

# Stage 2 Research Project – 2014

RPA

RPB

## School Assessment Cover Sheet for

➤ Assessment Type 1: Folio

**SACE Registration Number:**

**Research Question:**

What are the most effective activities to improve fine motor skills in children aged three to five years?

**Consideration and refinement of**

**P1 Discussion of research topic leads to refining of question.**

My original idea for the Research Project was to explore a topic on health or medicine, as I have always wanted to be an obstetrician or pediatrician. Since I have a lot of patience with children, I thought it would be a good opportunity for me to do detailed research about childhood development. I started my brainstorming by using a 'general-to-specific' triangle-planning tool. I came up with idea of looking at Occupational Therapy techniques, which I then narrowed down to fine motor skills.

Next, I used a mind map with 'Fine Motor Skills in Children' as starting point to come up with some potential questions. So original questions I pondered were; 'What are some activities children can do to improve their fine motor skills?' and 'How Occupational Therapy techniques help improve fine motor skills?' merged these to, "What Occupational Therapy techniques help improve fine motor skills in children?" This question however was too descriptive and didn't lend itself to argument. I needed to refine the question further.

First, I set a clear purpose for the research by adding 'most effective' which would force me to qualify which techniques work best. I set a specific parameter, 'three to five year olds' so that I was looking at a particular age range. My final question became 'What are the most effective techniques to improve fine motor skills in children between the ages of three to five?'

Also, I did another mind map to help me with my guiding questions in my outcome. The questions 'What are some activities children can do to improve their fine motor skills?' and 'How can Occupational therapy techniques help improve fine motor skills?' are most related to my Research Question.

I believe this topic is researchable and manageable since there is a specific topic focus, and a specific age group. My question allows me to show depth of knowledge and understanding about how fine motor skills develop in young children. Finally, the question requires a considered judgment to be made, as I will need to decide which techniques are most effective and which ones are not.

Capabilities

I plan to develop the Literacy Capability, especially since English is my second language, by: communicating clearly with different people in different situations, eg: parents, childcare centre staff, and children; ask questions in a variety of contexts, eg: conduct interviews with Occupational Therapists and other professionals and seek feedback from staff and parents; use primary sources such as interviews and action research and secondary sources such as books and websites. I will also develop the Critical and Creative Thinking Capability by coming up with a variety of creative 'play' based activities for children to develop their fine motor skills. Another Capability that I will develop is the Personal and Social Understanding Capability. Working with children is a personal goal of mine, and this project requires me to interact with, and therefore manage relationships with the children, their parents and staff. This also involves the development of empathy and the participation in work and community life and linking with local groups (childcare centre), working in teams and handling challenges and finally, making responsible decisions. Overall, I hope that the knowledge and skills that I learn through the project I will be able to apply later in life.

**D4 Thoughtful discussion of capabilities and how they may apply to research process and personal development.**

**P1 Explanation of the refining of the question. Question was narrowed to a particular group and a focus on OT activities. Question is researchable/ manageable. Scope and purpose clear. Enables considered judgements.**

**Safety and Ethical Considerations**

**P2 Indicates thoughtful planning.**

As my research topic is 'What are the most effective activities to improve fine motor skills in children aged 3-5 years'. As I'm interacting with kids therefore I will need to undergo a Police Check before I start my action research. This is a legal requirement, especially because I am 18 years old. I also need parental consent for the children to participate in the research so I will create a parent information sheet and parent consent form. In the information sheet I will ask permission to record their child's activity by only recording their hands so I could add these videos in my outcome to answer my guiding questions. Also, instead of using the child's name I will use a letter to represent the child (eg Child A, Child B etc). I also need to make sure I correctly reference all sources of information I use and not breach copyright laws or plagiarise.

**Planning of research processes appropriate to research question**

**P2 Thorough planning. Steps clearly explained and refinements discussed.**

Interview – Term 1 – Weeks 5-6

I have sent emails to several Occupational Therapists (OTs) in Adelaide. Also, I have tried to contact some students that are currently studying OT in university so if I can't manage to have an interview with an occupational therapist then I might just interview the university student. The interview questions are the seven guiding questions that are extended from my topic questions. I hope to gain expert opinions – primary source information – on what methods they may have used to improve fine motor skills in children.

**P2 Variety of research processes outlined and discussed. Fallback plans indicated.**

Internet Research – Term 1 – Weeks 3-5

I plan to study some YouTube clips which show fine motor skill activities to get some ideas. I found one which shows how to do activities and one which shows the actual kids doing the activities. I will use these to create my own activities to try out. I will also conduct an advanced 'Google' search to narrow down some useful websites for some general secondary information about Occupational Therapy techniques and fine motor skills. I plan to copy and paste the information then print them so I can make some handwritten notes. I plan to highlight relevant information, analyse the information and judge them according to relevance, reliability and usefulness.

Action Research – Term 1 Weeks 9-11 and Holidays

I will design ten activities, which I think will improve fine motor skills in children and then conduct some action research to investigate the validity of these activities. I plan to visit my local child care centre and work with small groups of children. I will probably focus on 2 activities per session, which will require 5 sessions. I also need to cost the materials and leave myself enough time to buy what I need and prepare the activities. I will need to either phone the centre or visit them in person to work out the best time for me to conduct the research and then organise parental consent.

Feedback Sheet – Term 1 Holidays

A feedback sheet for staff and parents is a way for me to gather some quantitative data. The feedback sheet will consist of a variety of questions, including closed 'forced choice' questions, short answer questions for personal opinion, rank style questions and scale questions. This feedback form will be given after the action research is done and I will collect them as soon as possible so I can analyse the information.

Literature Review – Term 1 Weeks 3-9

Since our school library has limited resources in child development I plan to go to the State Library in the city every Saturday to get more information on my topic. I will photocopy or take a picture of the book and then analyse this information for its relevance, usefulness and reliability.

