

Essay - Medical Art for Children

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Subject; SAHT 2674 - A History of Drawing

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Class; 1 - 3 pm Friday

Tutor; Vaughan Rees

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Value of Assessment; 50%

Assignment Description; Essay (2500) words) or equivalent - written and illustrated. An equivalent form must be negotiated with the lecturer before Week 10. This essay or equivalent, will explore a specific area of interest to you and should state: The reasons for your choice; expert opinions and your informed opinion; visual examples of drawing practice; a critique of the style, media, representation; features that are particular to the field; relationship to the history of drawing; a bibliography.

Abstract

The process of investigation into the career field of medical illustration, with particular focus on children's health education, is presented (in the format of a scientific paper). It is hypothesised that children require different modes of communication to adults to ensure optimal transference of health promoting messages. Motivations for this current investigation include personal and physiotherapy career experiences, and intersection of interests in the disciplines of medicine, art and child education. The method includes approaches to relevant individuals and organisations, investigation of related information sources, and observation of current practices. Resulting data and opinions are analysed to draw final conclusions on the implications for future training and employment in the field of children's health illustration.

Hypothesis

It is hypothesised that children require different modes of communication to adults to ensure optimal transference of health promoting messages.

Introduction

The conception of this essay can find its source in my desire to combine three quite disparate areas of personal interest into a single speciality that may provide a direction for my own learning and career. These areas can be simply labelled as 'Medicine', 'Art' and 'Children'. I will now provide an explanation of how these interests developed and the implications of their combination for this essay, and for my future investigations and activities.

Some of my earliest remembered efforts in art were centred around the tracing and reproduction of pictures from the covers of books I had read for my book review projects in primary school; "My Friend Flicka" and the like. I excelled in art at school, but also in the sciences, and ultimately followed the more pragmatic path of a career in physiotherapy. It had always been my plan, though, that once I had established a career and made my fortunes in physiotherapy, that I would be able to support myself through art studies. As a result of ill-health the plan was compromised (and finances remained scarce) but the dream remained. Thus I found myself at College of Fine Arts, searching for a purpose for my art interest that may also stream easily from my previous experiences. I didn't want to waste previous knowledge, or spend limited resources of time and money on training into a completely new career. Although it would have been delightful to achieve, it seemed unlikely that relying on pure art would provide me with financial security, at least not in the short term, given the considerable competition in the field. Now, as I approach my 40's there is no time to waste, and my health continues to be problematic, and so remains a consideration regarding what I can expect to achieve and how quickly.

Therefore, as I progress through my fine art studies, it seems most appropriate to combine my skills and knowledge of the medical field with art in some fashion. Art therapy came to mind as a possibility, but preliminary investigations have revealed that full employment in this area would probably require further training which I cannot afford, temporally or financially. Also I want to start to remove myself from having to directly provide therapy to others, as I am becoming exhausted by its (often intense) emotional demands. But my history of ill-health (and so my identification with the role of 'patient'), and also my inherent desire to help others (which was the reason why I directed my high-school science interests into a career in physiotherapy in the first place), still need an outlet, in some milder, more indirect form. Art therapy also meant that I would be spending more time watching others 'doing' the art than having

the opportunity to employ my own hand skills, which at least in the past, had been very meticulous and accurate. This watching of others' creative attempts would only be frustrating in the envy that it would undoubtedly elicit, and the feeling of waste of my own hibernating abilities.

Therefore, using my art skills alongside my therapeutic skills has seemed important to me, and drawing anatomical subjects for health purposes seemed to be a rational solution, in other words, art for medical and physiotherapy instruction. But questions still remained regarding exactly how to do this, and whether it was the most appropriate choice, as I imagined it to be. This year, after two years of leave from the course, I chose to resume with primarily theoretical subjects to help re-establish a theoretical base for my practice. "A History of Drawing" was one of them, and when the opportunity to explore a personal field of interest was offered, it was easy to take a step towards medical illustration as the topic of my investigation. When further specialisation of the area was required in the assessment specifications, then children came to mind. I have been gradually moving towards specialisation in Paediatrics with my physiotherapy career. I was motivated to find a way of improving child health as a way of redressing my own illness experiences, and also to find a solution to some of the limitations I was discovering in physiotherapy. Often pictures of exercises are presented to carers and teachers to then instruct the children. I wanted to know if there was any way of communicating directly with children to enable them to learn to be aware of and have control over their bodies, and efficiently maintain their bodies, as tools for a fruitful life. I wanted this to be available to all children, whether they were well, ill or disabled. The future of our society is important to me. Training the next generation to intimately understand the limits, potentials and optimal use of their most vital resource - their own bodies - to achieve their dreams and serve society most completely is, I believe, a crucial concern.

