Luke Warhurst

Unit 5 - Action Research (AR)

Action Research Question:

How can I create an effective home-school learning environment and teaching schedule during an extended Covid-19 lockdown?

The background and rational for this action research:

During the recent primary school closures during the Government-mandated national Covid-19 lockdowns, I was forced to adopt the role of full-time teacher for my two primary-school-aged children: a ten-year-old boy and an eight-year-old girl.

Being very aware of the potential for a significant interruption in learning and progress that this situation presented, it was immediately apparent to me I needed to establish a home learning environment that would provide my children with as much learning continuity, stability and structure as possible. As well as the inherent difficulties, I realised that the situation also presented me with positive opportunities to tailor my children's education in ways that are, perhaps, impossible in their normal school environment. The lockdowns presented me with a unique and valuable opportunity to not only sustain and progress my children's education but also to develop and analyse my effectiveness.

Goals:

To help structure my efforts, I have identified the following goals:

1) I need to create a suitable learning environment for my children.

2) I need to implement an effective teaching schedule.

Meeting these goals will help me to:

1) Identify the needs of my children.

2) Identify their strengths, weaknesses, and needs.

3) Ensure that their emotional well-being is maintained.

4) Differentiate my approach in novel ways to take advantage of the inherent flexibility of home-schooling.

In addition, meeting these goals will also help my children to:

1) Understand and accept that home-school time is “real school time”.

2) Develop their functional skills and continue to work towards achieving school targets.

The personal benefits of embarking upon this Action Research project:

I believe that this research will help me to develop my fundamental transferable skills as a teacher. In many ways, the challenges that I will face have a degree of universality to them - the need to establish and maintain appropriate learning environments and roles therein, the need to manage behaviours, to encourage engagement, to overcome reluctance, to identify and assess strengths and weaknesses and to differentiate accordingly, and to be mindful of the emotional/psychological needs and stresses of the learning process. In addition to this, I hope that my action research will help me to enhance my flexibility and adaptability.

I am aware that educators need often to deal with unpredictable (and often unlooked for) situations, and I hope that this action research project will help me to develop not only the tools necessary to deal with this unexpected but unavoidable situation, but also to deal with future unexpected tutoring situations.

What is Action Research? And in my case, why might it be useful to me?

Jean McNiff concisely describes action research as being “a practical form of enquiry that enables anyone in every job and walk of life to investigate and evaluate their work.” (McNiff 2017) The key words here

are, “practical form”, “investigate”, and “evaluate” for they point to what makes the process so useful: its emphasis on using a structured, formal approach to documenting and analysing the process of self-discovery.

Action research is a uniquely tailored and personal activity, and it can mean different things to different people, however in all cases, the goal is to develop one’s capabilities (and one’s understanding of one’s capabilities) through the active process of “doing.”

Action research is not about generalising or theorising, although theory can underpin one’s actions during action research, it is about discovering unique solutions to unique problems. It is not an exclusively academic pursuit; in fact, as McNiff perceptively observes, plumbers can benefit from conducting active research just as much as professional researchers. I like to think of action research as a structured way to learn from one’s own experiences.

This process is achieved first by posing a question or set of questions that are unique to one’s own circumstances and then, by means of the analysis and documentation of direct personal experience and experimentation, forming conclusions that help one improve one’s performance.

Action research is ultimately intended to be made public. This may seem odd since the process is uniquely personal, but the value of doing so is that it represents a rich, complex, real exploration of experience that other can draw upon, even when their own experiences and circumstances differ. This is because of the inherent universality of the systematic process of self-discovery. Situations and skill-sets aside, there is often much that can be learned from the experiences of others, even when these lessons are rather abstract.

Perhaps because of the intrinsically personal, tailored nature of action research, there is not a universally accepted notion of what the process entails. Most, if not all, researchers agree that, broadly, action research exists as a cyclic process of observation, reflection, action, evaluation, and modification. However, within these generalise categories, there is much scope for disagreement. As McNiff observes, there is disagreement about not only what balance needs to be struck between action and research but also who should undertake the action and who shall undertake the research. [p.13]

There are many methods for conducting action research. The aim in all cases being to conduct a systematic, methodical means of enquiry. One way to conduct research is to “show a cause-and-effect relationship between variables, assuming that if people do this, that will happen.” [McNiff, p.47] This approach often relies on the collation and interpretation of quantitative data; information that is objective, statistical, and structured. This approach is very useful in certain contexts for helping practitioners hit upon a final course of action that “solves” a problem. Examples of quantitative data include grades earned through formal assessment processes, information technology platforms

that automate the assessment process and generate statistical performance metrics, and other similar processes that generate numerical datasets.

Another research method of research relies upon the collation and interpretation of qualitative evidence – evidence that is subjective, often unsystematic, and somewhat informal. This more exploratory approach is excellent at helping practitioners to form the sort of depth of understanding that can productively shape initial understanding of a problem. We can gather qualitative evidence in many ways, such as formal and informal observations, questionnaires, the solicitation of verbal feedback in both formal and informal settings and focus groups.

Quantitative evidence is particularly useful when considering many samples, while qualitative evidence is often more useful when using smaller sample sizes. However, this is certainly not a hard and fast rule, particularly when the samples are people, who are clearly complex and multifaceted.

I think that action research will be useful to me for the very reasons that I have described above; it is a way for me to systematically analyse and document my efforts in educating my children during the Covid-19 lock-down. This is a very specific and unusual situation and of course, my relationship with my children is utterly unique (as is the relationship between all parents and children). Consequently, the questions that I have, the challenges that I face, are to a certain degree uniquely my own - and of course, those of my children. The objectives that I have identified are wide ranging, and action research enables me to draw upon different strands of theory, practice, and personal experience to draw very personal - and uniquely useful - conclusions.

A brief review of some of the theories of alternative teaching methods for early years education, and some thoughts on how they might be used to inform my own practice and research:

For my research of existing literature, I have chosen to focus on alternative teaching methods and practices. As such, I have looked at the work of Montessori, Steiner/Waldorf, Harkness, Reggio Emila, Sudbury, and John Holt. The reason why I have taken this approach is because their “alternative” methods provide useful inspiration for the home-schooling of children, due to the relative flexibility of approach that such an opportunity provides. I have examined the ways in which their theories influence the establishment of both effective learning

environments and routines that support efficient student progress in a home environment.

I have chosen to be quite selective in my research since there has been an almost overwhelming amount of research undertaken on learning environments and effective routines and curricula. For this action research project, I wish to focus my efforts on the gathering and analysis of direct experience rather than on proving or disproving the applicable effectiveness of any set of theories. This is not to say that I place little value in the theoretical work of others; instead, I wish to use it as light inspiration for developing a tailored approach that works best for my children.

