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Feature Article

Collaborative curriculum development: Clinicians' views on the neurology content of a new occupational therapy course

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Academics are often accused of being out of touch with clinical practice. This can result in graduates who are poorly prepared to work in local health-care systems. To avoid this scenario, occupational therapy clinicians in New South Wales were invited by mail to list 10 topics related to neurology, which they felt should be included in a new undergraduate curriculum. Fifty-two clinicians responded. A modified nominal group technique was then used with 10 expert clinicians, to further explore the written responses. Content analysis revealed four areas which clinicians felt needed attention in the new curriculum. These areas or themes have been named: (i) Integrated Foundation Studies; (ii) The Art of a Thorough Assessment; (iii) Treatment Approaches in Neurology; and (iv) Building Confidence. Clinicians felt that neuroscience material needed to be better integrated with professional subjects; that observational skills and activity analysis should receive more class time, and that three different approaches to motor training should be taught. More practical student experience was also recommended, on and off campus, to help increase confidence when conducting initial assessments and upper limb retraining. Information from this study will be of interest to clinicians in neurology and to occupational therapy educators across Australia.

KEY WORDS *curriculum, education, neurology, occupational therapy, qualitative.*

INTRODUCTION

Many occupational therapists treat individuals with neurological conditions during their career, particularly people with stroke (Nelson *et al.,* 1990). Other neurological conditions encountered include traumatic brain injury, multiple sclerosis and Parkinson's disease. All of these conditions result in complex physical, perceptual and cognitive disabilities, which affect a person's occupational performance. Consequently, most occupational therapy undergraduate curricula include foundation subjects such as neuroanatomy and neuropathology, as well as content related to the assessment and treatment of impairments.

Undergraduate curricula for health professionals

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should also reflect changes in clinical practice so that graduates are adequately prepared to work in the health-care system (Wittman, 1990; Australian Association of Occupational Therapists, 1994). For example, Griffin (1993) reported that occupational therapists in acute-care hospitals in New South Wales were rarely getting time to use the treatment skills they had learned as undergraduates. Instead, they spent most of their time conducting assessments and preparing patients to go home or to another facility. This was due to time constraints and the reduced length of hospital stays. Undergraduate curricula need to be modified to reflect such changes in clinical practice.

In order to prepare students more effectively for the real world, and to stay in touch with such changes, academics need to seek the views of clinicians when designing a new curriculum. If stakeholders are not consulted, students may find that their skills and knowledge are out-of-date before graduation, and employment is more difficult to obtain in an already competitive environment. I therefore wanted to ask clinicians what skills and knowledge they felt should be included in the new 4-year degree course at the University of Western Sydney Macarthur, with a particular focus on neurology.

Review of the literature

Several researchers have examined the training needs of graduate occupational therapists, prior to or while working in particular areas of practice. Most studies have investigated paediatric practice, including neonatal intensive care (Dewire *et al.,* 1996), early intervention (Schaaf & Gitlin, 1989; Humphry & Link, 1990), and school-based therapy (Crowe & Kanny, 1990; Powell, 1994). Other studies have surveyed academics about the structure and content of existing occupational therapy curricula, focusing on specific areas of practice such as adult physical disability (Nelson *et al.*, 1990), early intervention (Humphry & Link, 1990), and gerontology (Strasburg & Gingher, 1986). While these studies describe the educational needs of graduates in particular clinical areas, and the content of existing curricula, the results cannot be generalized to neurology because the practice areas are so different.

One study does, however, provide information on the content of neurology curricula (Nelson *et al.*, 1990). This study reported the number of teaching hours dedicated to particular content areas within a curriculum, averaged across 28 of the 66 universities in the United States. For example, they reported the hours allocated to conditions such as stroke and head trauma, as well as to aspects of occupational therapy assessment and treatment. In relation to neurology, the greatest number of teaching hours were dedicated to the use of Bobath or Neurodevelopmental Therapy (29 h), Proprioceptive Neuromuscular Facilitation (PNF; 29 h), the Brunnstrom (29 h), and Rood (25 h) approaches to motor retraining.

No investigation was undertaken in this earlier study as to why academic staff chose to include these topics in their curriculum. Nor were the reasons for allocating specific proportions of time to particular techniques reported. It may be that the content of a subject or module reflects the personal views of the academic who develops that subject. Alternatively, content may be structured around a key textbook, instead of reflecting current health-care trends and evidence-based practice. These limitations, and the rapid expansion of scientific knowledge during the 1990s limit the current relevance of this study by Nelson *et al.* (1990), which was conducted 12 years ago.