Why not, then, investigate the role of medical illustration for children? This inspired further questions. Is there anything different between medical illustration for children and adults? Are there developmental changes in visual processing and body awareness which would alter the communication methods required to improve an individual's health, depending on their age? Is the visual form the best way of communicating healthful messages to children? Should medical illustrators then attempt to alter their techniques, or their considerations of presentation, to meet the requirements of children, and how would they do this? Have these

things been investigated before, or is it a new field in which I could develop expertise?

Method

To answer these questions I began by making contact with organisations I already had links with. Since I had become a member of Illustrators Australia (IA) a few years ago (to learn more about the field of illustration) I asked members if they knew of any medical illustrators, and especially any that worked to educate children (see email correspondence appendix). Colleagues in IA informed me of two medical illustrators, Ian Faulkner and Dr Levent Efes, who I subsequently made contact with and interviewed. I also approached Cumberland College of Health Sciences (CCHS). This was the campus where I had studied physiotherapy, in the days before it became part of University of Sydney. I explored the graphic (Dante Amores), biomedical (Ian Cathers) and health promotion departments for answers.

I also made contact with departments in the hospital where I am currently employed. I visited and interviewed Kay Scovell and Jill Menier, teachers at the Hospital School at Sydney Children's Hospital, and Marcus Cremonese, medical illustrator in the Medical Illustration Department of Prince of Wales Hospital, which is on the same campus at Randwick.

I had done preliminary investigations of illustration training many years ago when first exploring the idea of tertiary arts studies. University of Technology of Sydney (UTS) and Newcastle University offer some Visual Communication opportunities but generally in Australia I have found it difficult to find any clear training path towards illustration. In my internet browsing I fortuitously came across The Centre for Research and Education in the Arts (CREA) based at UTS. By contacting key academics there, who specialised in child education - Rosemary Johnston and Dr Anne Bamford - I was able to gain further guidance on relevant journals, children's books, texts and professional organisations, and further advice about my research direction.

Investigations on the internet and in library databases revealed further sources and contacts, regarding the history of medical illustration and current day practises and training. However very little information overtly intersected with the field of Paediatrics. The people I had spoken

to were able to suggest topics to initially explore which might provide entry points that would reveal answers my questions. So I entered a variety of subject key terms and hoped that I would be able to draw conclusions by comparing their findings. Search terms were as diverse as medicine, scientific illustration, visual perception, body awareness, self perception, body art, physical education, health promotion policy, information visualisation, information processing, psychology, child and adolescent development etc.

Many more opportunities for investigation were not fulfilled in time to present for this assignment, but the preliminary contact details have been established to enable future enquiry. For example, searches of the library catalogue of UTS's Kuring-gai campus (which specialises in education) revealed many relevant texts and children's books about children's illustration and visual skill. However this was geographically difficult for me to access. Similarly health promotion information at CCHS library would be valuable in informing this assignment, but I was also unable to attend this campus during this semester. I would have liked to have visited Ian Faulkner's studio, to observe the carbon dust technique he employs, but he too was on the other side of Sydney from where I lived. I am told that Westmead hospital has a strong Medical Illustration Unit, which may have offered expanded networks and information, but this will also have to wait for later. I have been fortunate to at least be able to use this assignment as a vehicle for launching my journey into the land of medical illustration for children, and hope that time will enable my questions to be more completely answered. In the meantime, I now intend to discuss the findings of my research into medical illustration for child health education.

