



Arrowsmith PROGRAM[®]

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8 August 2017

Email: portfoliocommittee3@parliament.nsw.gov.au

Attention: The Hon. Lou Amato (Chair)

Portfolio Committee No. 3 – Education
Parliament House
Macquarie Street
SYDNEY NSW 2000

Dear Mr Amato

Inquiry into students with a disability or special needs in New South Wales schools

1 Background

- 1.1 By way of introduction, my name is Barbara Arrowsmith Young. I am the founder and director of the Arrowsmith program and Arrowsmith schools (**Arrowsmith**).
- 1.2 Arrowsmith is aimed at helping students strengthen weak cognitive capacities underlying a range of learning difficulties. Arrowsmith was formed over 35 years ago, and is currently offered at schools throughout North America, Australia, New Zealand, Europe and Asia. Further information about Arrowsmith is available on both my website, and the official Arrowsmith website:
 - (1) <http://www.barbaraarrowsmithyoung.com/>
 - (2) <http://arrowsmithschool.org/>
- 1.3 It has recently come to my attention that Arrowsmith has been discussed as part of Portfolio Committee No. 3's inquiry into students with a disability or special needs in New South Wales schools (**Committee**), of which you are the Chair. The references to Arrowsmith as part of the Committee's hearing process are concerning to me. I consider many of the references to be untrue, misguided and unsubstantiated.
- 1.4 I am therefore writing to you to request that the Committee not give undue weight to these references, and in particular, that any recommendations given by the Committee in its final report take into account the evidence presented in this letter.
- 1.5 It is very easy to criticise in this way without proper or accurate reflection on the criticism. Almost all intervention programs have advocates and naysayers. It is a real problem if an inquiry is held without seeking access to as much information as is available about the topic. I am very pleased to have this opportunity to provide some facts and evidence to support the Arrowsmith program.
- 1.6 I have set out below each of the references which I have identified as relating to Arrowsmith, and in response, I have provided further information and substantiating evidence where available.
- 1.7 If you require any further information, or the Committee would like to discuss this with me in more detail, please don't hesitate to get in contact.

2 First hearing of the Committee – Monday 27 March 2017

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2.1 On Monday 27 March 2017, the Committee's first hearing was held in Sydney. The statements listed below were made by various participants in that hearing. In response, I have set out further information and where available, I have provided substantiating evidence which is enclosed.

- (1) **The Hon. Daniel Mookhey stated "This is specifically to the Catholic system and specifically about autism-related programs that the commission either allows or the education office teaches in its schools. I have had multiple parents contact my office about particularly the work of this Arrowsmith Program by Barbara Arrowsmith, and this program being sponsored and rolled out in Catholic education schools" (transcript pages 65-66)**

Although Arrowsmith has had some success with high functioning students with Asperger Syndrome (which some professionals consider the same as, or similar to high functioning autism and others to a non-verbal learning difficulty), students with autism are not usually suited to the Arrowsmith program and this is expressly stated as part of Arrowsmith's promotional material. I refer the Committee to Arrowsmith's website at <http://arrowsmithschool.org/suitablestudents/>. The Arrowsmith website outlines characteristics of the average student suited to the Arrowsmith program and states expressly that the average student does not have an autism spectrum disorder. An extract from the Arrowsmith website is enclosed at Annexure A.

It is possible that Mr Mookhey was mistakenly referring to Autism Spectrum Australia (Aspect). Aspect was appointed by the Department of Social Services to deliver programs in Australia, including Helping Children with Autism which is an Australian Government initiative providing support for children aged 0 - 6 years with Autism, their families and carers. An extract from the Aspect website is enclosed at Annexure B.

- (2) **The Hon. Daniel Mookhey stated "There is also a view that this program is obtaining funding which is perhaps not commensurate with the results that it produces and I have been pointed to examinations by other jurisdictions, particularly in Canada and courts in Canada, that have inquired into this program and have deemed it not to be necessarily suitable for rollout at scale because it is not yet at that point. In addition, multiple people pointed me to academic research from Oxford University especially into the efficacy of this program and it suggests that it is not worthy of investment. Is this incorrect, and if it is incorrect what steps did the Catholic education office undertake before it signed off on this program being rolled out: What measures are in place to measure its effectiveness and what plans are there in the future for either its expansion or contraction?" (transcript page 66)**

It is unclear to me what examinations Mr Mookhey is referring to. As no specific references have been provided by Mr Mookhey, I am unable to provide commentary. I ask that the references by Mr Mookhey be given no weight by the Committee without full information being provided by Mr Mookhey as to what examinations took place in Canada, and what inquiries were conducted by the Canadian courts. If such further information is provided, I request an opportunity to comment.

