of oneself and the community at large<sup>57</sup>. By helping other people, children are empowered to deal with, resolve and gain some valuable insights on their own personalities and behaviour<sup>58</sup>. Education programmes that have an emphasis on children helping others promote self esteem in children and the young people. This self confidence emanates from the fact that the children become aware they have something to offer to others, which in turn reduces dependency on their parents and guardians increasing independence and problem solving skills as well as empathy. Moreover, as children develop a sense of control over their own lives and a feeling of being useful to the community, enhances their resilience. Therefore, it is important to provide children with opportunities of forming positive relationships with their peers and the larger community to enhance their development and resilience.

### 2.3.2 Learner wellbeing

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<sup>56</sup> G.K. Oliver, Collin, P., Burns, J., and Nicholas, J., 'Building Resilience in Young People through Meaningful Participation,' Australian E-Journal for the Advancement of Mental Health, vol., 5., no., 1, 2006, p.4

<sup>57</sup> Ibid,p.5

<sup>58</sup> Ibid,p.5

Learner wellbeing encompasses more than just the physical and mental health of the child, young person or adult. It refers to the intricate connection of the emotional, social, interpersonal, mental and physical health of children and young people in addition to their involvement in learning and in life experiences<sup>59</sup>. Cahill argues that stable wellbeing is achieved when individuals have relevant psychological, social and physical resources required to face a particular problem or challenge. Thus, when people or learners have greater challenges than the available resources, their wellbeing diminishes.

In education, wellbeing is both a product and a process which enables the learner to progress towards attaining the anticipated normal parameters of developmental as well as academic outcomes<sup>60</sup>. At Forest Schools, programmes are structured in a manner that recognises that learners may require additional support as well as their innate skills to draw upon necessary resources to maintain their wellbeing, especially when they encounter additional challenges from inside or outside the school environment. Research studies have demonstrated that wellbeing can be enhanced or influenced by modifying or introducing a number of varying opportunities into the learning program. A research study conducted by Awartani, Whitman and Gordon<sup>61</sup> sought to establish what influences learners' wellbeing both within and outside school. From the research study, the learners listed a number of activities that influence their wellbeing, namely physical health, physical and emotional safety, confidence in their capabilities, emotional wellbeing, pleasure and joy in learning, in addition to having a satisfying relationship with peers and other significant people. Other factors influencing learners'

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<sup>59</sup> H. Cahill, Beadle, S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children And Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,' <http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)

<sup>60</sup> Ibid, p.18

<sup>61</sup> M. Awartani, Whitman, C.V., and Gordon, J., 'Developing instruments to capture young people's perception of how school as a learning environment affects their wellbeing,' *European Journal of Education*, vol. 43, no.1, 2008, pp.51-70.

wellbeing includes the presence or lack of inner strength and spirit or self confidence, a sense of connection with life and community in addition to overall satisfaction with life.

Childrens' wellbeing cannot be addressed fully without including the state of their mental health. A growing number of research studies show that students across the world are recording an increasing number of mental health disorders, such as stress, depression, attention deficit hyperactivity disorder (ADHD), hyperactivity, panic attacks and other mental illnesses. The prevalence of mental health issues definitely undermines the child's capability to deal with the normal demands of life, slows their growth and development as well as their resilience, which in turn lowers participation and levels of connectedness to the education setting as well as to the local community<sup>62</sup>. Forest Schools offers opportunities of reducing the impacts of mental illness amongst children through their engagement in and with nature. The research study conducted by Taylor and Kuo<sup>63</sup> showed that students with ADHD demonstrated an improved level of concentration after walking in a green park.

Children's wellbeing and resilience are closely interrelated. Although both attributes are found within every individual, they are influenced greatly by internal and external factors. According to Cahil et al<sup>64</sup>, individual resilience is an interaction between the internal characteristics of the person and the external factors in the environment. Recognising the critical role that external environment plays in influencing resilience and wellbeing of an individual enables educators, parents, and other stakeholders devise effective interventions of changing the student's environment to achieve desired outcomes. Through the development of the Forest School

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<sup>62</sup> B. Bernard, *Resiliency: What we have learnt*. San Francisco, CA, West Ed, 2004.

<sup>63</sup> F. Taylor, and Kuo, F. E., 'Children With Attention Deficits Concentrate Better After Walk In The Park,' *Journal of Attention Disorders* Online First, vol.x., no.,x., 2008, pp1-8.

<sup>64</sup> H. Cahill, Beadle,S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children And Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,'<http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015) p.18

program, this approach is of critical significance as it emphasises the importance of developing a holistic educational program that involves the learners, the surrounding environment, parents and the educational community.

Forest Schools offer an ideal environment for fostering children's' development, because it offers learners the opportunity to spend a considerable portion of their educational lifetime in the natural setting. The role of schools in building resilience and wellbeing of learners has been studied widely and this offers new insights on how it can be achieved. According to Cahill et al<sup>65</sup> promoting students wellbeing is a major responsibility for schools besides teaching academic skills. The two common approaches of developing learners' resilience and wellbeing in school setting are taking whole school method and strength based approach<sup>66</sup>.