Research Topic Mind Map

**Topic**  
**What are the most effective activities to improve fine motor skills in children aged 3- 5 years?**

**P2/D4** Planning process clearly indicates links between process and capability.

**P2** Thorough planning of research processes that are highly appropriate. Chart shows each sub-question and breakdown of sources to be used.

What are fine motor skills and Occupational Therapy?

What is the definition? Is there any age range to develop the fine motor skills?  
 What is occupational therapy? What specific area of the body does occupational therapy include?  
 Sources to use:  
 Secondary sources such as Internet websites to find out the general definition and then use medical books to explain it in detail.  
 Occupational Therapy brochures.

**Capability**  
 Literacy Capability  
 I will analyse information for each website and take note of some important words.  
 Also, it will improve my writing skills by using proper language.

What causes fine motor skills delays?

What are the actual facts about what causes fine motor skills delays? Are the causes mental, physical or due to genetic history?  
 Sources to use:  
 I will use secondary source such as Internet and books to research some facts that causes fine motor skill delays.  
 An interview with an Occupational Therapist will be conducted to get a better answer and also get more information on fine motor skills.

**Capability**  
 Literacy Capability  
 I will use simple language to prepare my interview questions. Also, I will use different texts to create these questions.

What are the risks of not developing fine motor skills?

Do different age groups have different risks? What kind of help do patients need to develop fine motor skills? What does therapy involve?  
 Sources to use:  
 Internet research will be used to find specific information on specific age ranges.  
 The Interview with an Occupational Therapist will also help to explain the answers to my questions in detail.

**Capability**  
 Literacy Capability  
 I will develop an understanding of different text types such as websites and interviews.

How can Occupational Therapy techniques help improve fine motor skills?

What kind of particular techniques could develop fine motor skills? Are they used the same way to treat each patient (are the techniques the same?) Will the techniques be appropriate for the specific age group? Do these techniques require using all of the hand or just the fingers?  
 Sources to use:  
 The interview with the professional Occupational Therapist will help me obtain more accurate and reliable answers for my question.

**Capability**  
 Literacy Capability  
 I will improve my language comprehension and writing skills by listening to, taking notes and analysing the answers.

What are some activities children can do to improve their fine motor skills?

Is there any age range for these activities? What kind of equipment will be used in the activities? Will they be able to do it individually or with caregiver/ parent's help? How long will they spend on each activity?  
 Sources to use:  
 Internet research will guide me and give me some general information about what equipment/materials could be used to develop fine motor skills. Also, I will ask this question during the interview to get more information or some other ideas about activities. I will watch Youtube videos to get an overall understanding of how to undertake these activities when I conduct my own action research.

**Capability**  
 Literacy Capability  
 Viewing video footage will help me develop my Literacy – I have to listen carefully for meaning.

## Internet Research Examples – page 1

### Source

Members. "Fine Motor Development 0 to 6 Years." *Skillbuildersonline.com*. Skillbuildersonline, 2002. Web. 20 Feb. 2014.

### Key findings

I've gained the simple meaning of 'fine motor skills' and child development in different stages from 0 to 6 years. Since my topic is based on a particular age group, I mainly looked up the information on children aged 3 to 5 years old.

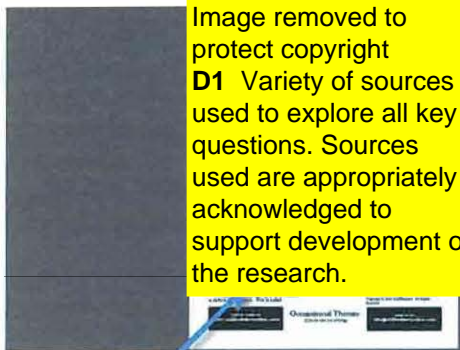
When a child is 3 years old, they will be able to hold a pen with their fingers, copy simple lines (eg vertical and horizontal) and shapes (eg circles). Also, they will be able to use scissors and cut a piece of paper into two. At the age of 4, a child will have a preference for using a lead or dominant hand. They will be able to do tracing, coping, colouring within the lines, holding a pen with 3 fingers, and moving scissors in a specific direction. When a child is at 5 years old, they will be able to do more movements with their hand and fingers by colouring with success, and be more precise in cutting and drawing shapes without instruction.

### Reliability

This source was made in 2002, which is not very current but still it includes the basic information I want. The source, does not contain bias since its purpose is to explain and provide information about gross and fine motor skills. The pdf was produced by a company

**D1** Variety of sources used to explore all key questions. Sources used are appropriately acknowledged to support development of the research.

**D2** In-depth analysis of key findings and explanation of ideas to develop research context. Usefulness explained. Validity and reliability discussed. Similar processes used for each research process.



### Validity

The source is relevant to my topic since I'm looking for the definition of 'What are fine motor skills?' it is not clearly stated but I got the general meaning of it. Also, the source would help me in my further action research by interacting with kids from ages 3 to 5 therefore it is important to know the skills or activities that the child can do at that specific age, so I know which activities to conduct based on the different skills.

The information provided useful activities and options to design my own activity that could improve fine motor skills in children.

### Skills and Knowledge Developed

The starting point to my research was to have a quick look at a few websites to gather an exact definition of fine motor skills. This required a simple Google search, cross-referencing information and synthesising the results. I then looked up other websites over several weeks and copied and pasted information from the most relevant sites. I highlighted key points and then analysed the information for reliability and validity and usefulness. This was an effective research process because I was able to gather a large amount of specific information directly related to my research question, in a relatively easy manner.

**D3** Discussion indicates research processes and their relationships to skills developed. Indication of influence on research direction and of effectiveness of process.