In relation to the research from "Oxford University" which Mr Mookhey refers to, to my knowledge there is no research which has been or is being conducted at Oxford University investigating the efficacy of the Arrowsmith program. The only commentary connected with Oxford University which I am aware of is an online 'blog' written by a professor at Oxford University, Dorothy Bishop. This opinion blog does not constitute academic research (as suggested by Mr Mookhey) and accordingly, I request that it be given no weight by the Committee.

Finally, in response to Mr Mookhey's query as to what measures are in place to measure Arrowsmith's effectiveness, we refer the Committee to the Catholic Education Commission of NSW's memorandum dated 21 April 2017. This document is enclosed at Annexure C. The memorandum provides answers to various questions taken on notice from the hearing on 27 March 2017. Specifically at pages 18 to 21 of the memorandum, the document discusses

Arrowsmith and the steps taken by the Catholic Education Commission or dioceses to assess the effectiveness of Arrowsmith. The memorandum states that:

"the results of the evaluation indicated that the program [Arrowsmith] was having a beneficial effect on students: educationally, personally and socially. Specially, the evaluator noted that the Arrowsmith Program, had made a positive educational and social difference to the lives of student who had previously not experienced success in academic tasks and had difficulties in other aspects of their functioning"...

"In the pilot program evaluation, feedback from parents was positive, with reports of clear improvements in their children's basic day to day life skills and personal development. Growth in self confidence and sense of independence was also experienced by the students and observed by teachers, school counsellors and parents."

- (3) **Mr David Shoebridge stated "You gave them the advice and showed them evidence that it [Arrowsmith] does not work – it might be contraindicated – and they continue to provide it. What happens then?" (transcript page 66)**

It is unclear to me what evidence Mr Shoebridge is referring to. As no specific references have been provided by Mr Shoebridge, I am unable to provide commentary. I ask that the references by Mr Shoebridge be given no weight by the Committee without full information being provided by Mr Shoebridge. If such further information is provided, I request an opportunity to comment.

I note that there are currently six research studies underway relating to Arrowsmith. A summary of these research studies is enclosed at Annexure D and further information is set out at 4.1(1) below.

- (4) **The Hon. Daniel Mookhey stated "You would understand that parents who have children with complex needs could be attracted to the prospect of a program promising dramatic results and transformations over a very short timeframe. That would be an attractive proposition and therefore a worthy use of substantial funds. Do you recognise that those parents are very vulnerable in that scenario." (transcript page 67)**

The average length of time over which an individual participates in the Arrowsmith program is 3-4 years. I put it to the Committee that this should not be considered a "very short timeframe", as suggested by Mr Mookhey. Accordingly, I request that the Committee not be misguided by the inaccurate comment regarding the mechanisms of the program.

- (5) **The Hon. Daniel Mookhey stated "I have had parents contacting me saying that their children have undertaken this course and that the results were not what was promised. The moment they have suggested publicly that promises were not being delivered they were threatened with legal action. Was that considered in that dioceses as being a relevant factor in sponsoring the program? If it was not, do you think that type of behaviour is reflective of a program that is worthy of support? That is the tactic one associates with people aggressively selling a commercial product, not those whose dominant consideration is educational outcomes." (transcript page 67)**

As the founder and director of Arrowsmith, I confirm that neither I, nor Arrowsmith, have ever threatened a parent or student with legal action for criticising the Arrowsmith program.

It is unclear to me on what basis this statement has been made and Arrowsmith fully refutes that such threatening action has occurred. This unfounded assertion is damaging to Arrowsmith's reputation. I request that it be given no weight by the Committee, and removed from any documentation intended to support discussions or the drafting of the Committee's final report and recommendations.

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- (6) **The Hon. Daniel Mookhey and Ms Elizabeth Gadek (National Director, Aspect Education, Autism Spectrum Australia) took part in the following exchange (transcript page 75):**

Hon. Daniel Mookhey: *Is that program [Arrowsmith] used in your system?*

Ms Gadek: *No. I was aware of the program but I was not aware that it was for children with autism specifically.*

As noted at 2.1(1) above, students with autism are not usually suited to the Arrowsmith program and this is expressly stated as part of Arrowsmith's promotional material.