#### a) Strength based approach

The method focuses on building on the capabilities and resources of young people and children in school setting<sup>67</sup>. This approach capitalises on the existing strengths, positive attributes and deliberate promotion of wellbeing and resilience in children. According to Seligman and Csikszentmihalyi<sup>68</sup> a strength based approach is founded on positive psychology, where great emphasis is placed on promoting the strengths, capacities and other positive attributes of the individual that help them flourish rather than the usual approach of focusing on what is wrong and then rectifying the anomaly. In the school setting, some of elements that could be

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<sup>65</sup> H. Cahill, Beadle,S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children and Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,'<http://www.education.vic.gov.au/Documents/about/departement/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)

<sup>66</sup> Ibid

<sup>67</sup> M.K Alvord, and Grados, 'Enhancing resilience in children: A proactive approach,' *Professional Psychology: Research and Practice* vol.36, no.3, 2005, pp.238-245.

<sup>68</sup> M.Seligman, and Csikszentmihalyi, M., 'Positive Psychology: An introduction,' *American Psychologist*, vol.,55,no.1, 2000,pp 5-14.

emphasised using the strength based approach to promote learners' resilience and wellbeing include promoting the child's sense of belonging or connectedness to the culture of the setting, developing a positive climate in school or kindergarten, encouraging positive peer relationships with other learners, creating opportunities which allows learners to contribute their skills, knowledge or expertise in helping other children or members of the school community. Other strength based approaches in the school setting include creating opportunities where all learners experience success, acknowledging, recognising and rewarding learners for achievement, promoting positive teacher-learner relationships and enforcing collaborative teaching techniques in addition to emphasis on positive behaviours<sup>69</sup>.

Various researchers have examined the feasibility of incorporating the principle of positive psychology and this strength based approach in schools and other learning institutions. Clonan et al<sup>70</sup> opined that implementation of a positive psychology approach in schools is long overdue. Forest Schools programmes are ideal for implementing this positive psychology approach because the emphasis is on the provision of physical and psychological safety, building supportive and meaningful relationships within that community, offering opportunities for learners to feel and develop a sense of belonging and opportunities for building skills. Other essential attributes that promote implementation of positive psychology approach in Forest Schools are the availability of opportunities that integrate family and community in the holistic learning provision and a strong emphasis on development of positive social norms and values.

#### b) Whole School Approach Method

This technique entails the application of multilevel approaches in a school setting to promote learner wellbeing<sup>71</sup>. The whole school approach, also referred to as a universal approach is

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<sup>69</sup> Ibid, pp.8-13.

<sup>70</sup> S.M. Clonan, Chafouleas, S.M., McDougal, J.L. and Riley Tillman, T.C., 'Positive Psychology goes to school: Are we there yet?', *Psychology in the Schools*, vol.,41, no.1, 2004, pp. 101-110.

<sup>71</sup> F.Rowe, and Stewart, D. E., 'Promoting connectedness through whole school approach: A qualitative study,' *Health Education*, vol.109, no.5. 2009, pp. 396-413.

characterised by involvement at both classroom and school organisational levels to actualise achievement of learners wellbeing. The Health Promoting Schools model (HPS) is a universally acceptable guide to whole school approach. HPS model was started by the World Health Organisation (WHO) with the sole intention of assisting schools to appreciate how social and ecological factors affect the health and wellbeing of learners and young people. To promote wellbeing, the HPS model is used as an organising structure, to help schools integrate actions in the school culture, curriculum, environment, cooperation with parents, community and health organisations<sup>72</sup>. This implies that a whole school approach method integrates the usage of classroom curriculum, extra curriculum activities, the school policy, continuous professional teacher development and other activities carried out in school and cooperation with parents, community and other stakeholders, this would of course include the Forest Schools approach to learning throughout the whole school, for all pupils, with all teachers and support staff, as well as governors and other stakeholders being on board.

The various techniques used to enhance learners' wellbeing using the whole school approach include use of a clear Social and Emotional Learning (SEL) curriculum, encouraging positive child-teacher relationships, promotion of good peer relationship, encouraging parent-school involvement and promoting school and external agency relationships.

Social Emotional Learning curriculum is specifically tailored to equip learners with emotional and social skills. According to Frydenberg<sup>73</sup>, students who have undergone SEL training record better social and emotional competence with a lower inclination of engaging in violent and other risky behaviour. Although the curriculum has received a fair share of criticism for

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<sup>72</sup> H. Cahill, Beadle, S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children and Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,' <http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)

<sup>73</sup> E. Frydenberg, *Think Positively! A course for developing coping skills in adolescents*, London, Continuum international Publishing Group, 2010, pp.36-49.



allegedly failing to deliver, several empirical studies have proved its effectiveness in attaining the targeted behavioural changes and instilling appropriate skills to the learners. Encouraging positive teacher–learner relationships within a whole school approach to promoting wellbeing entails implementing mechanisms that ensure the nurturing of effective and friendly relationship between the learner and the educator. According to Cahill et al<sup>74</sup>, positive teacher-learner relationship enhances the cognitive, emotional and behavioural engagement of the child or young person significantly. Positive teacher-learner relationships are associated with increased student participation in school activities and greater achievements. The state of any teacher-learner relationship varies in different school or kindergarten settings. However, children and young people affirm that establishing positive relationship with their teachers promotes their resilience and positive involvement in learning.