Montessori

Maria Montessori had this to say about establishing a nurturing and progressive teaching environment and routine, “Our care of the child should be governed, not by the desire to make him learn things, but by the endeavour always to keep burning within him that light which is called intelligence.” which highlights the need for educators to foster the spirit of enquiry in young children.

As Angelina Stoll Lillard notes in *Montessori - Science behind Genius*, “there is a close relationship between movement and cognition... [and] the best learning is active” [Lillard. Preface. Viii] and this is apparent in Montessori’s idea that the teaching environment needs to be spatially stimulating and peaceful. An ideal Montessori environment is one in which, contrary to a more behaviourist model of ordered learning, little adult-imposed learning is established. Rather, the environment facilitates learning dictate by active exploration and participation. In practical terms, this means that the things in the learning environment need to be proportional to the height of the child (for example, tables, chairs, and other furniture is child sized and accordingly easily accessible), the environment is clean and uncluttered, possesses materials that allow children to practice and develop skills, and, as a whole, provides bountiful opportunities for children to work in harmonious accordance with their own style and rhythm. This seems pertinent and applicable because home environments are, by their very nature, cluttered with distractions that can detract from the focused act of academic learning. However, on a practical level, a paucity of resources (and little time to purchase the furniture and equipment) makes the establishment of a home learning environment that satisfies the demands of the Montessori Method difficult to realise.

Extending from this principle, the Montessori Method promotes the idea that adults should not strictly impose the learning schedule (as is usually the case in traditional school-based learning environments). This has a great deal of merit and home-school educators can and should take

this into account in order to take full advantage of the inherent flexibility of home-schooling. After all, freedom from being beholden to convention is one of the major appeals (and strengths) of home-schooling. In imposed home-schooling because of government mandated Covid-19 lockdowns (and in other similarly mandated situations), this approach is difficult to implement because of the need to instigate a learning routine that acts as an extension of the traditional curricula (and the academic expectations and demands that this places upon students) that have been established by the schools from which children are temporarily prevented from accessing. Having said this, one can still, through careful planning, fold curriculum-based learning into a somewhat Montessori-like approach to allowing children to dictate the pace of their own learning in home environments.

An additional strength of the Montessori approach is that it allows educators to assess the strengths, weaknesses and needs of learners with observational assessments. This is important in my case due to having limited access to my children's school assessment records. As such, I am mindful of the importance of observational assessment in quickly getting an understanding of their current and developing needs.

Steiner/Waldorf

The Austrian scientist/philosopher Rudolph Steiner was an advocate of the need to develop children in an all-round way that considers body, soul and spirit. To put this more practically, this means helping children by challenging them "on intellectual, creative, artistic and social levels at all stages of development." [International Waldorf School]

The Waldorf method recognises multiple seven-year development stages in which we should place emphasis on different aspects of development. For example, during the first seven-year cycle, we should focus education on the development of skills relating to the physical body and during the second cycle, we should place emphasise the development of skills relating to emotional development.

My own children, being eight years old and ten years old, fall into the domain of this second cycle of development and, consequently, according to the Waldorf method particular attention needs to be paid to their emotional development. This is pertinent regarding the Covid-19 imposed home-schooling because the enforced separation of children from their teachers, peers, and familiar learning environment might have a terribly negative emotional impact upon them.

Contrary to the Montessori approach, a Waldorf education usually features a more teacher-led curriculum structure. It draws upon traditional forms and structures whilst at the same time provides abundant opportunities for flexibility and child-directed enquiry and flexibility within these structures. I think that approach has a lot of merit because it allows home-educators to support the intellectual/mental

adjustments that children need to undertake in order to accept the idea that the home space can, for a little while, be a place of focused learning, an extension of the school environment, as opposed to an “escape” from it.

A typical Waldorf curriculum is subject based (for example, featuring courses of study that look at science, mathematics, English, art, etc.), and in addition to the valuable emphasis placed on emotional development, it can be modified and drawn upon to help create a home-school curriculum that is both easily accessible to home-school children (because of its familiarity) and inherently flexible enough to allow innovation and a great deal of differentiation.

Edward Harkness

Edward Harkness championed the virtues of enquiry and debate, saying that the ideal learning environment would take advantage of a conference method in which learners would sit around a circular table with a teacher and, through active discussion or tutorials, encourage all learners to speak up and actively take part in the learning process.

In terms of the physical learning environment, adherents of the Harkness method typically make use of a large circular table about which teachers and learners sit. This table features predominantly as the centre of learning.

This approach has merit when applied to the specific home-schooling situation I am conducting my action research project on because:

1) It is a practical way to create an inclusive, active learning environment, needing only the space and furniture to allow myself and my children to come together as a group.

2) It promotes a sense of encouraging intimacy that supports and builds upon the already trusting/nurturing parental/child relationship that I already have well established, helping to extend this into a different but still related teacher/student relationship.

The Sudbury Method

This method, taken from initial work established by the Sudbury Valley School in Framingham, Massachusetts, USA, advocates an extreme of self-determination and democratic choice by learners. [Allen] The key principle that underpins this method is that learners are inherently motivated to learn and, consequently, it is not for educators to supply the motivation. In his article, Allen references a Sudbury educator who uses the example of young children developing the skills to walk without needing external (i.e., adult) prompting to do so. In effect, the Sudbury Method extends this line of reasoning across all areas of education.

My belief, born from my experiences as both a parent and an educator, is that this is a far too extreme and rigid position to take.

However, it makes me mindful of the need for flexibility and the perceptive judgement of the moods of one's learners. Children are motivated at various times to learn many skills but in my case, the requirement to meet the needs of my children's school-imposed curriculum means that I (and my children) lack the luxury to allow instinctual motivation to drive the direction of home-schooling. Yet, being mindful of the Sudbury Method and its philosophy remains useful because I have the freedom to change each day's prescribed schedule of learning tasks; I can, should, and will reorder and delay tasks in accordance with the motivation and emotional needs of my children.

John Holt

About home-schooling, John Holt and Pat Farenga have this to say, "Families having more time together won't automatically solve any problems between parents and children, but... [b]y having more time together the chances increase that not only relationships, but also academics, can flourish." [Holt & Farenga. P.3] This points to a particular strength of home-schooling, the opportunities that it presents to deepen the parental/child bond, which can lead to the establishment of the sort of positive relationships that are conducive to academic attainment. This is important and applicable in the context of this action research project because of the need for emotional attentiveness to underpin all educational efforts. Interestingly, despite the often-stark differences in the philosophies that I have already referenced, Holt's belief can usefully be born in mind when one attempts to pull the elements of competing theories together to create a unique and effective, context-specific approach.