Results and Discussion

Interviews

(see appendix)

Most of the interviewees concurred that an understanding of children was important to effectively communicate with them. However, the advice about how to achieve this understanding was variable or vague. Simple interaction with children was seen by some as an adequate learning arena ground by which understanding would be achieved by osmosis. But even some of those interviewees who where trained as child teachers in the past had reportedly not been instructed on visual information development and its implications for learning. Considering the reliance of

child learning on the information they receive from their eyes, I find this hard to believe, and would like to find out whether more recent education training incorporates this crucial topic. Anne Bamford offered some enlightenment in her discussion of the progress of children's visual information processing from literal to symbolic meanings at about the age of ten. Rosemary Johnston emphasised the need for illustrations to be simple to ensure clarity in communication. She also commented that children often require diversion when ill, and prefer to read books that will take their minds off their illness. They also regress in their reading tastes. Although this does not constitute direct health care through visual images, it does have impact on children's mental health outcomes indirectly.

Other considerations offered by the interviewees encompassed the training and career prospects in medical illustration, with comparisons with children's book illustration. It seems that children's book illustration potentially promises greater financial rewards and recognition. However a crossing of the two areas into medical illustration for children drew comments like "that would be an interesting area to go into". It seems that no one has specialised in this area yet.

Literature Review

"I would ask you to remember this one thing," said Badger. "The stories people tell have a way of taking care of them. If stories come to you, care for them. And learn to give them away where they are needed. Sometimes a person needs a story more than food to stay alive. That is why we put these stories in each other's memory. This is how people care for themselves. "

Lopez, Barry, Crow and Weasel, Illustrated by Tom Pohrt. Farrar, Straus and Giroux, 1990, 63 pages. Quoted in Kilpatrick, William, Wolfe, Gregory and Wolfe, Suzanne M. Books that build character: A guide to teaching your child moral values through stories. Touchstone, New York, 1994.

We may draw a conclusion, then, that communication of messages laden with thoughts, ideas, opinions, entertainment, and meanings is an important activity for both giver and receiver, and can even be even crucial for the health and life of both. How does vision enable this process to occur?

Much of the literature I perused forwarded theories on the development of motor skills, sociability, perception, drawing skill, language, etc., but little about visual processing of information specifically. By its omissions,

the available literature was effective in highlighting particular areas that required further clarification.

Books about children's development may have included sections on the analysis of individual children's scribbles, and the progress in their exploration of line, form and representation with age (Alschuler and Hattwick, 1969, 110-111), but overall trends and implications were rarely offered.

Even recent scientific investigation is only beginning to understand the way that the human brain processes visual stimuli meaningfully. Downing et al (2001) explored the cortical regions that related to the processing of specific images, such as the recognition of faces and bodies. They stated "Visual perception and cognition appear to be served by distinct mechanisms for at least a select few categories, including faces, places, and bodies", but we are long way from understanding this in children.

Smith (1989, p76-77), in her book about each of the senses, noted that "Vision is not a single process. It is keeping scientists busy in many laboratories, exploring many different aspects of how we see what we see. A unifying theory of vision is not in the offing, but understanding aspects of visual processing holds promise for a variety of applications, especially in computer science and artificial intelligence."

However, it is not just the ability of a child to see an object, but also the perception of that object and the meanings that it offers that is of most interest to this discussion. For example, a child's ability to make choices about good or bad, and to perceive that something will be beneficial to themselves, needs to have developed adequately for them to be convinced that they would prefer to be healthy. Development of causality and self-responsibility also need to be considered. Therefore illustration for children cannot be assumed to be effective because it seems to be persuasive to an adult. There are likely to be many points of progress in a child's development that influence the extent to which an image will not only appeal, but also persuade.

In addition, the creativity and the production of art cannot necessarily reveal the necessary answers about the reception of images. Therefore investigations into art education and art therapy have not been fruitful either. For example, the fact that children draw simplistically does not necessarily mean that the same images will be efficiently read by

children. By way of comparison, I remember an anecdote about a toddler who would mispronounce a certain word, but when that word was repeated back to him with the same mispronunciation he barely recognised it, ultimately rejected it and attempted to correct the adult, while still mispronouncing it himself. The child was unable to perceive his own limitations, and could not understand the communication when it was similarly limited. It could be extrapolated that similar effects may arise with visual information for children. A child's drawing may have an individual meaning for themselves, but it cannot be assumed that other children's drawings of a sick person used to illustrate a hospital brochure, for example, will be able to be understood for that meaning. They may recognise that another child had created it, but that may be all. If it is only presented as a decoration that a child may feel comfortable with then this may be adequate. But it may be confusing if used for instruction. Additionally if the children's drawings in the brochure indicate a younger age group than that of the reader, there may be a dismissal of the material as irrelevant to themselves. For example, there is little point using illustrations by five year olds for a brochure aimed at adolescents. It would most likely be seen as childish, inferior and insulting, and therefore rejected. Thus there are many reasons why neither children's drawings, nor illustrations that imitate them, might not be appropriate for communication to children.