A research study conducted to establish what learners appreciate most from their relationships with their teacher found that students rated teacher friendliness, firmness and helpfulness highly. Moreover, learners report high achievement from their positive relationships with the teachers when the learners perceive their mentor as having authority and control over the class and when the learners perceive that the teacher trusts and respect their opinions. The significance of positive teacher- learner relations has also been highlighted in a research study conducted by Cahill et al<sup>75</sup> which found that learners derive valuable benefits such as persistence, engagement and improved sense of self importance from the “little things” that their teacher does to them. These “little things” include listening to the learners, elaborating unclear concepts when helping the learners with work assignments, motivating and believing in learners’ abilities and treating them with respect. Teachers demonstrating good relational skills with the learners also instil a higher level of confidence to the students. A study conducted by

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<sup>74</sup> H. Cahill, Beadle,S., Farrelly, A., Forster, R., and Smith, K., ‘Building Resilience in Children and Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,’<http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)

<sup>75</sup> Ibid

Cahill et al<sup>76</sup> found that teachers demonstrating good interpersonal skills with the learners such as greeting and talking to them in addition to showing interest in the learners' personal social activities instilled higher levels of confidence to their learners.

Promoting positive peer relationship is also a critical element of the whole school approach to enhance learners' wellbeing and engagement in school participation. The nature of any relationship between peers has a profound influence on the learner's overall experience of any given education setting. Holfve-Sabel<sup>77</sup> argues that a constructive relationship with other peers offers emotional and psychological support, friendship and promotes a sense of belonging. Learners who have formed positive peer relationships record improved social and emotional skills. In addition they are less likely to engage in risky behaviours, violence, bullying, drug abuse and other antisocial behaviours during adolescence as well as later in life. However, it is important for the school staff and teachers to be on the lookout for the possibilities of any learner forging negative peer relationships. Negative peer relationships are associated with negative learner outcomes such as bullying, drug abuse and poor academic and social outcomes.

Encouraging school-home relationships promote students resilience by preparing them with increased social and emotional skills. Parents and guardians are the first individuals that a child interacts with and their influence on the child's emotions and social skills is powerful and long-lasting. Contemporary research findings have demonstrated that learners who involve their parents in their studies at home environment have the best learning platform for achievement<sup>78</sup>. Involving parents in children's learning has a positive effect in promoting their academic performance and wellbeing. Moreover, children with increased parental involvement

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<sup>76</sup> Ibid

<sup>77</sup> M. Holfve-Sabel, M, 'Learning, interactions and relationships as components of students' wellbeing: Differences between classes from student and teacher perspective', *Social Indicators Research*, Jan 2014, pp.21-27.

<sup>78</sup> J. Goodal, 'Parental engagement to support children's learning: A six point model,' *School, Leadership And Management*, vol.33, no.2, 2013, pp.133-150.

in their school life are more likely to attend school frequently, achieve success and join higher levels of learning and have better social and emotional skills as they grow and mature<sup>79</sup>.

Cooperation between school and the wider community has a positive influence on development of wellbeing and academic outcomes in children. When schools, families and the community work together, the combined effort makes it easier to address developmental needs of the children required to achieve desired outcomes<sup>80</sup>. Bernard<sup>81</sup> affirms that links between school and community is essential to offer additional support and resources to children when necessary. Access to health support is one of the most important benefits that schools could get by linking with health related agencies. Recent findings on mental health status of school age children indicates that about 17% of children aged 4-17 years and 26% of young adults aged 17-25 years suffer from at least one mental illness (Slade et al <sup>82</sup>). These findings highlight the importance of partnering with health organisations to offer appropriate mental health support to the learners. Health seeking behaviour in children has also been found to depend on familiarity with the health provider. Cahill et al<sup>83</sup> noted that children are reluctant to trust a stranger with their personal health issues, and it is therefore important for schools to establish early rapport with health agencies. Teachers should also play an important role in offering first hand guidance and counselling sessions to learners with mental health

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<sup>79</sup> H. Cahill, Beadle,S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children and Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,'<http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015

<sup>80</sup> Ibid p. 32

<sup>81</sup> B. Bernard, *Resiliency: What we have learnt*, San Francisco, CA, West Ed, 2004, p.73

<sup>82</sup> T.A. Slade, et al, 'The mental health of Australians. Report on 2007 national survey of mental health and wellbeing,' Canberra, Department of Health and Aging, 2009, pp 20-69.