Finally, Ilott (1991) consulted occupational therapy clinicians in the United Kingdom, when developing a new 4-year, part-time degree course. The author involved local clinicians and managers in the planning team, because they were potential consumers and purchasers of the programme's graduates. The planning team met over a 2-year period, and developed a modular curriculum, which included core units such as neurology, elderly, social skills training, and management. The number of hours allocated to each module was reported (for example, 36 h for neurology), however no detail was provided regarding the content of the neurology module.

Statement of the problem

No recent studies were identified, from Australia or overseas, which focused exclusively on the development or content of an occupational therapy neurology curriculum, nor on the views of clinicians about such matters. Such information is important for curriculum planning in universities, so that graduates are well prepared for clinical practice.

My study was conducted to identify the skills and knowledge which clinicians felt should be taught during a 4-year undergraduate degree, to prepare students for practice in neurology. The study provides contemporary information on one area of clinical practice, which can be

used to guide occupational therapy educators who are revising or developing a new curriculum.

METHODS

Two data collection methods were used in this study: a mailed survey questionnaire and modified nominal group technique. Both sets of data were analysed qualitatively.

The mailed questionnaire

In December 1995, a questionnaire was mailed to all 100 members of the occupational therapy Neurology Focus Group in New South Wales, Australia. Another 20 questionnaires were distributed at regional meetings in New South Wales. The questionnaire was adapted from that described by Powell (1994), and piloted with three clinicians. The final questionnaire included demographic data and two open-ended questions. The first question asked participants to list 10 topics which they would like to see included in the neurology component of our new course. The second question asked if there were any other factors which should be considered, when planning the neurology curriculum. Several other closed questions were also asked relating to demographic data (see Table 1). Consent was assumed when subjects returned the questionnaire.

Data from the questionnaires were sorted into three provisional categories, 'Foundation Studies', 'Assessment' and 'Treatment', using the text shuffling (or cut-and-paste) technique described by Lofland and Lofland (1984). Phrases and paragraphs which had a similar meaning were grouped together on large sheets of paper (for example, 'neuroanatomy', 'neurophysiology' and 'areas and functions of the brain' were grouped together under 'Foundation Studies').

Modified nominal group technique

Several months later in 1996, I invited members of the Neurology Focus Group to discuss the content of these provisional categories. Ten clinicians participated in a group discussion, which was taped and later transcribed by me. An external facilitator ran the group on my behalf, to avoid bias in the discussion. This person was an occupational therapist who did not work in neurology. Consent was assumed by each clinician's agreement to participate in the group.

A modified nominal group technique was used, to expand and discuss the data obtained from the questionnaires (Delbecq *et al.*, 1975). Brainstorming of ideas, which is characteristic of the nominal group process, had already been carried out by questionnaire respondents, and was not repeated with Neurology Focus Group members, hence the term 'modified'. Group members were asked whether they agreed or disagreed with topics recommended by survey respondents, and to discuss their reasons. Some topics, such as initial assessment and upper limb retraining generated more discussion than others.

Sample

Demographic data were analysed using descriptive statistics. Fifty-two clinicians responded to the mailed questionnaire ($N = 52$). This represents a response rate of 42%. In some facilities, up to six clinicians contributed to a single questionnaire. Table 1 shows the personal and work characteristics of questionnaire respondents.

Of the 10 group participants, nine worked primarily

Table 1. Personal and work characteristics of respondents

Characteristics ($n = 52$)	*n*	%
Gender		
Male	1	1.9
Female	51	98.1
Years of clinical experience		
0–5	34	65.4
5.5–10	11	21.2
10.5–35	7	13.4
Geographical work location		
Sydney metropolitan	41	78.8
Non-metropolitan	11	21.2
Work setting		
Acute-care hospital	27	51.9
Dedicated rehabilitation unit/ward/hospital	12	23
Out-patient and community-based rehabilitation	13	25
Caseload		
Neurological only	14	26.9
Mixed (i.e. general rehabilitation; geriatric)	34	65.4
Other (i.e. paediatrics; developmental disability)	4	7.7

with an in-patient, neurology caseload. One person did not treat patients at all. Four worked in dedicated rehabilitation units, and five worked in acute-care hospitals. No other demographic data were collected on the group participants.

Qualitative data analysis

Multiple copies of the questionnaire responses and transcribed group discussion were made, so that I could separate words and paragraphs for analysis. Using the cut-and-paste method described earlier, I grouped text with similar meaning into categories on large sheets of paper, to begin the data reduction process. Table 2 summarizes topics which were placed into each category at this stage. The numbers shown in Table 2 refer to the frequency with which respondents mentioned specific topics (for example, the word 'neuroanatomy' appeared on 24 occasions).