### Source

Christensen, Julie. "Delayed Fine Motor Skills in Children." *Preschooler*. Demand Media, 2 Feb. 2014. Web. 24 Apr. 2014.

### Key findings

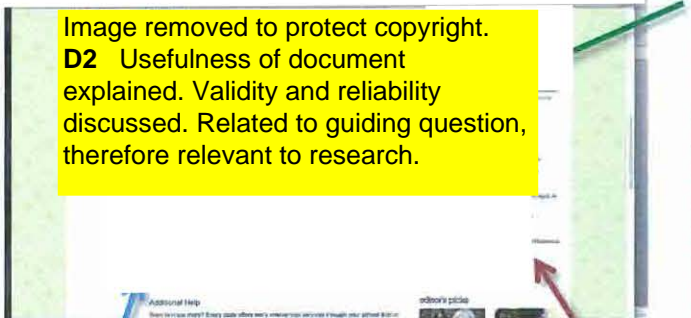
The website clearly shows the main information that I'm looking for such as the symptoms, causes, strategies, and treatments of child motor skill delays. Symptoms: when a child has fine motor skill delays, they usually have difficulties in writing or using scissors. Also children will avoid some activities and they may also struggle with other activities that require using the thumb and index fingers. Causes: girls are more likely to gain fine motor skills more quickly than boys. Low muscle tone, sensory issues, cerebral palsy and other disorders have a big impact on child fine motor skill development. Solutions: parents and teachers should not force kids to do some activities or tasks that they might not want to do since they might not be ready for the tasks. Instead, using some little tricks that make the activities fun and enjoyable to learn. Use different colours in activities such as painting, make shapes to capture a child's attention and also use some tools such as play dough to develop their hand muscles. Creating different activity environment can help children to write and make them feel that writing is fun and interesting.

### Reliability

The source was made in February 2014, which is very recent. The source basically provided all information in a fairly straightforward and non-biased way. The source was written by preschool teachers in a blog format, so could be considered fairly reliable information from educated professionals who have first hand knowledge of child development.

Image removed to protect copyright.

**D2** Usefulness of document explained. Validity and reliability discussed. Related to guiding question, therefore relevant to research.



### Validity

I found that the symptoms, causes and treatments from the source was the relevant information that I want for my guiding or interview questions, 'What are some activities children can do to improve their fine motor skills?' and 'What are some common signs that might indicate that a child may benefit from an occupational therapy evaluation?' This basic information helped me understand some of the general information about why a child might have fine motor skill delays and some cures.

## Internet Research Examples – page 2

### Source

Members. "50 Fine Motor Skills Activities for Children." *Loveplayandlearn.com*. WordPress & Atahualpa, Sept. 2012. Web. 2 Mar. 2014.

### Key findings

Activities for children to improve their fine motor skills. Most of them involve using fingers such as painting, making patterns and so on. I thought fine motor skill activities needed to be designed by occupational therapists, however by reading the blog, I found out that fine motor skills activities can be designed by anyone – as long as the activity requires the use of fingers or hands.

Image removed to protect copyright.

### Reliability

The information is not really accurate because it is a blog, which means it can be changed and added by other people therefore the information is not very reliable. However, when considering some activities I think the blog is very helpful. The blog was made in September 2012 which is still current.

### Capabilities Developed

My capability for Literacy was developed by this process in a number of ways. As English is my second language, I really had to concentrate on what I was reading. This meant looking up any words I was unsure of and clarifying any information I didn't understand by asking teachers. I also improved my literacy skills by taking notes and summarising information into short sentences. Some of the internet research involved looking at different types of documents, such as articles, pdfs, power point presentations and blogs. I found my confidence improved as I began to recognise some different styles of English and I became comfortable with technical terms the more I came across them.

### Validity

The information is relevant and useful. Since I'm starting an action research by interact with kids therefore I need to develop some activities so I can get more specific information. Also these 50 activities helped to select the different range of fine motor skills activities such as play dough (which requires children to use each of the fingers), placing beads by using thumb and index fingers and so on. I will use some of these activities to help to conduct my action research.

**D2** Structured analysis of sources evident on this page, allows for in-depth exploration of ideas.

**D4** Analysis of how research process helped develop capabilities.

### Source

kidslearningstation, (2014). *writing readiness worksheets*. [online] Available at: <http://www.Kidslearningstation.com> [Accessed 28 Apr. 2014].

### Key findings

This is a worksheet of tracing lines. In the same website, there are some other worksheets that could develop fine motor skills such as curved lines and zig-zags. Since lines or shapes can look boring to children, I thought of using some cartoon characters on the worksheet to make them more appealing. By making the worksheet more interesting and more like a game rather than a worksheet, the children hopefully might find this activity fun which will add to its effectiveness.

Image removed to protect copyright.

### Reliability

There was no information about the author on the website, therefore the information is not necessarily reliable nor accurate. However, because I'm only looking for the activities and not written information, it is still useful because I can use the document as a source to design my own activities.

### Validity

This worksheet is relevant to my topic as part of my action research activity is about line tracing therefore the website gave me a good idea of how to present the worksheets. I think the pdf was quite useful as it has shown me the format of the activity. As I'm going to design my own activity worksheet for kids, I need more of these kinds of examples to develop my ideas to make the activity better.

**D1** Indication of planning and assessment of usefulness of sources and effect on further development of research.

## Youtube Video Research – Examples

### Source

*Fine Motor Skills- Play Dough Chain.* Prod. Childcareland. Perf. Childcareland. *Fine Motor Skills.* Youtube.com, 22 Oct. 2008. Web. 4 Mar. 2014.

Image removed to protect copyright.