<sup>83</sup> H. Cahill, Beadle,S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children and Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,'<http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)

issues before referring them to health specialists. This of course requires those teachers or practitioners to have the appropriate expertise and skills before entering into this kind of relationship.

2.3.2.1 Promoting wellbeing in schools using Positive Educational Practices (PEPs)  
Positive Educational Practices (PEPs) is one of the most pragmatic framework applied in guiding school staff and psychologists on how to promote wellbeing in learning institutions (Noble and McGrath<sup>84</sup>). The Positive Education Practices (PEPs) framework is founded on five basic components of wellbeing, which are essential for educators to produce well rounded and adaptable learners in school. These basic component of wellbeing are; social and emotional competency, positive emotions, engagement through strengths, and a developing a case of meaning and purpose.

Social and emotional competency as a basis for developing wellbeing and is founded on the hypothesis that students experience happiness when they are empowered with social and emotional skills. These skills can be instilled through social and emotional learning program that incorporates resilience skills, emotional and literacy skills in addition to personal achievement expertise<sup>85</sup>. The role of positive emotions in promoting wellbeing in humankind cannot be overemphasised. Positive emotions enhance the capacity of an individual to think positively, with renewed vigour and optimism. This promotes the capacity of the individual to solve problems and take on more challenging tasks. Schools could promote positive emotions in learners by implementing programmes, such as Forest Schools that emphasise and encourage a sense of belonging, pride, fulfilment, optimism, safety and enjoyment<sup>86</sup>. Wellbeing in schools is

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<sup>84</sup> T. Noble, and McGrath, H., 'The positive educational practices framework: A tool for facilitating the work of educational psychologists in promoting pupil wellbeing', *Educational and Child Psychology*, vol. 25, no. 2, 2008, pp.119-134.

<sup>85</sup> H. Cahill, Beadle, S., Farrelly, A., Forster, R., and Smith, K., 'Building Resilience in Children and Young People: A Literature Review For The Department Of Education And Early Childhood Development. Melbourne Graduate School of Education,' <http://www.education.vic.gov.au/Documents/about/department/resiliencelitreview.pdf>, 2014, (Accessed on 29 May 2015)p.18

<sup>86</sup> Ibid, p.18

also greatly enhanced by promoting good teacher- learner relationship. This relationship is essential because it promotes a sense of connectedness among the learners to the school and the community. School connectedness is a “feeling of being close to, part of and happy at school. It is also accompanied by a feeling that teachers care about the learners’ welfare and safety of students”<sup>87</sup>.

Engagement through strengths of the learners is another cornerstone in the positive education practices (PEPs) framework for developing wellbeing in schools. This element emphasises on the need of student to be cognisant of their abilities and strengths, so that they can use them to help others as well as attain their personal goals. Wellbeing is enhanced when abilities and strength of the learners meet with opportunity. It is therefore important for the schools to create appropriate environments where learners can utilise their strengths and abilities. This can occur during Forest Schools programmes and by creating opportunities where learners can find meaning and purpose for their existence is paramount for the development of resilience and wellbeing. It is through undertaking tasks that have positive impacts on other people and pursuit of personal goals that learners experience fulfilment and wellbeing. The goals of Forest Schools are to do just that within a contextualised learning environment and then learn to transfer these into everyday lives.

### **2.3.3 Students confidence**

Considerable research studies have been undertaken to investigate the impacts of nature on confidence in children. In one study, Kellert and Derr<sup>88</sup> found that children reported an increased sense of personal autonomy and an improved self confidence which enhanced their decisiveness after participating in Forest School programmes. In another study, Kaplan and

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<sup>87</sup>H.P Libbey, ‘Measuring student relationships to school. Attachment, bonding, connectedness, and engagement,’ *Journal Of School Health*, vol.74,.no. 7., 2004,pp 275-276.

<sup>88</sup>S.R. Kellert, and Derr, V., *A national study of outdoor wilderness experience*. Washington, DC, Island Press, 1998.

Talbot<sup>89</sup> found that youth and children who participated in wilderness challenges reported improved self confidence, feelings of self control, enhanced ability to concentrate and a positive outlook and a decreased level of anxiety after participating in these nature programmes. The main defining characteristic of confidence in children is self belief which comes when they are given the liberty, freedom, time and space to learn and show their self determination<sup>90</sup>.

Forest School programmes are designed in a manner that promotes healthy self esteem and confidence in children. The main defining characteristics of Forest Schools include frequent and regular sessions over a lengthy period, during the whole of a school year to established Forest School routines and the freedom to take risks<sup>91</sup>. A study conducted by O'Brien and Murray<sup>92</sup> found that the frequent sessions conducted over a long period of time provide children with time and space, which enable them develop familiarity with the environment. Similarly, established Forest Schools routines undertaken frequently was found to offer framework of stability, reliability and security to the learners<sup>93</sup>. The predictability of Forest School sessions and the framework that they establish on a day to day basis as well as over the course of the year, provide children with clear guide, which encourage them to engage in the various opportunities provided with more freedom to explore and to experiment, and thus develop.