One recent revelation that I have had from reading Holt's work is that in fundamental ways, there is actually negligible difference between the roles of educator and parent. Previously, upon considering my approach to this action research project, I was concerned about how to transition and switch between the roles of parent and schoolteacher when in fact, perhaps no such shift is necessary.

Holt was a fierce critic of formal learning establishments, witheringly stating that, "one reason why so few schools are any good at their work is that... when learning happens, the school takes the credit, and when it doesn't, the student gets the blame." [Holt. P7] He believed that schools often inflicted intellectual and emotional harm on children [p.20] and, as such, children do well to be removed from such environments. This is not a position that I subscribe to, however, it highlights the importance of developing an environment and schedule of learning that supports emotional and intellectual development above all else. It certainly seems plausible that a parent/child relationship is more likely to lead to learning that is wholly concerned with supporting the growth of the child rather than furthering the professional reputation of the educator, and

perhaps on an instinctual/emotional level this can be detected and understood by the child, facilitating greater engagement with and motivation to undertake learning.

From this philosophy, I choose to extract the positives rather than the negatives, that one can leverage one's relationship with one's children to establish a highly productive, nurturing and engaging learning environment. It is a great motivator and helps to frame my entire approach to home-schooling.

How I intend to identify a problem to be researched:

The enforced home-schooling of my children because of Covid-19 lockdowns presented me with several challenges. In trying to anticipate how best to establish an effective home-school learning environment and teaching schedule, I have asked myself the following questions:

1) What are the advantages of a formal, structured learning environment?
2) How can I leverage the inherent flexibility of home-schooling to take advantage of structure and routine while overcoming some of its weaknesses?
3) How can I effectively and quickly help my children transition from a formal classroom-based school learning experience to a more flexible, tailored home-schooling experience?

These questions, when considered together, have helped me to identify the problem that I intend to research, which I have encapsulated in the following question: how can I create an effective home-school learning environment and teaching schedule during an extended Covid-19 lockdown?

How I intend to gather and interpret data:

I will gather data by means of informal observations, formal and informal assessment, and the solicitation of feedback. Methods include:

1) Observing behaviour and social interactions.

2) The use of formal assessment to gather statistical performance data.

3) The use of simple, low-key informal assessment methods, such as a “narration and explanation” approach – setting aside time for my children to explain to me, or teach me, some of what they have been learning during the week.

4) The solicitation of feedback through meaningful conversation in non-formal contexts.

I will rely on the collation, analysis and interpretation of both qualitative and quantitative evidence. My justification for taking this approach is that although progress can often be best measured using statistics, engagement and focus can often be judged better through observing behaviours and interactions, and the through the solicitation of feedback.

In short, I will use statistical quantitative evidence to gain an understanding of academic progress, but then use qualitative evidence to interpret the statistics. I believe that this will be a practical and productive approach to take due to my deep parental understanding of my children’s personalities, emotional and physical characteristics, and motivations. In a different context, perhaps one in which my students were not my own children, I might take a different approach that places more emphasis upon quantitative evidence, however I think that leveraging my parental knowledge and understanding of my children will be essential.

How I intend to act upon the evidence gathered by means of the interpretation of data:

Being that the purpose of this action research project is to see how learning environment and learning schedules can best be implemented to promote progress, engagement, and happiness, I intend to change the classroom environment and the learning routine based on the evidence gleaned from the analysis of gathered data.

I will conduct this process three times over the duration of the action research process.

How I intend to evaluate the results of the changes I have made to my approach:

By comparing the data gathered pre and post changes, I will see how my instigated changes - positive or negative - have affected upon the engagement, happiness, behaviour and progress of my children.

Background:

I undertook this research over a one-month period. The subjects of this research were my own children; a ten-year-old and an eight-year-old.

My son is currently preparing to take his 11+ examinations, which take the form of verbal and non-verbal formal written tests. In academic terms, this (alongside the continual development of his functional skills) is his present focus.

My daughter's academic focus is on strengthening the foundations of her key skills in mathematics, English, and reading.

For both children, it is important for their mental health and all-round development that time is routinely given over to art, sport, and health-related tasks.

I need to develop a well-rounded schedule of activities.

Before the action research began, I talked to both my children about the process, explaining what I wanted to do and why it would be useful in ways that they could understand. I made clear to them I would halt the process (but of course, not the home-schooling!) if, after an appropriate time of reflection, they decided they did not want to be involved.

For reasons of ethics and confidentiality, I have included little information about my children above and beyond their ages and the results gain through the gathering of supporting evidence.

Timeline, plan of action and observations:

This action research project will take place over a four-week period. At the end of each week, I will collate and analyse the data and evidence gathered over the course of the week. Based on the conclusions I make, I will make one key change each week (if necessary) to the learning environment and/or to the schedule, repeating to the process to see what impact it has upon engagement, behaviour, progress, and happiness.

Week 1:

The environment:

For this week, a reasonably spacious "playroom" has been converted into a formal classroom environment, complete with bookshelves, height appropriate chairs, tables, etc. All the children's academic work (except

for the use of on-line learning platforms, which for logistical reasons will take place in a separate room) will be conducted here. The room is reasonably spacious, light and airy and offers room for movement, the repositioning of chairs, tables, etc.

The schedule:

For this first week, we are following a traditional five-day learning schedule, modelled on the schedules they follow when in school. Despite being of different ages, I have decided that both children will always study the same subjects, albeit with age/ability appropriate material. For this first week, I have some school-set learning materials I can use. These are supposedly appropriate for the children's levels, and I hope to use these to help me develop my understanding of their progress.

At the end of the week, I will solicit feedback on the students' experiences this week to help inform next week's approach.

Notes:

I believe it is essential for the students to emotionally and intellectually accept the shift from traditional schooling to home-schooling as soon as possible to maintain and enhance the continuity of learning and progress. My reasoning for using a dedicated learning environment and a reasonably traditional schedule is that it will present a familiar experience for the students, helping them to understand and accept that home-schooling is "real schooling", and must be committed to and taken seriously. I hope that this will help ease the initial transition from a tradition school environment to their new home-school environment.

Week 2:

Changes made to the environment:

This week, the "computer room" in which on-line learning takes place has been converted into a second formal learning environment. Now, the students will work in the same room for some non-IT related periods and apart for others. The two rooms are next to each other, so I can move freely between the two without leaving either student alone for an extended period.

Changes made to the schedule:

The schedule has remained largely unchanged this week, other than some minor shifting around of lessons to ensure that students do not work away from each other for over one period at a time.