**D1** Thorough and resourceful development of research indicated in use of another type of source used.

**D2** Process for in-depth analysis continued.

**D3** Key Findings indicate development of knowledge and skills applicable to the research.

### Equipment used

Play dough

### Key findings

The play dough activity requires using most of the fingers by squishing, squeezing, stretching and moulding play dough to build muscle strength. She uses different coloured play dough to make the activity more interesting.

### Validity

It is relevant to my topic since it shows the activity that I will demonstrate to children in my action research. It is very useful for me to get an idea to demonstrate the activity by watching the video.

### Reliability

The video was made in October 2008, which I think is not new. However, I think the source was reliable as the Youtube account is under a proper childcare organisation.

### Source

Lovett, S. (2014). *Pony Bead Snowflakes Fine Motor Skills Activity For Preschool Kindergarten Pre-K.* [online] YouTube. Available at: [https://www.youtube.com/watch?v=\\_0peg\\_Zih1Q](https://www.youtube.com/watch?v=_0peg_Zih1Q) [Accessed 27 Apr. 2014].

Image removed to protect copyright.

### Equipment used:

Colourful beads

### Key findings

I think this activity is not very useful and easy. She just put the colourful beads into its position therefore I decided to add a new tool to make the activity more interesting and also help to improve their fine motor skills. I would like to let kids make a necklace by using colourful beads and plastic strings, which I think it is going to be a tough activity for kids since it is difficult to pass the string through bead holes.

### Validity

This video is a useful source for me as it gave me an idea for one of my action research activities. Also, it helped me to know that using colourful beads are important as it could make children more interested in the activity.

### Reliability

The source is not current and it was made in 2008. However, this source was reliable because it was made by a childcare organisation.

### Source

Lovett, S. (2014). *Pre-Writing Skill Cards.* [online] YouTube. Available at: <https://www.youtube.com/watch?v=237U448rgMA> [Accessed 27 Apr. 2014].

Image removed to protect copyright.

### Equipment used

Pen  
Different trace line samples

### Key findings

Many children struggle with holding a pen or pencil correctly so I think this activity is really important because it can help to develop this part of a child's fine motor development. This activity requires using thumb and index fingers to hold the object, which could improve their muscle strength. I think I might use different pictures on the paper to start with and let them trace the lines.

### Validity

I used this activity as part of my action research activity. This clearly shows the difference between the normal fine motor developing child and the kid with having difficulties in fine motor development.

### Reliability

The video was made from a proper childcare organisation, which makes it a fairly reliable and trustworthy source. This source was useful and provides an example of an important activity in fine motor development.

**D1** Inclusion of action research support the variety of research processes used. Explanation of purpose of each activity indicates thoroughness in planning.

**D2** In-depth analysis of results of each task, with an assessment of effectiveness.

**D3** Examination of the tasks indicate development of knowledge about fine motor skills.

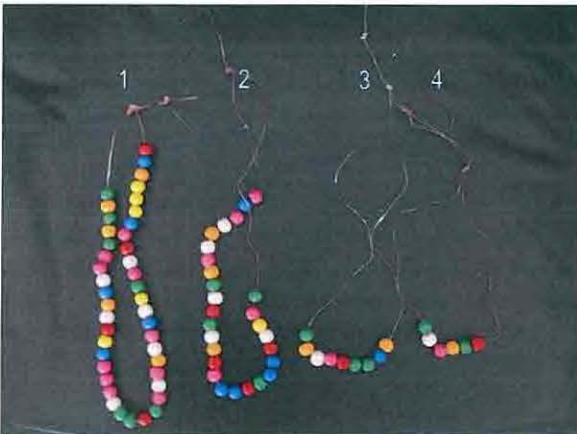
**Action Research – Key Findings**

The action research was conducted at a family day care centre. Five different activities were performed by four children with two 4 years old (one girl and one boy) and two three years old (boys). The finished product of each child can be identified in the photos by a corresponding number –  
 4 yr old girl = Child 1      4 yr old boy = Child 2      3 yr old boy = Child 3      3 yr old boy = Child 4



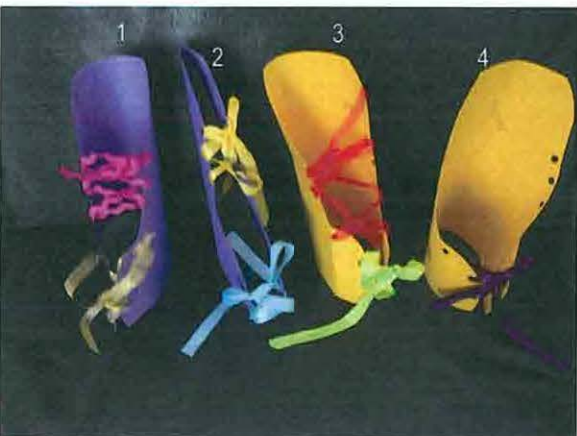
**Activity: Glue Crab, Cat or Flower**

This activity is designed to help develop the movement of the hands by pressing the shapes onto the plate. It also develops their creativity skills at the same time by using different colours of shapes to imagine the parts of the object. From this activity, I found out that the child 1 (girl) and child 2 (boy) (all 4 years old) were able to finish the activity quickly and were also able to use a glue bottle. However child 2 had some issues with identifying the different shapes. Child 3 and child 4 needed to complete the task with their caregiver. Child 3, (three years old) had some difficulties with gluing and also identifying the shapes. Child 4, (just turned three) needed help from their caregivers to complete the activities step by step. **highly effective**