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<sup>89</sup> S.R Kaplan, and Talbot J.F., Psychological benefits of wilderness experience. New York, Plenum Press, 1983, pp.27-64.

<sup>90</sup> L. O'Brien, 'Learning outdoors: the Forest School approach,' *Education 3-13*, vol.37., no.1, 2009, pp.45-60.

<sup>91</sup> L. O'Brien, and R., Murray, 'A marvellous opportunity for children to learn; A participatory evaluation of forest schools in Wales and England', [http://www.forestry.gov.uk/pdf/fr0112forestschooolsreport.pdf/\\$FILE/fr0112forestschooolsreport.pdf](http://www.forestry.gov.uk/pdf/fr0112forestschooolsreport.pdf/$FILE/fr0112forestschooolsreport.pdf), 2006,(accessed 10 June 2015) p.26

<sup>92</sup> Ibid, p.26

<sup>93</sup> Ibid, p. 26

Forest Schools, though the professional training provision of practitioners, have well established structures to manage risks in the outdoors. This risk management framework empowers children to engage in a wide variety of risky activities with higher level of independence and greater curiosity, rather than avoiding them altogether. Some of the experiences that they could engage in include using different tools, climbing trees, playing with animals and making fires and other woodland related activities. Children develop a greater sense of self confidence and self belief when they engage in risky physical activities, which are adequately provided in woodlands. This encourages them to take on more challenging activities that promote learning, character development and ability to manage risks<sup>94</sup>. The overall impacts of the established routines, the freedom to take risks and frequent sessions in the woodlands is that children develop positive behaviours that demonstrate improved self confidence and self belief in their capabilities. Moreover, children demonstrate improved social and emotional competence with peers and adults in addition to showing keen interest to learn and improved self discipline.

Self confident individuals approach their given tasks in a unique and distinct manner, which often results to better outcomes. Bandura<sup>95</sup> noted that such individuals set challenging goals, demonstrate high attention focus and interest on a given tasks, and persist for long period of time on the task. Moreover, self confident individuals are resilient when they face formidable challenges or failure and work hard while applying strategic problem solving skills. Taylor and colleagues<sup>96</sup> affirms that learning in nature enhances the development of three critical forms of self discipline, which improves self confidence in children and adults. These forms of self

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<sup>94</sup> Ibid p.27

<sup>95</sup> A.Bandura, A., *Self efficacy; the exercise of control*, New York, W.H. Freeman, 1997, pp.38-62.

<sup>96</sup> F.A. Taylor, Kuo, E.F., and Sullivan, W.C., 'Views of Nature and Self-Discipline: Evidence from Inner City Children. *Journal of Environmental Psychology*, no., 20010241, 2001, pp. 1-16.

discipline include delaying gratification, concentrating and inhibiting initial impulses<sup>97</sup>. Concentrating as a form of self discipline involves the ability of a person to overcome mental distractions and capacity to sustain focus on a given tasks despite boredom, fatigue and frustrations. The ability to concentrate enables the person to work on a given task with undivided attention, which results to higher level of progress and efficiency. Such individuals are able to complete assignments quickly. In children, lack of attention is a major cause of academic underachievement<sup>98</sup>. Mastering of a task through perseverance is one of the most important attributes necessary for a child to develop a sense of self reliance in childhood and adulthood.<sup>99</sup>

### **3.0 Methodology**

#### ***3.1 Research objective***

The objective of this study was to establish the impacts of long term Forest Schools programmes on the children's resilience, wellbeing and confidence. For the purpose of this study, long term Forest School program runs for a minimum period of 9 to12 months. This project is of great significance to Forest Schools stakeholders keen on investigating the long term effects of the programmes on children. Although extensive research has been undertaken to investigate the effects of Forest School programmes on children's confidence, resilience and wellbeing, majority of the studies focussed on the short term impacts. In the previous research studies, evidential findings indicated that Forest School programmes have positive impacts on the children's resilience, confidence and wellbeing. This research study intended to evaluate how these 9 -12 month Forest School programmes affect resilience, confidence and wellbeing of young children. To generate relevant findings, an extensive evaluation of previous research studies that focussed on the topic was conducted. This approach was used because it provided a broad perspective of findings from various Forest Schools practitioners across the world.

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<sup>97</sup> Ibid,pp.1-2.

<sup>98</sup> Ibid, p.2

<sup>99</sup> Ibid ,p.2



Since Forest Schools research is a relatively new but universal concept, it is important for parents, learners and other stakeholders to be conversant of not only its pedagogical foundation, but also its long term effects on children. As an Archimedes Forest Schools practitioner, the researcher has a wealth of experience in initiating and running Forest School training programmes across the United Kingdom and around the world and acknowledges its profound impacts on children's character and achievement. The researcher has developed renowned Forest School programmes and has published several publications on the Archimedes Forest Schools Model.