3 Submission by the NSW Department of Education in response to supplementary question

- 3.1 In connection with the hearing held on 27 March 2017, the NSW Department of Education provided a document setting out its response to a series of questions, including *"what advice has been provided by the NSW Department of Education to schools regarding the Arrowsmith Program?"*. In response, the Department of Education wrote:

- (1) ***"The Department of Education has provided advice about this program upon request from schools. In summary, this advice is that there is at present no conclusive evidence to support the use of the Arrowsmith Program. The department has not identified any peer-reviewed research of the Arrowsmith Program."***

As outlined above, Arrowsmith has one peer reviewed article in a scientific journal, and there are currently six research studies underway relating to Arrowsmith which will be submitted for publication in peer reviewed journals. A summary of these research studies is enclosed at Annexure D.

While the department may not have identified any peer-reviewed research of the Arrowsmith program, this does exist and I request that it be considered by the Committee in making its final recommendations and drafting its report.

4 Second hearing of the Committee – Monday 3 April 2017

- 4.1 On Monday 3 April 2017, the Committee's second hearing was held in Sydney. The statements listed below were made by various participants in that hearing. In response, I have set out further information and where available, I have provided substantiating evidence which is enclosed.

- (1) **Dr Mark Carter (Associate Professor, Department of Educational Studies, Macquarie University) stated *"Their program [Arrowsmith] has existed for 35 years and, to the best of my knowledge, there has not been a single peer-reviewed article in a scientific journal at this point. Certainly I think you could say with absolute confidence that it is not an evidence based program"* (transcript page 22)**

The Arrowsmith program has been actively committed to independent and evidence-based research for three decades. Arrowsmith acknowledges the debate in the field as to what constitutes evidence-based research, and considers that careful study design is essential to achieving meaningful results. A summary of Arrowsmith's approach to research and some of the current debate in the field regarding evidence-based research, prepared by the Arrowsmith program's Director of Research (Howard Eaton), is set out at Annexure E.

Arrowsmith has one peer reviewed article in a scientific journal, and there are currently six research studies underway relating to Arrowsmith which will be submitted for publication in peer reviewed journals. A summary of these research studies is enclosed at Annexure D. As indicated in the summary document, research is being undertaken at the University of British Columbia (Faculty of Medicine) as well as Southern Illinois University. It is intended that this research will be published in peer reviewed journals.

I wish to particularly draw your attention to a study completed by Dr Naznin Virji Babul, which has recently been published in a peer reviewed journal. This study relates to individuals with

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traumatic brain injury who are enrolled in the Arrowsmith program. The three month pilot study found evidence of changes in the brain-behaviour relationships following the Arrowsmith intervention. The researchers stated, "*Our results provide preliminary evidence that participating in an intensive cognitive intervention program was associated with neuroplastic changes in adults with chronic traumatic brain injury that occurred in parallel with improvements in cognition.*" Details about Dr Babul are available at <http://www.centreforbrainhealth.ca/virji-babul-naznin>, an extract from which is enclosed at Annexure F. The published study can be found at <http://www.heliyon.com/article/e00373?via=sd&cc=y%3D&> and is also set out at Annexure G.

I also wish to draw your attention to a research study by Dr Lara Boyd, which will be submitted to peer reviewed journals. The research relates to Arrowsmith using imaging, cognitive and academic measures. The study has two control groups – learning disabled students in the public school system and typically developing students without learning disabilities. Details about Dr Boyd are available at <http://brain.rehab.med.ubc.ca/people/lab-leadership/>, an extract from which is enclosed at Annexure H. Also enclosed at Annexure I is an extract from the publication, "*Arrowsmith Brain Imaging Study: Year One Update*" dated April 2016 which highlights the positive preliminary results from the study. Dr Boyd is also conducting imaging research, as well as cognitive and academic measures on 12 students enrolled at the summer school program at Eaton Arrowsmith School Vancouver in July-August 2017, with the intention of publishing the research. I enclose at Annexure J a letter from Dr Boyd and Dr Kimberly A Schonert-Reichl, setting out a summary of current research in relation to the Arrowsmith program.

In addition to the studies referred to in Dr Boyd's letter, there are two further studies currently underway with Dr Boyd's involvement. These are outlined at points 3 and 4 of the *Arrowsmith Program Research Update 2017* document included in Annexure D.