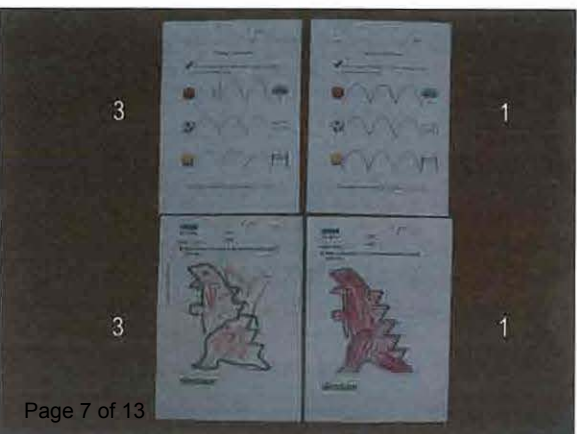
**Activity: Rainbow Coloured Beaded Necklace**

The purpose of the activity was to see the difference in development of fine motor skills in different ages from three to five. Stringing beads also helps with children's creativity by creating patterns or sequencing, which lays the groundwork for maths, science and art. Child 1 (4 yr old girl – the eldest in the sample group) had well developed fine motor skills which is reflected in her finished product. Child 2 (boy) was also 4 yrs old and I think he has good fine motor skills too. When comparing the two 4 yr old children with the two three year olds, a huge difference can be seen from the picture. It was hard for the three year old boys to concentrate on the activities and it was hard for them to complete the activities. Also, one of the three year old boys lost his patience and gave up on the activity. **very effective**



**Activity: Shoe Lace Plate**

This activity was close to real life. This helps to develop their hand skills by connecting each dot with lace. This activity was never conducted before in their family day care, and three children found the activity quite difficult and hard to make a shoelace pattern. However, one four year old girl, (Child 1) completed the activity with patience by reminding her of which dot she had to connect. Child 2 and Child 3 also completed the activity but it took longer for them to find the pattern and connect the correct dots. They were able to complete the activity with the help of the caregiver. Child 4 was unable to complete the activity and gave up. **reasonably effective**



**Activity: Line Tracing**

The activity was to determine a child's hand strength and correct their pencil grip by holding a pencil correctly. A child with poor fine motor skills will not be able to hold a pencil correctly and also some children refuse to hold a pencil. It is simply because their fine motor skills are not improved/ developed, which will could affect their success in school. Child 1 (4 year old girl) finished her line tracing perfectly; proving that her fine motor skills are developing along guidelines. However, Child 3 (three year old boy) found it a bit difficult to trace lines. He did the activity with the help of the caregiver. The other two children completed their activities relatively easily – probably because they are used to doing these activities at childcare. **moderately effective**

Literature Review Research – Examples

- D1 Another example of a research process used.
- D2 Continued use of structure to analyse the sources allows in-depth analysis.
- D3 Highly effective development of knowledge evident in key findings.

Source

Clark, Michele J. "Appendix." *Occupational Therapy with Children*.  
 By Helen Clancy. New York: Churchill Livingstone, 1990. 275-87. Print.

Image removed to protect copyright.

**Key findings**

In the book, there was much information about the performance adaptation of children from different ages until adult age. Also, it contains development tasks for particular ages, and it is separated in different topics such as imitation, participation and so on. Since the growth of children develops differently when children are developing, some children might develop a specific part quicker than others. When considering the reason why the child is not developing fine motor skills, it has to be considered from all kinds of things not only the fingers and hand actions.

**Reliability**

The book was published in 1990, even it published 14 years ago, the information is still very good and reliable. In the appendix, it explains the stages of development, which does not contain bias.

**Validity**

The source is relevant as it gives more detail information about the physical actions of fine motor skills of a child. The information that I need in the book is detailed written about the performance adaptation of child in different ages, which could help in my action research.

Source

West, R. (1991). *Royal Society of Medicine child health guide*.  
 1st ed. London: Hamlyn.

Image removed to protect copyright.

**Key findings**

There is a chart that shows the percentage of children passing Denver Developmental Screening Test at relevant milestone ages. On the chart, I've underlined the section between 3 to 5 years of age. Most kids will learn how to copy either by copying from others. Most of their fine motor skills were already developed which means that they will be able to use hands and fingers.

**Reliability**

The information was not current because it has not been updated since 1991 however it is useful and has accurate information as a doctor wrote it.

**Validity**

This chart directly showed the range of skills that child is needs to be developed once they arrive that specific age. It also gave me a clear image of what kinds of activities should I add in to improve my action research.

Source

Bibliography: Marion, M. (2003). *Using observation in early childhood education*. 1st ed. Upper Saddle River, N.J.: Pearson/Merrill-Prentice Hall.

Image removed to protect copyright.

**Key findings**

Parents should be involved in the activities, which could help the children with their thinking skills and social skills. Parents should demonstrate the activities first and talk more during the play, so the kid would like to play the activity again and again (it is also a way to develop the fine motor skills). Children like to play symbiotic games which is a pretend play with dolls, this could help with kids emotional development as well as their fine motor skills as it require using hand to hold the object. More tools or equipment are required, as kids grow older to develop different parts of their brain. From the information, I had an idea that I could use more then one or two objects to attract children's attention and improve their fine motor skills at the same time.

**Reliability**

The source was not very new and it was written in 2003 however the information is still accurate as it was written from an observation in early childhood education.

**Validity**

As I need to interact with kids therefore I decided to look at some relevant information about emotional development in kids. This could help me to interact with kids. Parents are not involved in activities.



**Research Processes**

**D3** Analysis of research processes and the relationship to the development of knowledge and skills.

**Action Research**

**Effectiveness**

I faced many challenges throughout the action research. Some children did not understand the activity and some had little patience and gave up easily. I use simplest English language and explained the process/ steps of the activity slowly and also demonstrated them again.

**Knowledge and Skills Developed**

Since I'm interacting with kids in child care centre the police check has to be done. It was difficult for me to wait till my police check is done and start the action research. I created the parents information and parents consent form for my action research activity. While doing the designing the of the activities and I also used Internet as a source to help me to get more information. I've collect so many information about the child development, some might relevant to my topic and some won't but I think it is useful to read more information so it will give me much broader understanding of my topic.