The research question for this study was

- What is the impact of long term Forest Schools programmes on children's resilience, confidence and wellbeing

### ***3.1.1 Research approach***

Qualitative method was used in this study to provide an in-depth and detailed understanding of the meanings and parameters under investigation. To gather the qualitative data, illuminative evaluation was used. An illuminative approach was ideal because it enables the audience to decode their own meanings of the research through an interpretive process. Moreover, the subject of the research study is unique, requiring meanings and understanding rather than proof. Relevant case studies obtained from selected articles were also used to enhance this illuminative evaluation.

## 4.0 Results

### 4.1 Impacts of long term Forest School programmes on children resilience

Long term Forest Schools programmes improves resilience on young children. A research study by Horseman<sup>100</sup> found that resilience of the young children increased tremendously after attending a long term Forest School program. In the case study, one child who was needy and cried constantly before the program demonstrated a remarkable improvement in her resilience after attending the Forest Schools program. She stopped crying, would quickly pick herself up after falling during Forest Schools sessions and began smiling and enjoying learning. This change of attitude was also demonstrated back in the classroom and outside the school. A case study by the Daily Mail<sup>101</sup> reported that long-term participation in risky Forest Schools activities improved resilience in children. In another research study, Wells and Evans<sup>102</sup> found that participation in nature programmes moderated the impacts of stress on children, which promoted their resilience. The positive impacts of long-term Forest Schools programmes on improving children resilience are also highlighted in research studies by Bernard<sup>103</sup> and Alvord & Grados<sup>104</sup> Middlewood Nature Nursery have reported that children's confidence levels have increased significantly over the course of the year. Children are more involved, willing to take challenges and to support their peers to overcome. Children are reported to be happier, their

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<sup>100</sup> L. Horseman, 'We are going down to the woods today. case Study of a Forest School project with Carr Manor Primary School Nursery', <http://kindlingplayandtraining.co.uk/wp-content/uploads/2011/08/Forest-School-Case-Study-Carr-Manor.pdf>, (accessed 10 June 2015) p.5

<sup>101</sup> Daily Mail, 'Children Thrive on Risky Play: Activities Including Climbing Trees and Rough and Tumble Games Help Improve Their Creativity, Behaviour and Resilience,' <http://www.dailymail.co.uk/news/article-3120837/Children-thrive-risky-play-Activities-including-climbing-trees-rough-tumble-games-help-improve-creativity-behaviour-resilience.html#ixzz3dXV2pxM4>, 12 June 2015, (accessed 10 June 2015)

<sup>102</sup> N.M Wells, and Evans, G.W. "Nearby Nature: A Buffer of Life Stress among Rural Children." *Environment and Behaviour*. Vol. 35:3, 2003, p.320.

<sup>103</sup> B. Bernard, *Resiliency: What we have learnt*, San Francisco, CA, West Ed, 2004.

<sup>104</sup> M.K Alvord, and Grados, 'Enhancing resilience in children: A proactive approach,' *Professional Psychology: Research and Practice* vol.36, no.3, 2005, pp238-245.

vocabulary range has increased and their willingness to dialogue with peers and adults was observed as greatly improved compared to their baseline assessments on admission.

#### **4.2 Impact of long-term Forest School programmes on children confidence**

A number of research and case studies affirmed that long term Forest School programmes improved confidence of young children. A research study by Loyne Learning Alliance<sup>105</sup> found that children reported an increased level of self confidence after participating in a long term forest program. In the research study, the researcher compared the confidence levels of the sampled children before and after participation in nature play. The factors that contributed to increased confidence in the study included children involvement in uncontrolled play, which enhanced their relaxation and the open space, which encouraged the learners to engage in different risky activities without fear of being reprimanded by the teachers. In another research study, O'Brien and Murray<sup>106</sup> found that young children developed a great deal of confidence by attending frequent sessions in the woodland. In the study, the researchers found that at the beginning of forest sessions, most children were less confident and were fearful of the new environment. However as they become more familiar with the natural environment following frequent visits, their confidence increased and they began enjoying learning in the woodlands. According to O'Brien and Murray<sup>107</sup> increase in confidence in children was demonstrated by initiating their own ideas of play, trying out new activities, taking leadership roles in woodland play with their peers and demonstrating higher level of independence. In another case study, O'Brien and Murray<sup>108</sup> observed a child who was initially an introvert, fearful and constantly

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<sup>105</sup> Loyne Learning Alliance, 'Self Esteem Forest School Intervention, 2013, (accessed 10 June 2015)  
'<http://www.loynelearningalliance.co.uk/downloads/1128%5E>,