Finally, I wish to draw your attention to a research study by Dr Greg Rose, Director of the Center for Integrated Research in Cognitive and Neural Sciences, Southern Illinois University. Dr Rose is conducting imaging research and also using cognitive and academic measures on students in the Arrowsmith program and will be submitting papers for publication. Details about Dr Rose are available at http://mypage.siu.edu/gmrose/Rose_CV.pdf, which is enclosed at Annexure K. Dr Rose is also conducting imaging research on 22 students enrolled at the summer school program at Arrowsmith School Toronto in July-August 2017, with the intention of publishing the research. A letter from Dr Rose setting out a summary of his current research and commentary on preliminary results is also enclosed at Annexure K.

On the basis of the various research studies, those previously conducted and those currently underway, and results produced to date, I consider it misleading to suggest that the Arrowsmith program is not evidence-based and for any negative connotation to be interpreted by the Committee because of this comment. Arrowsmith has appeared as part of research in a peer reviewed article, and as outlined above, there are currently six studies underway in relation to the program.

- (2) **Ms Carol Barnes (Academic and advocate) stated "I was lecturing in public and a woman came up to me at the end of the lecture and said, "I have had to take my child out of the Arrowsmith program. My child is being very badly damaged. It is so expensive. I have put so much effort into it. We have tried so hard. Look at me, guess what I do for a living." She said, "I am an oncologist. Do you not think that if there is anyone in Australia who would have said, 'Show me the evidence, give me the articles from the peer-reviewed journals. Show me how it works', that that would be me? No, my school said, "Why don't you enrol him in this. It is going to rewire his brain" – that is what we used to call learning – "so that he will learn to read and learn to do math and all those things. I could not get the \$7,000 out of my purse fast enough to say yes." (transcript page 24)**

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This is one example of a student for whom Arrowsmith was obviously not successful. Neither I, nor Arrowsmith have ever suggested that the program would be successful for all participants. It is only natural that a program like Arrowsmith will have both successful and less successful participants. It is not a cure-all program, nor is it marketed to be one. Any program, even programs that have peer reviewed studies published in journals will have people for whom the program did not work.

As stated above however, there are currently numerous studies, both those completed and those underway, relating to Arrowsmith which are showing positive results. I request that the Committee not be misled by Ms Barnes' recounted story without also considering such research and results.

(3) **The Hon. Daniel Mookhey and Ms Gadec take part in the following exchange (transcript page 25):**

Hon. Daniel Mookhey: *Your evidence is that they are selling snake oil*
Ms Barnes: *Yes. They are selling snake oil.*

As noted at 4.1(2) above, neither I, nor Arrowsmith have ever suggested that the program would be successful for all participants. It is however inaccurate and damaging to Arrowsmith's reputation to suggest that the program is "snake oil" and that I, or Arrowsmith, are trying to sell "snake oil".

I request that this exchange be given no weight by the Committee, and be removed from any documentation intended to support discussions or the drafting of the Committee's final report and recommendations.

5 Submission by Ms Carol Barnes (Academic and advocate) in response to supplementary question

5.1 In connection with the hearing held on Monday 3 April 2017, Ms Barnes provided a document setting out her response to the following supplementary question:

What are the barriers and concerns faced by the public and academics in raising issues with the efficacy or standards of education [in] programs such as Reading Recovery, Arrowsmith, Brain Gym, Cellfield, Cogmed, Fast ForWord, Colours Glasses & Overlays, Davis Dyslexia, Experience-Based Programs (e.g. DORE/DDAT), Lumosity and Tomatis Method for Auditory Retraining?

5.2 The statements listed below were made by Ms Barnes in her document, and although many of these were made in a general sense and not specifically in respect of Arrowsmith, I have set out my responses given Arrowsmith was specifically referenced in the supplementary question.

(1) Ms Barnes wrote: "I have never been contacted by a parent who feels that their child has been helped over the long term by any of the computer-based, exercise-based or music-based interventions listed in the Question." (supplementary Barnes document page 4).

I wish to ensure that the Committee is not misled into believing that the Arrowsmith program is unsuccessful, simply because Ms Barnes has not been personally contacted by a parent connected with the program. To make such an assumption would be baseless.

I can provide numerous testimonials from both students and parents for whom the Arrowsmith program has been successful. I can also provide numerous testimonials from professionals in the field who endorse the Arrowsmith program. A sample of such testimonials are enclosed at Annexure L.

(2) In her document, Ms Barnes has listed out a number of characteristics which she suggests are features of non-evidence based programs.