Notes:

Informal observations showed me that although the students were initially happy to share learning spaces, the nature of their sibling

relationship soon led to the sort of distracting behaviour that negatively affects engagement. I speculate that this is partly due to them not having fully internalised the idea that our home space (usually a place of play and relaxation) is now also a place for dedicated learning.

In other words, the sort of behaviour that is appropriate for young siblings to engage in in the home can be inappropriate for the classroom, and this became increasingly apparent.

Having said this, for their happiness and mental well-being, I believe it is important that the students still have ample opportunities to work alongside each other, particularly in the absence of other children. As such, I established a second dedicated learning environment and alter the students' schedules to build in time to work together, beside each other, and apart. Hopefully, this will help to enhance their engagement in their work and, perhaps, place more value in the time they spend together.

Week 3:

Changes made to the environment:

No changes were made to the environment this week.

Changes made to the schedule:

This week we shifted to a six-day schedule, with each subsequently featuring less formal learning periods.

Notes:

Assessments seem to show that the changes made to last week's environment and schedule resulted in improved engagement. However, student feedback seemed to show that there was a growing resentment to the rigidity of the home-school experience. I have moved to a six-day schedule, with each day featuring less formal learning periods and more opportunities for play and exploration. I hope that this change will help to lessen the perception of overly intensive study days.

In terms of the environment, I have decided not to make any changes. This is because the shift to a six-day schedule is substantial enough to warrant the entire focus of this week's research.

Week 4:

Changes made to the environment:

Other than the use of the dedicated "computer room", dedicated learning environments have been abandoned. For this week, the children can choose to work in one of the established learning environments or in another room of their choosing, for example at the kitchen table or in their bedrooms.

Changes made to the schedule:

This week, formal schedules were abandoned and replaced with learning targets that needed to be achieved by the end of the week. Students effectively had a significant say in how and when to direct their own learning.

Notes:

Assessment data shows that engagement is being sustained. The children initially responded well to the shift to a six-day schedule, particularly over the first five days in which there appeared to be readily observable improvements to their general happiness and contentment. However, the sixth day (Saturday) was met with resistance. The children welcomed the lessening of their loads Monday to Friday but resented an increase to their learning duties on Saturday. Although I was tempted to reinstate a five-day schedule, I instead decided to give the children greater say about when they work.

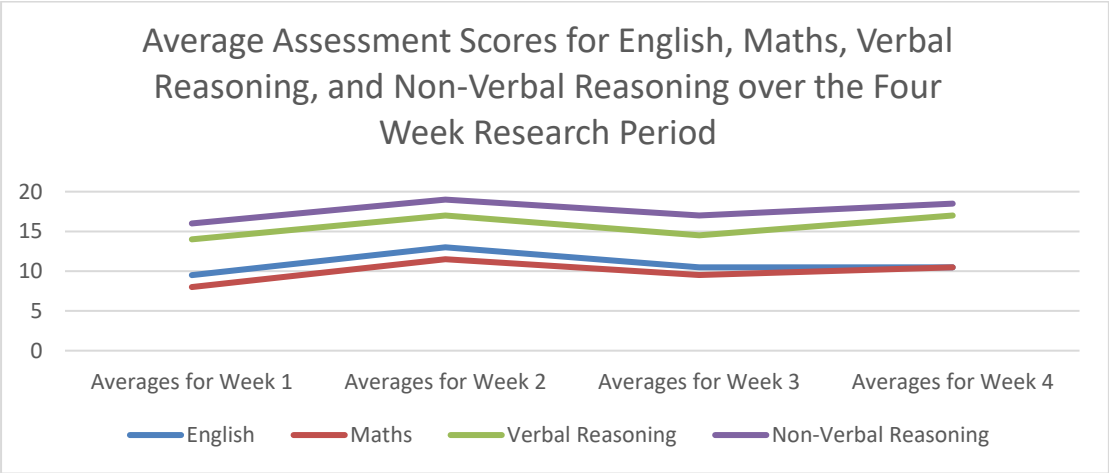
I decided that rather than imposing a top-down schedule, I would instead set individual learning targets that needed to be achieved by the end of the week, effectively allowing my children (with my guidance) to direct the pace of their own learning. To support this approach, I also allowed my children to choose where they undertook their work - the idea being, if the work gets done, it does not matter where it takes place.

Luke Warhurst

Results and conclusions for the eight-year-old:

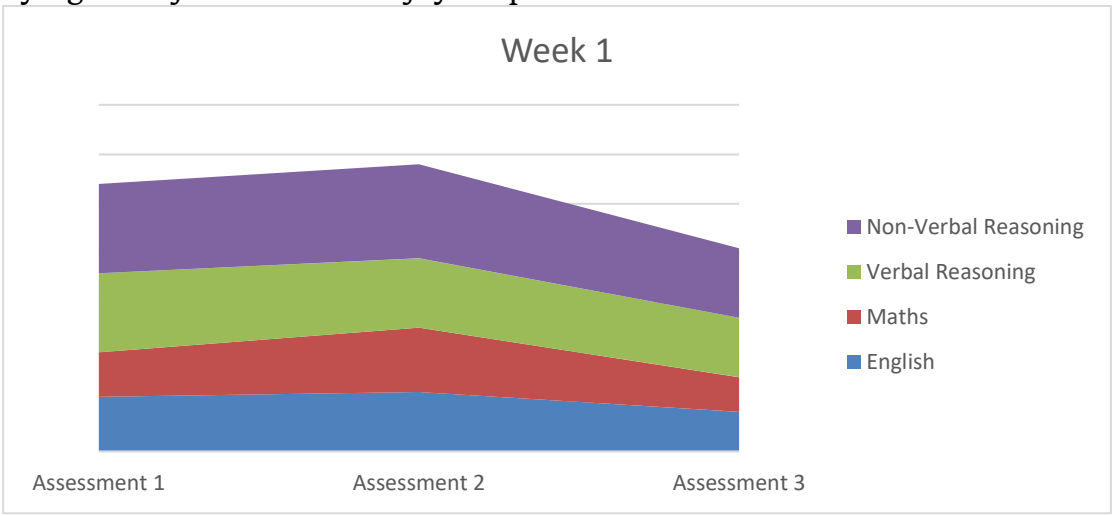
The assessment results for the eight-year-old child show that, broadly, performance:

1) Peaked during the second week.
2) Was lowest during the first week.
3) Was second best during the third week.