<sup>106</sup> L. O'Brien, and R., Murray, 'A marvellous opportunity for children to learn; A participatory evaluation of forest schools in Wales and England',  
[http://www.forestry.gov.uk/pdf/fr0112forestschooolsreport.pdf/\\$FILE/fr0112forestschoools\\_repor\\_t.pdf](http://www.forestry.gov.uk/pdf/fr0112forestschooolsreport.pdf/$FILE/fr0112forestschoools_repor_t.pdf),  
2006,(accessed 10 June 2015) p.26

<sup>107</sup> Ibid, p.26

<sup>108</sup> Ibid, p.26

needing adult assurance improve her self esteem remarkably after she participated in a long term Forest School program. The child began taking risks in the woodland and became interested in looking for opportunities that involved application of different tools in the woodland and interacting more with their peers. Other signs that demonstrated improved confidence of the children after participating in Forest Schools include an increased interest in taking part in various forest activities especially exploring and investigating different plants and animals. The children were looking forward to spending more time in the woodland after participating in several forest sessions.

### ***4.3 Impact of long term Forest Schools program on children's wellbeing***

Long term Forest School programmes have positive impacts on physical wellbeing of children. A study by Mackett and Paskins<sup>109</sup> established that playing and walking in the outdoors offers children with sufficient physical exercise than a majority of other activities. The study found that playing in the outdoors provides children with the second most efficient method of burning calories behind engaging in PE lessons or games lessons at school. This implies that long term Forest Schools programmes could play a crucial role in reducing childhood obesity and related lifestyle diseases. Long-term outdoor activities contribute positively to children emotional and psychological wellbeing. A study by Thomas and Thompson<sup>110</sup> established that access to natural environments enhanced children's wellbeing by enabling them to let off steam, shout, run and provides opportunities for calm reflection, confiding in peers and interacting with family members and also any animals or pets present. Lester and Maudsley<sup>111</sup> found that playing in nature enhances mental health and plays a critical role in restoring psychological health in children and adults. Nature offers opportunities for escaping monotony

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<sup>109</sup> R.Mackett, and J. Paskins, 'Children Physical Activity: The contributions of playing and walking', *Children and Society*, no.22, 2008, p 352.

<sup>110</sup>G. Thomas, and G. Thompson, 'A Child's Place: Why environment matters to children. A Green Alliance/Demos report,' <http://www.demos.co.uk/files/ACHildsPlace.pdf>, 2004, (accessed 14 June 2015), p.10.

<sup>111</sup>S. Lester, and M. Maudsley, 'Play naturally: A review of children's natural Play. Playwork Partnerships,' <http://www.playengland.org.uk/media/130593/play-naturally.pdf>, 2006,(accessed 13 June 2015)

and ordinary experiences and opportunity for engaging in new interests, which are essential elements of restoring mental health and psychological wellbeing<sup>112</sup>. The significance of outdoor play in enhancing children's wellbeing has been highlighted in research by Taylor and Kuo that investigated the impacts of nature on children with attention deficit. In the study, it was established that frequent interaction with nature restores attention capacity in children with attention deficit hyperactivity disorder (ADHD) and others with challenges in focusing in a wide range of activities such as reading and sports<sup>113</sup>. Early years children at Middlewood Nature Nursery – A Forest Schools Kindergarten, where children are outdoors everyday, have been reported through observations to have increased levels of self initiated play and engagement and are developing more independence in relation to experimentation and exploration. The children are more willing to share their discoveries and to invite others to join in group play and parallel play.<sup>114</sup>

Blackwell and Nawaz<sup>115</sup> reported higher levels of confidence in children protecting and looking after the environment, resulting in self initiated litter picking and reminding others to do so. In addition returning to and sharing the forest environment with family and friends during family centred recreation and leisure times with the specific purpose of sharing and demonstrating their skills and knowledge of playing they had developed during their Forest Schools experiences that week.

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<sup>112</sup> Ibid, p.43

<sup>113</sup> F. A. Taylor, and Kuo, F. E., 'Children With Attention Deficits Concentrate Better After Walk In The Park,' *Journal of Attention Disorders* Online First, vol.x., no.,x., 2008, pp.1-8.

<sup>114</sup> Middlewood Nature Nursery – A Forest Schools Kindergarten Report June 2015

<sup>115</sup> Blackwell, S. and Nawaz, H. 'Perceptions about Forest Schools: Encouraging and Promoting Archimedes Forest Schools', *Academic Journals*, vol.9.no15, 2014

## 5.0 Discussion and Conclusions

This paper investigated the impacts of long term Forest School programmes on children's resilience, confidence and wellbeing. Illuminative evaluation approach was used for qualitative analysis and secondary data from previous studies was the main reference point. By using secondary sources data from previous research studies, findings from other Forest Schools practitioners, psychologists and educationists were adequately investigated. This enabled the research to synthesise and refine all pertinent information related to the theme of this study.