As noted above already, I consider it misleading to suggest that the Arrowsmith program is not evidence-based and for any negative connotation to be interpreted by the Committee because of such comments. Arrowsmith has appeared as part of research in a peer reviewed article, and as outlined above, there are currently six studies underway in relation to the program. Nonetheless, I also wish to respond to some of the characteristics which Ms Barnes has listed, as I do not consider these to be an accurate reflection of Arrowsmith's operation. I also refer the Committee to Annexure E for more information as to Arrowsmith's commitment to independent research.

Ms Barnes comments that parents report that non-evidence-based programs and their owners or proponents...

- (a) ***"Rely on testimonials and anecdotes rather than controlled clinical trials whose results have been published in peer-reviewed journals. [For every glowing testimonial from a purportedly 'satisfied' customer, there could be 100 dissatisfied customers for whom the program didn't 'work'. Testimonials or anecdotes cannot be evaluated for accuracy and cannot be summarily generalised to others. Legitimate health professionals do not solicit testimonials from their patients. Further, there is no way of knowing what incentive has been held out to named authors of testimonials, eg, 'If you write here that my program is terrific, you'll get XXX free lessons for your child.']"*** (supplementary Barnes document page 4)

Arrowsmith does not rely on testimonials and anecdotes, although positive feedback does exist for the program from participants, parents and professionals. See examples at Annexure L. All testimonials provided are at the discretion of participants, parents and professionals. Neither I, nor Arrowsmith, have ever provided incentives for such testimonials to be provided.

As outlined in detail above at 4.1(1), there are a number of previous studies pointing to academic and cognitive benefits of the Arrowsmith program and there are currently a number of research studies underway with the intention of being published in peer reviewed journals. It is inaccurate to suggest that testimonials are the only basis of substantiation for the Arrowsmith program.

- (b) ***"Cite an unpublished in-house 'study' which purports to support the program but which included no control or comparison group, and which canvassed no other explanations for participants' reported improvement or success."*** (supplementary Barnes document page 5)

This statement is inaccurate in relation to the research studies completed or currently underway involving Arrowsmith.

For example, a study (which was not 'in-house') conducted by Dr William Lancee (Head of Research, Department of Psychiatry, Mount Sinai Hospital and Assistant Professor, Department of Psychiatry, University of Toronto) in the Toronto Catholic District School Board in 2003 involved 30 students in the Arrowsmith program and 10 comparison students. This study did canvas other explanations for students' improvement. See further information at <http://arrowsmithschool.org/wp-content/uploads/2016/12/report-on-tcdsb-2003.pdf>, an extract of which is set out at Annexure M.

As a further example, two studies conducted by the University of Calgary were presented at poster sessions at the Canadian Psychological Association Convention in June 2014 and American Psychological Association Convention in August 2014. These studies involved a peer review vetting process for acceptance at the Conventions. A letter from Dr James Hale (the researcher who conducted the two poster session studies) is annexed at Annexure N, together with further information from the websites <http://arrowsmithschool.org/wp-content/uploads/2016/12/effects->

[of-arrowsmith-program.pdf](#) and <http://arrowsmithschool.org/wp-content/uploads/2016/12/brainbased-intervention.pdf>.

Further details regarding research studies involving Arrowsmith are set out above at 4.1(1).

- (c) ***“Cite a study or book which has been authored by the very person who owns the business promoting the program. [Self-publication is easy in this age of technology, whereas in the past an author needed to convince at least one book publisher that their work was worth disseminating. And most so-called ‘self-help’ books are not peer reviewed – anyone can write a book.]”*** (supplementary Barnes document page 5)

I am the author of the book, *“The Woman Who Changed Her Brain”*. This publication was not self-published and was in fact published simultaneously by three publishers, Simon and Schuster, Harper Collins and Random House.

Although the comment by Ms Barnes may not be specifically in relation to my book, I wish to comment more generally that book publications are not ever peer reviewed. The University of Toronto states on its website that, “Peer review’ is the editorial process that scholarly articles go through before they are published in a journal. Since books go through a different editorial process before publication, they aren’t peer reviewed.” This comment can be found at <https://onereach.library.utoronto.ca/faq/are-books-peer-reviewed>, an extract from which is set out at Annexure O. It is therefore misleading to create a negative connotation on the basis that a book has not been peer reviewed.

- (d) ***“Claim to cure or fix a named disability or disorder, and allege that no other program will be capable of doing that.”*** (supplementary Barnes document page 5)

Arrowsmith does not use language such as “cure” or “fix”, and always focuses on the program’s capacity to strengthen learning capacities or address a range of specific learning difficulties.

Both I, and Arrowsmith, recognise that there are a multiplicity of programs that benefit students with learning difficulties, and as outlined above, Arrowsmith is open about the type of student which will most likely benefit from its program. Arrowsmith is realistic about its capabilities and limitations.