**D4** Thorough and informed understanding and development of the capabilities. Shown through examples of their application during the research process.

**Capabilities**

**The Personal and Social Capability:** I developed my personal and social skills by participating actively and responsibly in a community (childcare centre). I developed my empathy for and understood of others better by interacting with range of different people. Also, built strong bonds with kids in childcare centre even I stayed for few days. **Literacy Capability:** My literacy skills were improved by interacting with a range of people: teachers, staff, children, and parents / caregivers. Therefore I had to use language in different contexts and different purposes, for example using simple and clear language to children and making sure that they understood the activities and I also used some technical language which was appropriate for adults. Also, I composed a range of texts such as oral and written and drawing and demonstrated the activities to children and also analysed the information. **Critical and Creative Thinking Capability:** From the action research, I improved my critical and creative thinking by designing features that are fit for function. I designed few activities such as Glue Crab, Cat or Flower activity, which requires children to use different objects to make a pattern on the plastic plate. The Stamp and Cut was the activity that requires children to use both hands and cut the stamps on a strip of paper into equal distance. **Ethical Understanding:** I developed ethical understanding by going through the process of obtaining a police clearance to work in the childcare centre and also by ensuring that the children's privacy was upheld and their identities were protected.

**Youtube Videos**

**Effectiveness**

Viewing Youtube videos and taking notes, although time consuming was an excellent way to see first hand, demonstrations of how to undertake activities.

**Knowledge and Skills Developed**

I developed my critical viewing skills by watching Youtube videos. This process prompted me to understand the fine motor activities better and helped me to pick specific activities for my action research. By analysing the videos, a good comparison between activities was necessary to help me chose activities. I also improved my organisational skills by using different coloured, clearly labeled desktop folders to keep information and for a place to record the url details of the clips.

**D3** Highly effective analysis of the development of knowledge and skills and the effectiveness of the research processes used.

**Capability**

**The Literacy Capability**

My literacy capability has improved by accessing, analysing and selecting relevant information. Also I improved my writing, reading, viewing, listening skills because I watched Youtube clips and took notes at the same time.

**Knowledge and Skills**

I developed skills in using the library by working out how to use the catalogue system and then locate the book on the shelf. I also developed excellent skim reading techniques by using reading the first line and last line of each paragraph to determine its relevance. I photocopied pages of books I needed to concentrate on in more depth. I highlighted the key words and then turned these into dot-point notes.

**Literature Review**

**Capability**

**Literacy Capability**  
I improved my comprehension skills by reading and analysing detailed texts. The language was very technical and formal.

**Effectiveness**

The school library had no books on fine motor skill development in children so I went to the State library every Saturday. I found three books, but because I couldn't borrow them, I had to read through them at the library and photocopy the pages I needed to analyse further. The books were an excellent source of detailed information on fine motor skill development in children.

**P1** Evidence of thorough consideration of and refinement of research question.  
**P2** Guiding questions indicate thorough planning of processes.

### Interview Analysis

Interviewee: Interviewee – a student currently studying Occupational Therapy at Adelaide University  
Time: Tuesday week 7

1. What are some signs and causes of fine motor delay?

**Signs:** immature pencil grasp, using two hands on the scissors, difficulty manipulating small objects (eg. Beads), doesn't want to engage in fine motor activities such as drawing.

**Causes:** delays in reaching developmental milestones – may be a slow learner or other conditions (eg. ADHD Autism spectrum disorder)

2. What are the risks of not developing fine motor skills?

- Difficulty during school and participating in classroom activities
- Low self-esteem, embarrassment
- Disengagement in fine motor activities, withdrawal
- Frustration/anger when completing fine motor activities

3. What is occupational therapy?

- Enabling 'doing'

OT's work with the person to get them engaged in occupations that are meaningful to them as a way of improving deficits or returning them to prior levels of functioning.

4. How can Occupational Therapy help improve fine motor skills?

OT's can use activities that promote pinching, flexing/ extending the fingers, basically anything to increase strength in the fingers and improve co-ordination. A simple task might be asking a child to pick up the blue m&m (a colourful button-shaped chocolate candies) from a bowl of coloured m&ms.

**P2** Clarity of purpose of the use of research process used.

#### Key Findings, Validity and Reliability

The purpose of the interview was to obtain in-depth, primary source information from an Occupational Therapist about fine motor skills. The key findings were highlighted and I plan to use this information in my Outcome – probably in a page on background information and ideas for other activities. The answers gave me some new information I did not already have and some reinforced information I had previously discovered through other sources. Although her answers were her opinions, her ideas are quite reliable as she is currently studying Occupational Therapy so are based on her own academic findings.

**D2** In-depth analysis of information based on findings, validity and reliability.

#### Effectiveness

The major challenge that I faced when I was preparing the interview was actually organising the time to contact and then conduct a face-to-face interview with an occupational therapist who works with children. A former student who completed the research project last year suggested I contact a university student as they are valid sources of information and fairly easy to contact. I was able to phone Interviewee who was happy to complete the answers to my questions via email. I found this method really handy because I was worried about the logistical constraints of organising a face-to-face interview. The other advantage was that I didn't have to worry about recording the interview and transcribing the answers to paper. This was also a relief considering I sometimes make mistakes in English because English is not my first language.

**D3** Assessment of effectiveness of process used and of knowledge and skills developed.

These interview questions answered my research guiding questions

#### Final Research Question:

What are the most effective techniques to improve fine motor skills in children between the ages of three to five?

#### Guiding Questions:

1. What are fine motor skills?
2. What causes fine motor delays?
3. What are the risks of not developing fine motor skills?
4. How can Occupational Therapy techniques help improve fine motor skills?
5. What is Occupational Therapy?
6. What are some activities children can do to improve their fine motor skills?