The study found that long-term Forest School programmes have positive impacts on the children's resilience, confidence and wellbeing. Resilience in children is demonstrated in a variety of behaviours, such strong sense self efficacy and self esteem, which is characterised by positive self regard, strong belief in one's abilities and a positive attitude. Resilient children have well developed problem solving abilities and easily resolve issues pertaining to their interpersonal relationships with their peers and adults. In addition, they demonstrate a high level of self awareness and are capable of expressing their fears and other emotions without difficulties. Children exhibit these characteristics in form of easy going temperament, good self regulation of emotions and impulses and maintaining attention. In regard to their social competence, resilient children are emotionally responsive, demonstrating empathy and care to others, have a sense of humour and they increasingly portray behaviours that makes them appeal and relate well with others. In relation to their personal goals, resilient children demonstrate a strong sense of purpose, have realistic expectations, and are self motivated and persistent. Long term Forest School programmes enhanced resilience in children by providing self directed learning opportunities, where children participate in making their own decisions and engaging in activities which they enjoy and those within their capabilities. The programmes encourage children to develop positive relationship with educators, peers and family members, which further enhance the child social and cognitive competence.

Long term forest programmes improved the confidence of the participating children. Children with high self confidence are characterised by willingness to take calculated risks and try new

things. O'Brien and Murray<sup>116</sup> opined that self confident children demonstrate a high level of self belief that comes about when they are given the freedom and opportunities to explore and grow independently. Self belief in children is demonstrable in their personalities, which is characterised by high levels of positive attitude, resilience, persistence, independence and self control. Moreover, confident children are curious and seek new opportunities that will utilise their abilities and are also willing to learn new skills. Educators play a critical role in promoting children's confidence in forest school setting. Instead of directing the learners, the educators initiate the learners' enthusiasm, sparking children's engagement in the process. The educators also encourage and reassure the nervous and timid learners by initiating new ideas, and providing resources that would stimulate their creativity and participation.

Once the children become fully engrossed in different activities, the educator steps back. In the course of learning, the educators learn and integrate with the children, ensuring that they are safe from physical harm. Moreover, the instructor and educators play a critical role in creating positive relationships between the learners, parents and community. This creates a favourable and safe environment for nurturing confidence in children enrolled in long term forest school programmes.

Wellbeing in children and human kind in general is associated with good physical and psychological health. In children attending forest school programmes, wellbeing arises from an interplay of carefully designed activities and curriculum that focuses on holistic development of the child. Research has demonstrated that playing in the outdoors is essential for physical development of the child and offers ideal physical exercises that help in reducing obesity, promoting development of a strong body and also enhancing physical agility. Interaction with green space and a wide range of fauna and flora have been found to enhance psychological and

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<sup>116</sup> L. O' Brien, and R., Murray, 'A marvellous opportunity for children to learn; A participatory evaluation of forest schools in Wales and England',

mental wellbeing of children. Exposure to nature has also been found to be an effective remedy for managing ADHD.

From this study, frequent and constant visits to the woodlands enable the children to become familiar with the natural setting. It was noted that during the first Forest Sessions, children normally demonstrate some degree of discomfort and uneasiness but when they become used to the natural setting, they eventually develop confidence and they blend naturally in the woods. Development of confidence, resilience and wellbeing as the children become familiar with the natural setting could be attributed to the fact that forest schools programmes are founded on the principle of positive psychology. This implies that the curriculum is child centred, and it focuses on enhancing the learners' strengths, interests and capabilities.

Wellbeing in children promotes their resilience and confidence. Physical and psychological health is critical components that enhance coping capability and self confidence in children as well as in adults. It is therefore important for educational stakeholders to put appropriate measures and policies that promote wellbeing, to ensure that children acquire self confidence and resilience. The measures that enhance wellbeing in school include application of whole school approach and strength based approaches.

Research funded by the Forestry Commission in Scotland<sup>117</sup> investigated the restorative benefits and influence of nature. Roe, J et al measured restoration before and after school compared with before and after Forest Schools in two settings. Affective restoration was investigated using a mood scale<sup>118</sup>. The results showed that those experiencing the highest levels of mental anxiety and stress where anger was one form of resultant behaviour were impacted the greatest as a result of their Forest Schools program.

Kenny, R. states that from her findings "The significant difference for wellbeing and

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<sup>117</sup> Forestry Commission Scotland - Forest school: evidence for restorative health. 2009

<sup>118</sup> University of Wales Institute of Science and Technology (UWIST) Mood and Adjective Check List (MACL), Mathews et al 1990



involvement data recorded between school and forest based learning for these children demonstrates that this Forest School context created an optimal learning environment which effectively supported the learning and wider developmental needs of participating children”<sup>119</sup>

This research programme was investigating children in the Early Years

Forest school programmes are designed in a manner that ensures that they promote the interests and capabilities of the learners and at the same time ensuring that the children feel part and parcel of the larger society. This research study relied on secondary data from previous research studies. In future, it is important to carry out a primary research on this theme.

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<sup>119</sup> Kenny, R. Involve, Enjoy, Achieve, Forest School and the Early Years Foundation Stage - An Exploratory Case Study, 2010

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