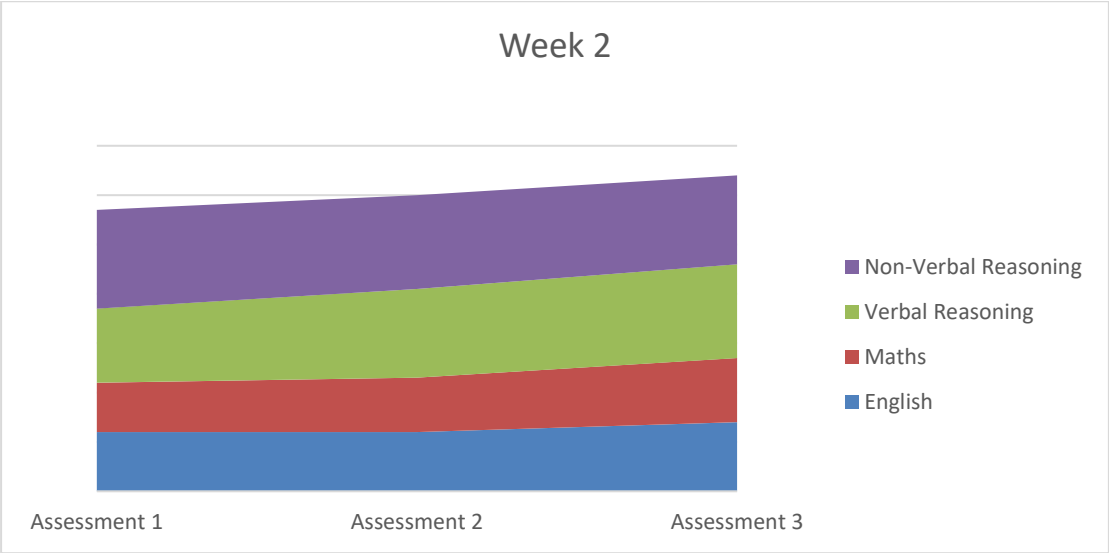


During the first week, we can see that there was a marked drop in performance across most subjects as the week went on. Notably, however, assessment performance in English was comparatively flat throughout the week, despite showing a slight downward trend after the mid-week second assessment.

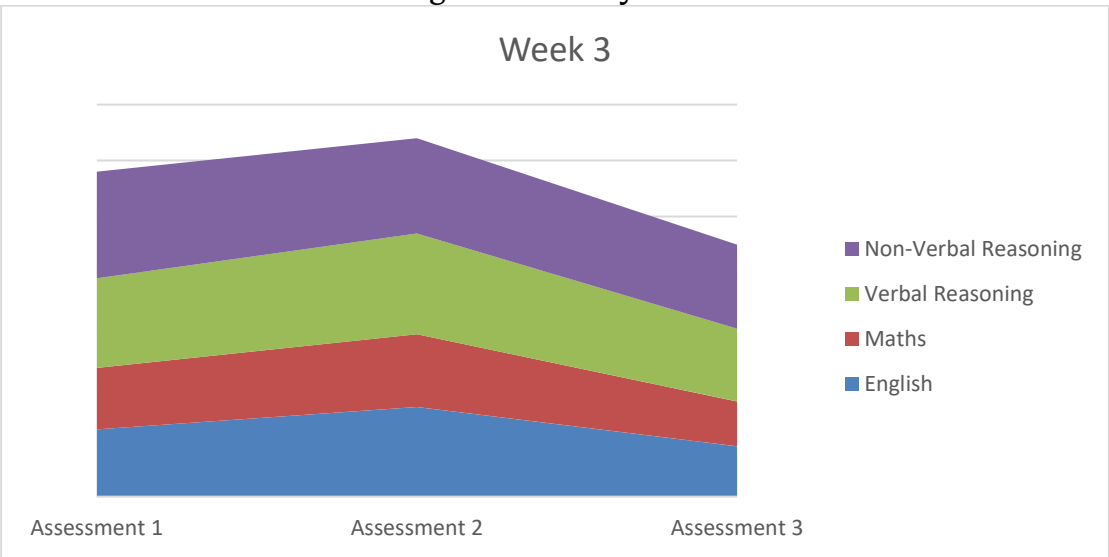
Out of all four subjects, the child shows a particular interest in English. I suspect that the natural engagement and motivation in studying a subject that one enjoys explains this.



During the second week, we see a gradual and sustained rise throughout the week; the exception being – again – in English, in which performance remains consistent. As the only significant change this week was to embed learning periods into the schedule that took place in a different environment to her sibling, allowing her the space and time to work by herself (with my guidance and oversight) enhanced engagement and focus.

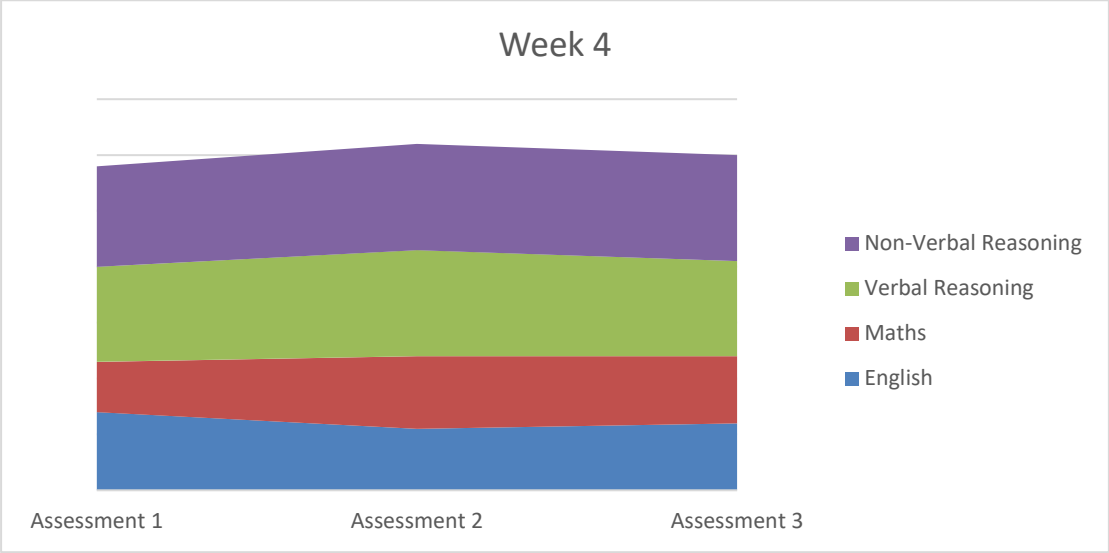


During the third week, we see marked improvement between the start and the middle of the week, followed by a steep drop. The major change this week was the switch to a six-day schedule, with each day featuring a lighter schedule. The lighter daily schedule appears to have enhanced motivation and focus. However, extending the working week into Saturday resulted in a marked downturn in engagement and performance. This accords with my own observations - I noted significant resistance to working on Saturday.