5. What are some activities children can do to improve their fine motor skills?

- doing up buttons
- sorting coloured beads, coins
- anything involving tweezers
- play dough- rolling it into balls to increase muscle strength

6. What are some common signs that might indicate that a child may benefit from an Occupational Therapy evaluation?

Often children are compared to others to see where they are developing mentally. If some kids seem a bit 'behind' than it might indicate OT would be beneficial. (eg. Are they holding the pencil as they should be, can they write their name, do they actively participate in fine motor tasks or not?)

#### Capability Development

Though the interview process, I developed my Literacy capability by using my language skills to design appropriate question and then analysing the answers. I used simple language and deliberately kept the questions short and to the point. I also had to think about sequencing the questions in logical order.

**D4** Reflection on how the research process has helped to develop the capability.

#### Knowledge and Skills Developed

Through this process, I gained some organisational skills and learnt about interview question design. First, I searched Occupational Therapy businesses in Adelaide and sent emails to them. When I did not receive any replies I phoned Interviewee and asked if she would be okay with answering my questions. I then designed the questions by basing them on the seven guiding questions that are extended from my topic questions. Her responses allowed me to think more deeply about the different reasons of why fine motor skills can be delayed in some children. It allowed me to improve my high order thinking skills about how I am going to design activities for my action research. It made me think about what I might have to do to help a particular child who might have a particular reason for fine motor skill delay, for example they might not just be slow learners, they might have an underlying issue like ADHD or Autism.

## Feedback Analysis

**Feedback Form**

Fine motor skills are the collective skills and activities that involve using the hands and fingers. It is important to present fine motor activities in motivating and engaging ways suitable for the child's developmental level, to ensure a willingness to participate and to increase the likelihood of success. Fine motor skills can be developed by participate in different fine motor activities such as manipulating play dough, drawing and painting and playing with pegs etc.

1. How would you rate your child's fine motor skills?
2. How often does your child participate in these types of activities at home?
 

Often                      Sometimes                      Never
3. How long does your child usually spend time on o
 

- Less than 5 minutes
  - 0-5minutes
  - 5-10 minutes
  - More than 10 minutes
4. Is your child usually able to complete these activit reasonable time?
 

Yes                      Sometimes                      No
5. Which of the activities completed during the trial do you believe were the most effective? (Please rank in number order – 1 being most effective, 5 least effective.)
 

- Stamp and Cut
  - Shoe Lace Plate
  - Glue, Crab, Cat or Flower
  - Line Tracing
  - Rainbow Coloured Beaded Necklaces

**Brief information about fine motor skills:**

- Definition
- Activities that help to improve fine motor skills
- The importance of developing fine motor skills

I prepared this question to determine how well the parents thought their child's fine motor skills were developing.

These questions were designed to find out how often parents participate in activities with their children and also to know what amount of time they spend on these types of activities.

These questions clearly show the development of child's fine motor skills. If a child took longer time to complete one activity it means that the child is having difficulties with the fine motor skills.

This rank style question was designed to directly answer my research question – that is, what activity is the most effective for improving fine motor skills.

D1, D2, D3 This page is a good example of the link between research design and the in-depth analysis, and their effect on the development of knowledge and skills.

### Effectiveness

I think I designed the questions well but the feedback form didn't really work. I don't think the parents were able to judge how well their child's fine motor skills had improved after one session. Also, because the parents were not there, they were unable to see and therefore determine which activity was the most effective. I found it difficult to generate any useful data because of the variation in the responses. However, some of the responses reaffirmed for me that my idea for an informative, instructional style website for the Research Outcome is a good idea – that basically parents could find it useful. The feedback form also generated useful discussions with the childcare centre workers and parents and I found this informal feedback

### Knowledge and Skills Developed

The design of the feedback form helped me to develop the knowledge and skills associated with formulating a successful survey. I asked a variety of different style questions, for example; scale, rank and forced choice. These allowed me to gain the exact information I wanted, without any obscure answers like 'not sure'. I was able to generate some raw data and I also learnt that I should have asked at least one open-ended response for some qualitative data, for example, parent opinions.

### Key Findings, Validity and Reliability

The purpose of the feedback form was to generate some data and to summarise the effectiveness of the action research. The actual results themselves were too inconsistent draw any reliable numerical data, for example every parent had a different ranking for Question 5 and they all thought that each activity was fun and interesting. So although the feedback could not really be considered reliable information about which activity is actually the most 'effective' for developing fine motor skills, it still revealed what parents *thought* were effective and fun. I can use this information in my Research Outcome which is going to be a website designed to assist parents to do the activities at home with their children. The forms also did provide useful background information about how often children participate in these types of activities at home and also about how their parent's felt their child's fine motor skills were developing.

### Capability

I developed the Literacy capability by designing effective questions and then interpreting the results.

## Additional Comments

### A+

**P1** Thorough and highly resourceful development of the research question is indicated. The process undertaken is outlined. Comment is made on the validity of the question in terms of it being researchable and manageable, its focus and by specifying the age group.

**P2** Processes are described in detail on page 22. Included also is a chart linking different sub-questions to sources and how the process is linked to capabilities. Evidence of the planning process is also referred to in some of the analysis of sources.

**D1** A range of research processes appropriate to the research question are included. Development of the research can be seen throughout the 10 pages. Evidence is easily identified.

**D2** Each research process is analysed in-depth. The same structure of analysis is used for each process and includes validity, reliability, and key findings. This ensured the information and ideas to develop the research were explored fully.

**D3** The development of knowledge and skills is clearly identified. Headings such as "Effectiveness" and "Knowledge and Skills Developed" are used to highlight in-depth and thoughtful discussion. Links are made between **D1, D2 and D3**, highlighting effective development in the understanding of research skills.