- (e) ***“Claim to result in improved academic achievement, even though there is no academic content in the program (eg, jumping exercises to improve reading, computer games to improve handwriting, tracing hieroglyphics to improve spelling), and no evidence that the specific skills being learned and rehearsed can ever be generalized to other academic skills.”*** (supplementary Barnes document page 6)

A study on Arrowsmith was conducted by Dr Linda Siegel in 2003 (which was later reanalysed in 2013 by two independent researchers, one at UBC and one at University of Toronto). This study found that students identified as having learning disabilities in the Arrowsmith program in the Vancouver School Board significantly improved in spelling and reading comprehension, when compared to students identified as having learning disabilities in the traditional learning assistance class. Students in the traditional learning assistance class were receiving instruction in spelling and reading, whereas the Arrowsmith program students were not receiving this instruction because they were spending 50% of their day doing cognitive exercises in the Arrowsmith program classroom. Further details are available at <http://www.drmbc.org/uploads/www.eatonarrowsmithschool...pdf>, an extract from which is set out at Annexure P.

Dr William Lancee's 2003 study in the Toronto Catholic District School Board with 30 students with learning disabilities enrolled in Arrowsmith program and 10 students with learning disabilities enrolled in traditional special education classes found significant improvements on academic measures, such as spelling, word recognition, arithmetic, word comprehension, passage comprehension and word attack for the Arrowsmith program students over the students receiving traditional special education academic programs. Further details are available at <http://arrowsmithschool.org/wp-content/uploads/2016/12/report-on-tcdsb-2003.pdf>, extracts from which are set out at Annexure M.

A study conducted in June 2014 by the University of Calgary also demonstrated significant improvements for students in the Arrowsmith program on academic measures of letter word identification, spelling, reading fluency, passage comprehension, word attack, writing fluency, calculation, quantitative concepts and understanding directions. Further details are available at <http://arrowsmithschool.org/wp-content/uploads/2016/12/effects-of-arrowsmith-program.pdf> and <http://arrowsmithschool.org/wp-content/uploads/2016/12/brainbased-intervention.pdf>, extracts from which are set out at Annexure N. Other studies have also demonstrated improvement on academic measures for students engaged in the Arrowsmith program. Further details are available at <http://arrowsmithschool.org/wp-content/uploads/2016/12/report-on-academic-skills-and-learning-outcomes.pdf> and <http://arrowsmithschool.org/wp-content/uploads/2016/12/Research-Summary.pdf>, extracts from which are set out at Annexure Q.

I also wish to draw your attention to Annexure R, which shows data collected and analysed by two schools in Australia regarding academic results (WOLD Test – a writing measure; ACER MATH Plus; ACER PAT R Reading Comprehension) for students in the Arrowsmith program compared to students not in Arrowsmith. Students participating in Arrowsmith showed more academic growth on academic measures than students not participating in Arrowsmith.

On the basis of these studies and available supporting information, I consider it inaccurate to assert that the Arrowsmith program does not improve academic achievement. There is a strong basis for such claims of academic achievement in connection with Arrowsmith.

- (3) **Ms Barnes comments that “with respect to those in-house programs which are offered by schools full time during the regular school date, parents have been told: ...**

... “But if you last the distance in the program, your child's brain will have been so effectively re-wired that, even though they will be three to four years behind in their schoolwork by the end, when they return to the regular classroom they will be able to use their re-wired brain to easily catch up all by themselves without you having to pay for extra tutoring” (supplementary Barnes document page 18)

Confusion may arise in that Arrowsmith, in order to differentiate its full time from its part time program, defines its full time program as requiring student involvement for four 40 minute periods or 160 minutes per day, so it is inaccurate to suggest full day attendance in the program is required. It is also inaccurate to suggest that the program is promoted as one where, afterwards, students will be able to “easily catch up all by themselves without you having to pay for extra tutoring”. The Arrowsmith website (under the question, ‘How many years do students spend in the Arrowsmith Program?’) clearly states:

“Upon completion of the program some students may require one to two years to gain experience using their newly strengthened cognitive capacities and some students may need tutoring initially to bring academic skills to grade level”.

See <http://arrowsmithschool.org/program-faqs/>, an extract from which is set out at Annexure S.