For the fourth and final week, we see an initial increase in performance, followed by relatively flat performance statistics for the rest of the week. Interestingly, the child's strongest (and favourite) subject, English shows a dip in performance.

This week, the children were given lesson targets rather than a set schedule that they could attempt to meet in any order, on any day. The child attempted to complete all her English tasks over Monday and Tuesday, and I believe that this had a detrimental effect.



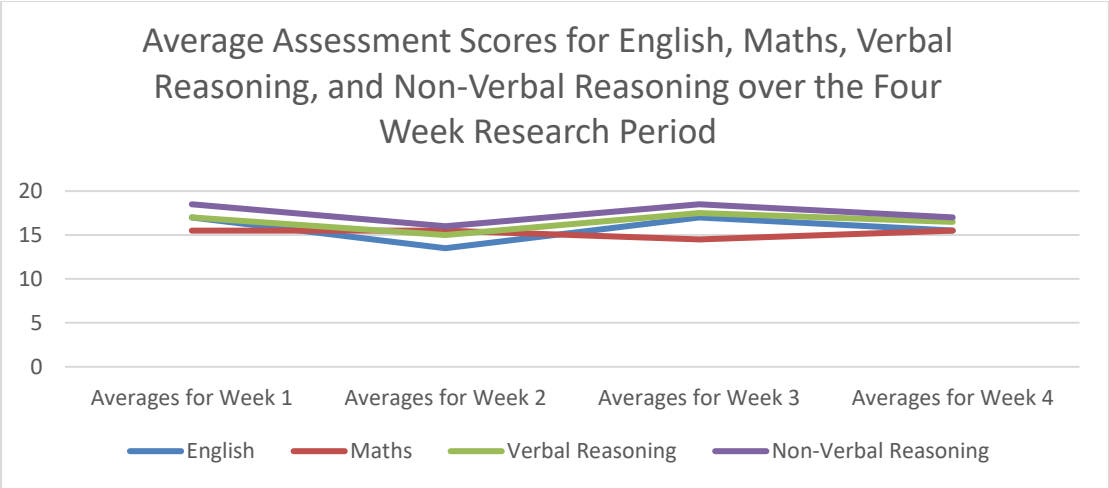
These graphs were generated from a detailed record of assessment results. Please note, this detailed record has been included in the appendix for further reference.

Luke Warhurst

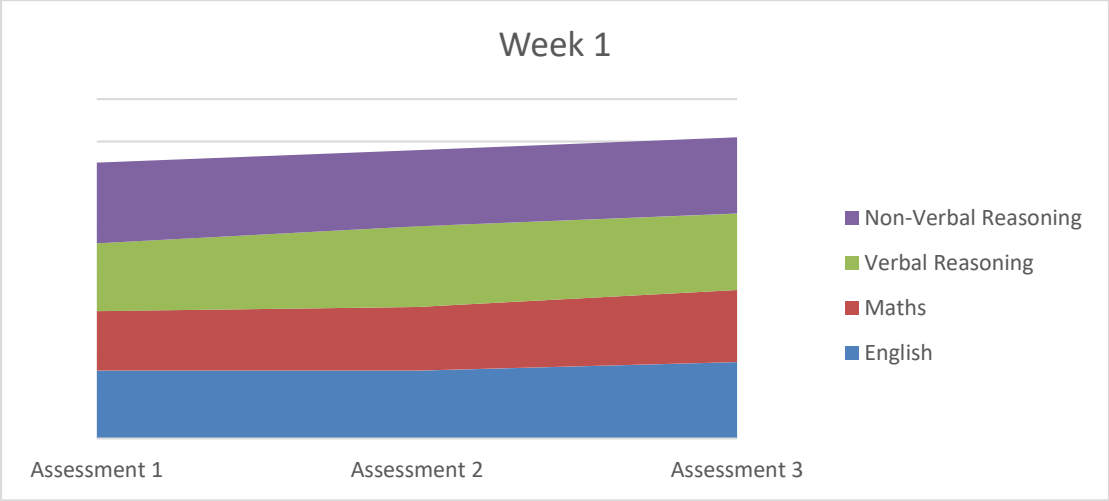
Results and conclusions for the ten-year-old:

For the ten-year-old, assessment results broadly indicates that overall performance:

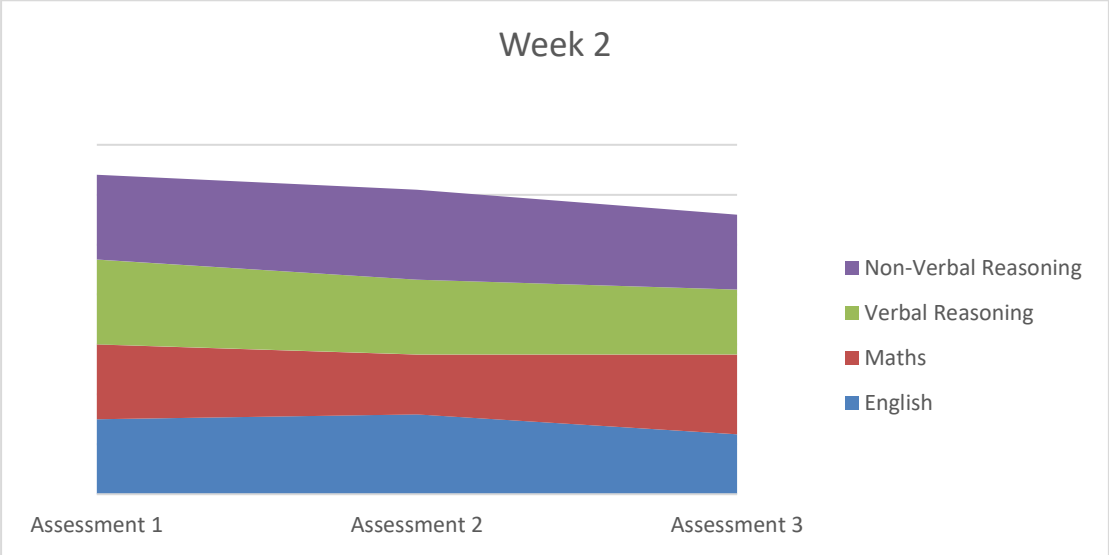
1) Peaked during the first week.
2) Was lowest during the second week.
3) Was second best during the third week.