**D4** Thorough and informed discussion of the development of the capabilities is evident. The link between the planned research tasks and the literacy skills is clearly identified. Progress towards the development is commented on in the sources analysis.

# Performance Standards for Stage 2 Research Project B

	<i>Planning</i>	<i>Development</i>	<i>Synthesis</i>	<i>Evaluation</i>
	Assessment Type 1: Folio		Assessment Type 2: Research Outcome	
			Assessment Type 3: Evaluation	
<b>A</b>	<p><b>P1</b> Thorough consideration and refinement of a research question.</p> <p><b>P2</b> Thorough planning of research processes that are highly appropriate to the research question.</p>	<p><b>D1</b> Thorough and highly resourceful development of the research.</p> <p><b>D2</b> In-depth analysis of information and exploration of ideas to develop the research.</p> <p><b>D3</b> Highly effective development of knowledge and skills specific to the research question.</p> <p><b>D4</b> Thorough and informed understanding and development of one or more capabilities.</p>	<p><b>S1</b> Insightful synthesis of knowledge, skills, and ideas to produce a resolution to the research question.</p> <p><b>S2</b> Insightful and thorough substantiation of key findings relevant to the research outcome.</p> <p><b>S3</b> Clear and coherent expression of ideas.</p>	<p><b>E1</b> Insightful evaluation of the research processes used, specific to the research question.</p> <p><b>E2</b> Critical evaluation of decisions made in response to challenges and/or opportunities specific to the research processes used.</p> <p><b>E3</b> Insightful evaluation of the quality of the research outcome</p>
<b>B</b>	<p><b>P1</b> Consideration and some refinement of a research question.</p> <p><b>P2</b> Considered planning of research processes that are appropriate to the research question.</p>	<p><b>D1</b> Considered and mostly resourceful development of the research.</p> <p><b>D2</b> Some complexity in analysis of information and exploration of ideas to develop the research.</p> <p><b>D3</b> Effective development of knowledge and skills specific to the research question.</p> <p><b>D4</b> Informed understanding and development of one or more capabilities.</p>	<p><b>S1</b> Considered synthesis of knowledge, skills, and ideas to produce a resolution to the research question.</p> <p><b>S2</b> Substantiation of most key findings relevant to the research outcome.</p> <p><b>S3</b> Mostly clear and coherent expression of ideas.</p>	<p><b>E1</b> Considered evaluation of the research processes used, specific to the research question.</p> <p><b>E2</b> Some complexity in evaluation of decisions made in response to challenges and/or opportunities specific to the research processes used.</p> <p><b>E3</b> Considered evaluation of the quality of the research outcome</p>
<b>C</b>	<p><b>P1</b> Some consideration of a research question, but little evidence of refinement.</p> <p><b>P2</b> Satisfactory planning of research processes that are appropriate to the research question.</p>	<p><b>D1</b> Satisfactory development of the research.</p> <p><b>D2</b> Satisfactory analysis of information and exploration of ideas to develop the research.</p> <p><b>D3</b> Satisfactory development of knowledge and skills specific to the research question.</p> <p><b>D4</b> Satisfactory understanding and development of one or more capabilities.</p>	<p><b>S1</b> Satisfactory synthesis of knowledge, skills, and ideas to produce a resolution to the research question.</p> <p><b>S2</b> Substantiation of some key findings relevant to the research outcome.</p> <p><b>S3</b> Generally clear expression of ideas.</p>	<p><b>E1</b> Recount with some evaluation of the research processes used.</p> <p><b>E2</b> Some evaluation, with mostly description of decisions made in response to challenges and/or opportunities specific to the research processes used.</p> <p><b>E3</b> Satisfactory evaluation of the quality of the research outcome</p>
<b>D</b>	<p><b>P1</b> Basic consideration and identification of a broad research question.</p> <p><b>P2</b> Partial planning of research processes that may be appropriate to the research question.</p>	<p><b>D1</b> Development of some aspects of the research.</p> <p><b>D2</b> Collection rather than analysis of information, with some superficial description of an idea to develop the research.</p> <p><b>D3</b> Superficial development of some knowledge and skills specific to the research question.</p> <p><b>D4</b> Basic understanding and development of one or more capabilities</p>	<p><b>S1</b> Basic use of information and ideas to produce a resolution to the research question.</p> <p><b>S2</b> Basic explanation of ideas related to the research outcome.</p> <p><b>S3</b> Basic expression of ideas.</p>	<p><b>E1</b> Superficial description of the research processes used.</p> <p><b>E2</b> Basic description of decisions made in response to challenges and/or opportunities specific to the research processes used.</p> <p><b>E3</b> Superficial evaluation of the quality of the research outcome</p>
<b>E</b>	<p><b>P1</b> Attempted consideration and identification of an area for research.</p> <p><b>P2</b> Attempted planning of an aspect of the research process.</p>	<p><b>D1</b> Attempted development of an aspect of the research.</p> <p><b>D2</b> Attempted collection of basic information, with some partial description of an idea.</p> <p><b>D3</b> Attempted development of one or more skills that may be related to the research question.</p> <p><b>D4</b> Attempted understanding and development of one or more capabilities.</p>	<p><b>S1</b> Attempted use of an idea to produce a resolution to the research question.</p> <p><b>S2</b> Limited explanation of an idea or an aspect of the research outcome.</p> <p><b>S3</b> Attempted expression of ideas.</p>	<p><b>E1</b> Attempted description of the research process used.</p> <p><b>E2</b> Attempted description of decisions made in response to a challenge and/or opportunity specific to the research processes used.</p> <p><b>E3</b> Attempted evaluation of the quality of the research outcome</p>