- (4) **Ms Barnes comments that “in the context of such full-time in-school programs in private schools, parents have been warned:**

You can't withdraw from the program because this school needs ten students to continue to run it, and if you withdraw your child, we won't have enough – and if the program has to close, then other parents in the program may remove their own child from our school altogether and find another school which runs the program, and then we'll lose all those parents' fees for our regular education program.

Further, some parents have reported that in the in-school context, a certain camaraderie develops among the parents of the ten or so children in the program, distinct from that among parents of children in the regular classroom. They sometimes describe this as feeling as if that are members of a special 'cult' – those enlightened individuals who 'believe in' the program. In this context, parents have been warned by their schools that, if they withdrew their child from the program, and especially if they are heard to begin criticising it in public or in the media, other parents whose children are still in the program “won't like you anymore.”

(supplementary Barnes document page 18-19)

Arrowsmith's full time program, as defined above being four 40 minute periods per day, is what I believe is being referenced by Ms Barnes as a full-time in-school program, however the warning statement above is completely inaccurate and damaging to Arrowsmith's reputation.

There are many schools which we can provide as examples where the number of students participating in the program is less than 10 students. Arrowsmith, in practice, only charges for the actual student number, and it is therefore not correct to suggest that withdrawing a student would result in the program closing for all students. Although the Arrowsmith program agreement indicates that there is a minimum enrolment number of 10 students to one teacher, as emphasised by the numerous schools with less than 10 students, having less students does not result in the entire program closing.

It is also inaccurate to suggest that Arrowsmith is, or has any relation to a 'cult'. Parents involved in the program who have children with learning difficulties may rely on each other and feel camaraderie because they are facing the same or similar challenges, however this is nothing more than a support group. To suggest that the program creates cults is inaccurate and damaging to Arrowsmith's reputation, and should be disregarded by the Committee.

- (5) **Ms Barnes comments that that two barriers and concerns discouraging public criticism of non-evidence-based programs include “threats stemming from confidentiality agreements” in respect of parents, and flow-on effects for teachers from confidentiality agreements being signed by schools (supplementary Barnes document pages 16, 23 and 32)**

Ms Barnes also comments that “Schools are reluctant to reveal the contents of such agreements but it is reasonable to assume that they would also contain a clause forbidding the criticising of the program in public.” I do not agree that such an assumption is reasonable.

Any confidentiality or non-disclosure agreement associated with the Arrowsmith program is aimed at protecting the intellectual property of Arrowsmith. Arrowsmith does not ask or require that students, parents or schools sign documentation which prevents signatories from ever speaking out publicly against the program or about the parent's, child's or school's experiences with the program.

To suggest that such documentation exists which prevents participants from commenting negatively about the program is inaccurate and damaging to Arrowsmith's reputation, and should be disregarded by the Committee.

(6) **Ms Barnes comments in relation to Arrowsmith specifically:**

“Academics and researchers who have openly called such programs into question in the print media or in television or radio interviews or documentaries have found themselves receiving lawyers’ letters in the same way as parents.

For example, portions of a television documentary about the Arrowsmith Program some years ago reportedly had to be spliced out following the first broadcast because the Arrowsmith business lawyers objected to the inclusion of criticisms which were being levelled against the program by a very highly-credentialed academic, and the Arrowsmith business threatened to commence legal action against both the academic and the broadcaster for defamation if the program were to be further aired uncut.”
(supplementary Barnes document page 26)

This statement is inaccurate and damaging to Arrowsmith’s reputation.

I expect that the television documentary to which Ms Barnes is referring is one entitled, *“Fixing My Brain”* which aired on 18 November 2008 on CBC. As noted above, Arrowsmith does not purport that it “fixes” any learning disabilities and this title was objected to by Arrowsmith prior to the documentary airing. Arrowsmith did not however have any say as the documentary was produced by two independent film makers.

Linda Siegel (professor Educational and Counselling Psychology and Special Education, University of British Columbia (now retired)) was interviewed for the documentary and made many critical comments about the Arrowsmith program. One such comment was removed from the documentary prior to airing at the request of Arrowsmith, as it was defamatory. No other negative references were removed, despite them being critical of the program.

It is therefore inaccurate to suggest that Arrowsmith “objected to the inclusion of criticisms”. Arrowsmith objected to one specific statement which was defamatory.

(7) **Ms Barnes has provided a series of references as part of an Appendix to her document.**

The Appendix includes a number of opinions regarding the Arrowsmith program and does not appear to include any research-based or substantiated evidence. In particular, the appendix includes:

- (a) **Extract from the Sydney Morning Herald’s Good Weekend magazine dated 22 April 2017 stating: “Indeed, what large-scale, randomised, control group studies do show is that brain training programs like Arrowsmith achieve very little.”**

I am familiar with the studies which this article is referencing as “brain training programs”, and these are not at all similar to the Arrowsmith program. The article extract is accordingly misleading and I request that the Committee disregard it.