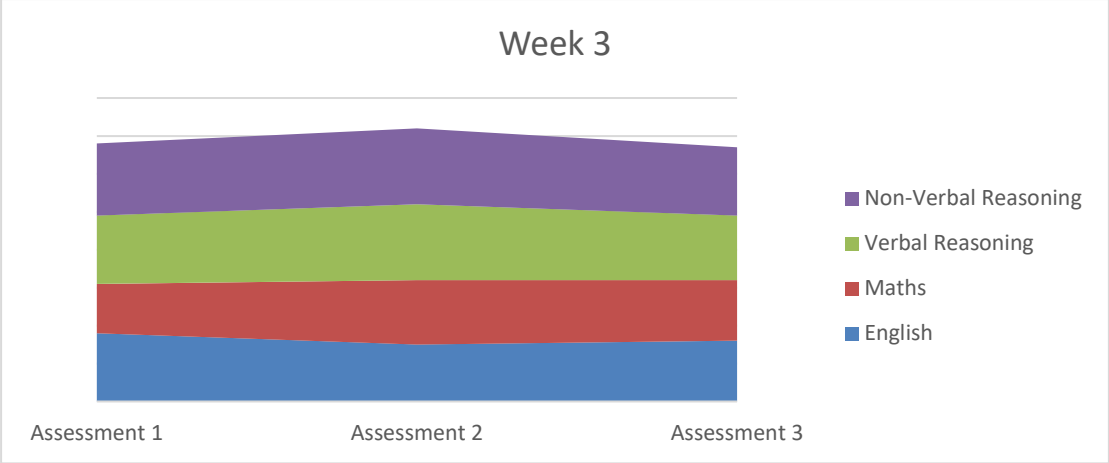
During the first week, we can see a gradual increase in performance across all subjects. Interestingly, compared to his sister, he responded particularly well to the partial replication of his school routine. His areas of strength/interest are maths and non-verbal reasoning but, interestingly, the results do not seem to show a marked difference in performance in these subjects compared with the other subjects.



During the second week, we see a gradual decrease in performance as the week progresses; the exception being in maths, a subject that he finds enjoyable. The only difference made this week was the enforced separation from his sister during certain periods, but solicited informal feedback suggested that this was a welcome change. I observed what I can only describe as “study fatigue” as the week progressed. Although, admirably, he understood and accepted the change of circumstances more readily than his younger sister, he appeared to grow somewhat resentful of the need to study during the week.

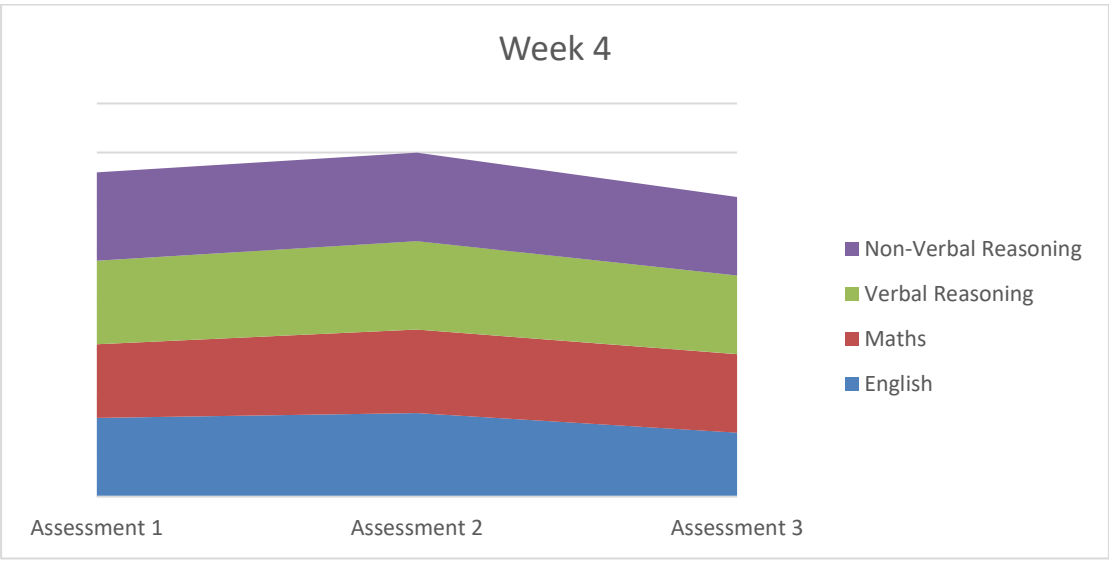


Surprisingly, given the observed growing resentment to keeping to a full-time study schedule last week, the switch to a six-day schedule had positive results. The change to a lighter schedule of work each day was met with renewed positivity and enthusiasm, translating to improved focus and engagement. Unlike his sister, the necessity to work on Saturday was not met with as much resistance, perhaps because of his extra two years of maturity. He understood and appreciated that a lighter per-day schedule requires the imposition of an extended weekly schedule. Nevertheless, we can see a dip in performance in non-verbal reasoning (one of his favourite subjects) and English (his least favourite subject).



For the fourth and final week, we see an initial increase in performance across the board, followed by marked decrease. Unlike his sister, he chose to space out his work relatively evenly throughout the week. It seems that he responded best to (and most appreciated) the structure of the first few weeks and, when given the freedom to choose when and what he worked on, preferred to keep to a routine like that implemented during the first week.

He elected to fit all his work into a five-day period, which I believe accounts for his dip in performance for his third assessments. My observations lead me to conclude that he rushed these to free up his weekend.



These graphs were generated from a detailed record of assessment results. Please note, this detailed record has been included in the appendix for further reference.

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General Conclusions:

The data for both children seems to suggest that the changes made for the third week – moving to a six-day schedule of individually lighter days combined with scheduled opportunities for the children to share a workspace and, at other times, to work away from each other – had a consistently positive impact upon engagement and performance. However, it is important to remember other factors no doubt influenced the statistics.

Informal observation and, at separate times, suggest some reasons for the differences shown by the statistics. For example, the ten-year-old had a better emotional and intellectual understanding of the lockdown situation than the eight-year-old – making it very clear to me in both our discussions and the evidence of observed behaviour that he understood and appreciated that the new home-schooling experience was a necessary, legitimate, and compulsory extension and representation of his ongoing learning. Perhaps his greater maturity, a product of being a little older, explains why this is so.

Another plausible explanation why the ten-year-old took more readily to being home-schooled was his awareness of his upcoming 11+ examinations. For quite a while, his school has been preparing him for these and emphasising their importance, leading to him beginning his home-schooling with a strong focus and drive.

The eight-year-old initially struggled to accept not only the changing role of the home during scheduled teaching hours (in that it was to be considered a formal learning environment while work was being undertaken) but also my role as her “real” teacher alongside my role as her parent.