In summary though, the dearth of information on visual communication requires further investigation. It may be that the correct avenues of literature were not explored. More recent journal articles may be helpful, but exactly which journals these may be were not able to be comprehensively established at this stage. Contact with organisations such as the International Visual Literacy Association and the various professional illustrator's organisations (see appendix) may enable further research.

Observation

Even though investigation into the theories of visual information processing seems to have failed us, items are still produced in an attempt to persuade children about their health. Various presentation formats include books, which may be instructional (physical education texts), interactive (colouring books, pop-up books), or persuasive (story books). Story books are particularly interesting in their imaginative and indirect methods of using example and mentoring to lay down a cognitive and behavioural path for the child to follow if they choose. For example,

stories of dinosaurs visiting the doctor, or flights of fancy when learning about sleep habits (see appendix, Society of Illustrators, 1993). Physical education texts can be highly pictorial (Killick-Jones et al, Pathways, 1994, see appendix), or disappointingly heavily text based (McCoy and Wibbeeman, The Teenage Body Book, 1989).

Most theories of learning acknowledge that practise of skills is integral to the maintenance and progress of the skill. Therefore, posters may be placed in gyms to encourage a feeling of enjoyment while participating in physical activity. Activity books, and sheets for teachers to photocopy for their students as part of a class program, provide opportunities for practise of ideas, hopefully stimulating internalisation of correct skill and behaviour, and motivation to then practise the activity. For example Sydney Children's Hospital offers a "Hospital Explorer Program" (Brydon, 2003, see appendix) in which school excursions to the hospital provide an opportunity for children to learn about aspects of their health. This includes drawing posters that address issues such as smoking, and completing activity sheets about lifestyle, nutritional and exercise choices (eg Cahill, Helen. Enhancing Resilience 2: Stress and Coping, part of Mind Matters series, 2000, see appendix). Other arenas for transmission of visual information about body learning and awareness include museums and mobile education units (like the buses employed by Life Education Australia, to tour and teach children about drugs, see appendix).

The images themselves range in sophistication, medium and technique. Colour pencil drawing, watercolour, collage, etching, etc have all been used delightfully to communicate with children. Different historical periods have revealed trends in keeping with the current culture, and health messages relevant to the day. For example, today, simple cartoon-like outline drawings are common for basic instruction. Richer and more lavish images often appear in storybooks. Photographic and computer produced images are often used and one can only assume that children are becoming increasingly familiar and proficient in reading these images. Websites are becoming an increasing mode of presentation which needs discreet attention. It also requires caution, in that reliance on this method to teach children may actually promote the sedentary habits and lack of exercise that is contributing to today's obesity epidemic.

Production restrictions, with regards to finances and time, are also a consideration. Hospital departments or charity organisations may not

have the resources to employ illustrators to enhance the message of their brochures. They need an item that will be quickly produced, easily amendable, and clearly reproducible by a photocopier. Photos are easy to take and insert by amateur DTP means, but their gray scales may be lost with progressive photocopies. Line drawings are time consuming to create for the non-artist, rarely aesthetically sophisticated and may lose accuracy with repeated tracings. And although therapists, for example, who are producing pictures of exercises for their patients, understand the physiological principles they wish to communicate, their understanding of how to best display this information visually is unlikely to be well informed and thus effective.

Given that the theory behind visual processing is incomplete, it would require considerably more investigation to analyse the reasons for the various choices that illustrators make in employing particular modes for specific purposes. Although it is crucial to the scope of this paper, answers are not forthcoming.

Conclusion

Medical illustration for children appears to be uncharted territory at this time. The hypothesis, that children require different modes of communication to adults to ensure optimal transference of health promoting messages, remains neither proven nor nullified. By revealing the lack of available material in this area, it seems that the personal communication, reading and observations completed so far can best be regarded as a preparation for future research. Thus considerable opportunities exist to develop a promising career of specialisation which would be simultaneously challenging, stimulating and rewarding.