- (b) **Extract from a book by Caroline Bowen (UK) and Pamela Snow (Aus) “*Making Sense of Interventions for Children with Developmental Disorders*” 2017. Guildford: J+R Press Ltd. (Ch 9) which states: “Instead of peer-reviewed literature, the Arrowsmith Program is heavily reliant on small-scale studies (eg, 31 sample sizes of 5, 7, 15), in-house reports, and testimonials from satisfied clients.”**

My comments in relation to the assertion of in-house reports and testimonials are set out above at 5.2(2)(b).

In relation to the sample size of studies involving Arrowsmith, I confirm that previous and current studies have student numbers of 27, 40, 55, 79 and 120. To suggest

that sample sizes are 5, 7 or 15 only is inaccurate and should be disregarded by the Committee.

- (c) **Technical report from the University of Auckland 2015 which states: “However, it is not the case that (present) neuroscience research actually supports the use of Arrowsmith’s particular exercises to remediate learning disabilities.”**

It is not clear to me on what basis this statement is being made. I am not aware of any present neuroscience research which supports this statement. If such further information is provided, I request an opportunity to comment.

As outlined above, there are current research studies being undertaken in relation to the Arrowsmith program, and these are demonstrating that Arrowsmith has a positive impact on students with learning disabilities.

6 Sixth hearing of the Committee - Friday 23 June 2017

- 6.1 On Friday 23 June 2017 the Committee’s sixth hearing was held in Sydney. The statements listed below were made by various participants in that hearing. In response, I have set out further information and where available, I have provided substantiating evidence which is enclosed.

- (1) **The Hon. Daniel Mookhey and Mr David Shoebridge take part in the following exchange (transcript page 8):**

Hon. Daniel Mookhey: A quick summary of the Arrowsmith Program is that you can rewire a person’s brain.

...

Mr David Shoebridge: In seven quick days.

This statement is inaccurate. There is no literature or commentary from Arrowsmith which suggests that the program is successful in “rewiring a person’s brain” in seven days. Arrowsmith consistently states that the program is a 3 to 4 year program. Further information is available at <http://arrowsmithschool.org/program-faqs/> (under the question, ‘How many years do students spend in the Arrowsmith Program?’), an extract from which is set out at Annexure S.

- (2) **The Hon. Daniel Mookhey and Ms Rhonda Filmer (Vice-Chair, Specific Learning Difficulties Association of NSW) take part in the following exchange (transcript page 9):**

The Hon. Daniel Mookhey: Have you had parents who have told you that they have been threatened with legal action if they were to go public with their concerns?

Ms Filmer: It will be addressed in the supplementary question from my colleague who has gone into it even further. Yes, they are not allowed to speak about it. There is a confidentiality clause and they are not allowed to go public.

As outlined above at 5.2(5), any confidentiality or non-disclosure agreement associated with the Arrowsmith program is aimed at protecting the intellectual property of Arrowsmith. Arrowsmith does not ask or require that students, parents or schools sign documentation which prevents signatories from ever speaking out publicly against the program or about the parent’s, child’s or school’s experiences with the program.

To suggest that such documentation exists is inaccurate and damaging to Arrowsmith’s reputation, and should be disregarded by the Committee.

7 Summary and conclusion

- 7.1 For the reasons outlined above, I request that the Committee not give undue weight to the inaccurate or misleading statements and written responses which have been provided as part of the Committee’s inquiry into students with a disability or special needs in New South Wales schools.

8 August 2017

7.2 I ask that any recommendations given by the Committee in its final report consider the further information and evidence I have provided in respect of Arrowsmith. I also request the opportunity to provide additional information or supporting evidence if the Committee has any specific questions or concerns.

7.3 Please don't hesitate to contact me if you wish to discuss this further.

Yours sincerely

Barbara Arrowsmith Young

The following annexures are enclosed within the separate document titled "*Annexures to Arrowsmith letter to Portfolio Committee No 3*"

Annexure A

Annexure B

Annexure C

Annexure D

Annexure E

Annexure F

Annexure G

Annexure H

Annexure I

Annexure J

Annexure K

Annexure L

Annexure M

Annexure N

Annexure O

Annexure P

Annexure Q

Annexure R

Annexure S