Having said this, and again based on my observations, both children appeared to benefit from the formal, structured approach of the first two weeks in that replicating their traditional school structure to a certain extent appeared to give both children sufficient familiarity of experience to ease the transition.

This is particularly the case for the eight-year-old for by the second week. She had grown to emotionally accept the routine, leading to her best statistical performance.

With the ten-year-old, despite his initial enthusiasm and focus, he was growing somewhat weary and resentful of the rigidity of routing and formality of the learning environment.

Interestingly, the changes instigated during the third week resulted in solid performance being achieved by both children. The change made during this third week was a shift to a lighter six-day schedule. With the eight-year-old, performance was slightly worse than during the second week, but not by a statistically significant degree. With the ten-year-old, the change to a six-day schedule resulted in marked improvement. My conclusion, therefore, is that this change was overall the most successful one instigated, and one that I would continue to adopt in the future if circumstances compelled me to once again resume full-time home-schooling.

Even more interesting, the extreme liberalisation of both the learning environment and the schedule (which was abolished and replaced with work-completion targets that needed to be met by the end of the week) seemed to have minor effect. I speculate that this is because the structure of the previous weeks had by this point resulted in both children being fully accepting of the home-school experience by this point, resulting in the sustainment of focus and engagement despite the reduction of imposed routine and environment.

My conclusion, therefore, based on my observations, my deep knowledge of and relationship with my children, and on the evidence of the statistics is that there is much value in imposing a traditional learning environment and schedule during the early stages of the transition from a regular school-based classroom experience to a home-based one. However, once this emotional/intellectual transition had been made, the need for a traditional, dedicated learning environment and teaching/learning schedule becomes increasingly lessened.

The solicitation of feedback from my children through meaningful conversation conducted informally (often solicited during regularly scheduled nature walks) seems to support this view. One complaint that this feedback highlighted was my children's desire for an equal amount of "alone time" as "together time" during their studies. This surprised me initially because I had assumed that in the absence of interactions with children outside of our family bubble, they would want to actively be together as much as possible. This certainly seemed to be the case during our non-school time at home, when they would happily play together at almost all times, however both children at different times expressed the desire to work away from their siblings.

In conclusion, I believe that the structure and familiarity of a formal learning environment and learning schedule are essential for successfully (and quickly) transitioning between very different learning experiences and environments, particularly when the goal environment already has different well-established role in their lives. However, to achieve the best results in terms of engagement, performance, and overall happiness, such an approach should be taken only to ease the transition into a more flexible learning environment and schedule that places more emphasis on

the guided child-led establishment of differentiated work patterns and habitual work environments.

How I have benefitted from conducting this action research:

I think that I have been able to effectively make use of several skills in this action research project, such as the collation, analysis and interpretation of statistical data and my ability to draw upon my parental knowledge to speculatively interpret how and why the changes that I experimented with have led to the statistical evidence presented.

In other teaching contexts, I would most likely lack such a deep understanding of my students, however, the experience of conducting this research has highlighted the importance of paying close attention to the emotional/psychological wellbeing of learners. I realise now that structure and routine can best be employed to support emotional and psychological wellbeing, for the maintenance and enhancement of emotional wellbeing leads most effectively to productive learning, solid all-round development and even academic achievement.

I have also learned that the differentiation of structure and schedule is almost as important as the differentiation of individual tasks and lessons. Although I might not always have the flexibility to make the sort of sweeping changes that I have made during this homeschooling experience, I nevertheless believe that bearing in mind the principles that have become apparent to me will make me a more effective, mindful teacher in any context.

One weakness of this research is that it was conducted over a relatively short time. I think that a longer period of research, perhaps over six months, would have more to say about the effectiveness (or ineffectiveness) of my approach, for it would allow me to see how well the changed that I instigated worked once the children had become well accustomed to being home-schooled.

This research has left me with as many questions as answers because being an active participant in the research activity as well as an observer and analyst, I have become keenly aware that I have much work to do on understanding how I can best employ the lessons that I have learned in more formal, less flexible teaching contexts. Perhaps this might be a

worthwhile line of enquiry for a future action research project; one that involves a greater sample size, a more formal teaching environment, and students whom I understand less comprehensively than my own children.

Ultimately, my action research project has been successful in some ways (in that I have gained a better understanding of how to homeschool my children) but represents only a first step on the path to a more applicable understanding how I can apply my findings in other contexts. In terms of my personal/professional development, I have learned that I still have much work to do to realise my potential as an educator.

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Appendix 1: 8-year-old assessment data.

Week 1	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	11	9	16	18
Assessment 2	12	13	14	19
Assessment 3	8	7	12	14

Average Result	9.5	8	14	16

Week 2	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	12	10	15	20
Assessment 2	12	11	18	19
Assessment 3	14	13	19	18

Average Result	13	11.5	17	19

Week 3	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	12	11	16	19
Assessment 2	16	13	18	17
Assessment 3	9	8	13	15

Average Result	10.5	99.5	14.5	17

Week 4	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	14	9	17	18
Assessment 2	11	13	19	19
Assessment 3	12	12	17	19

Average Result	13	10.5	17	18.5

	English	Maths	Verbal Reasoning	Non-Verbal Reasoning

Averages for Week 1	9.5	8	14	16
Averages for Week 2	13	11.5	17	19
Averages for Week 3	10.5	9.5	14.5	17
Averages for Week 4	10.5	10.5	17	18.5

All tests had a maximum score of 20. All tests were undertaken with formal test conditions.

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Appendix 1: 10-year-old assessment data.

Week 1	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	16	14	16	19
Assessment 2	16	15	19	18
Assessment 3	18	17	18	18

Average Result	17	15.5	17	18.5

Week 2	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	15	15	17	17
Assessment 2	16	12	15	18
Assessment 3	12	16	13	15

Average Result	13.5	15.5	15	16

Week 3	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	18	13	18	19
Assessment 2	15	17	20	20
Assessment 3	16	16	17	18

Average Result	17	14.5	17.5	18.5

Week 4	English	Maths	Verbal Reasoning	Non-Verbal Reasoning
Assessment 1	16	15	17	18
Assessment 2	17	17	18	18
Assessment 3	13	16	16	16

Average Result	14.5	15.5	16.5	17

	English	Maths	Verbal Reasoning	Non-Verbal Reasoning

Averages for Week 1	17	15.5	17	18.5
Averages for Week 2	13.5	15.5	15	16
Averages for Week 3	17	14.5	17.5	18.5
Averages for Week 4	15.5	15.5	16.5	17

Notes:

All tests had a maximum score of 20. All tests were undertaken with formal test conditions.