Initially, the data had been grouped into three predictable categories, as shown in Table 2 (Foundation

Table 2. Skills and knowledge to include in a neurology curriculum

Foundation Knowledge:
Neuroanatomy (24) and neurophysiology (15): (e.g. visual systems; cranial nerve functions; cortical dysfunctions such as apraxia and agnosia)
Anatomy and physiology: Upper limb anatomy
Communication disorders such as aphasia and dysarthria
Stroke (12): Aetiology; clinical signs; types of stroke
Post-traumatic amnesia
Gait disorders
Understanding of behaviour problems
Team and role delineation issues
Other neurological conditions: Traumatic brain injury (10); multiple sclerosis; Parkinson's disease; spinal cord injury; alcohol-related brain damage; cerebral palsy; spina bifida; attentional deficit disorder; paediatric neurological conditions
Assessment:
Functionally orientated assessments
Comprehensive initial assessment of a stroke patient
Goniometry for measurement of contractures/splinting
Sensory assessment
Activity analysis
Manual muscle testing for use in spinal cord injury and with progressive neurological conditions
Treatment:
Motor retraining: Neurodevelopmental Therapy/Bobath (16); Motor Relearning Programme (15); Proprioceptive Neuromuscular Facilitation (14)
Upper limb oedema management
Splinting (17) and casting in neurology
Management of abnormal muscle tone and spasticity
Care of the hemiplegic shoulder: Slings and supports; positioning; management of shoulder pain
Sensory retraining
Cognitive retraining
Perceptual assessment (33) and retraining (22)
Seating and positioning
Psychosocial issues: Sexuality; management of behaviour problems
Mobility: Bed mobility; transfers; mobility aids; wheelchair training
Community integration and long-term issues: Re-entry into the workforce
One-handed techniques and equipment
Community living skills: Driving; public transport
Models of practice and frames of reference to guide treatment in neurology
Support and counselling for carers and patients
Use of outcome measures
Client-centred goal setting

Numbers in brackets, for example (22) have been included where a topic was suggested 10 or more times. Table includes data from questionnaires and modified nominal group.

Knowledge, Assessment and Treatment). This reflects how content is often organized in an occupational therapy curriculum. However, further analysis revealed a fourth category related to confidence of new graduates, which did not belong to any of the other three domains. Subcategories were also added to the indexing system. This process of unrestricted or provisional sorting of data is referred to as open coding (Strauss, 1987), the purpose being to 'open' up the inquiry. Further study of the codes over several weeks resulted in common themes or issues becoming apparent.

To minimize researcher effects, checks of coding and thematic analysis occurred periodically, with members of a faculty research syndicate. This group of occupational therapy educators assisted with the development and naming of themes, by reviewing and discussing drafts of my manuscript. Raw data and a copy of the draft results section of this paper were also provided to one occupational therapy colleague, for independent verification. This person had prior experience working with data of this nature, and of content analysis. She checked that none of the original data had been omitted which may have been significant, and that the final categories reflected the data. Adjustments were made to the categories in response to feedback.

The four final themes were named Integrated Foundation Studies; The Art of a Thorough Assessment; Treatment Approaches in Neurology; and Building Confidence. Sample quotes are included below to provide depth and support for the data (Sowden & Keeves, 1985).

RESULTS

Integrated foundation studies

Clinicians viewed knowledge of neuroanatomy and neurophysiology as a prerequisite for practice in neurology, as well as an understanding of medical and surgical terms, and conditions treated in neurology. Several clinicians reflected on their own undergraduate education, and recognized in hindsight the importance of an integrated curriculum. By this they meant that neuroscience content needed to be applied, and linked to other occupational therapy subjects. Some clinicians had been taught by lecturers who worked for a service department such as biological sciences, but who were not occupational therapists. The clinicians felt that the limited clinical application of neuroscience content in their training led to a poor understanding of neuropathology and its effects on human performance. One occupational therapist in the group, who had taught neuroanatomy to undergraduates, felt that:

> …whatever aspect of neuroanatomy you're teaching, whether it be the cerebral hemisphere or the spinal cord or the cerebellum, you teach the anatomy and then give examples of the clinical problems that you can get when there is a disorder in the system.

With regard to neurological conditions, stroke was seen as one condition which all graduates should be knowledgeable about, and be able to confidently assess and treat: 'As many occupational therapists will be required to assess and treat a hemiplegic patient at some time in their career, this is an essential part of their knowledge.'

Emphasis was placed on understanding the neurophysiology, aetiology and clinical signs of different types of stroke, including those which affect the brain-stem and cerebellum. Greater use of patient videotapes was encouraged in class, to help students understand deficits such as apraxia and aphasia. Table 2 lists other neurological conditions and content which respondents identified as important background knowledge.

The art of a thorough assessment

The second theme was aptly described by one respondent as the 'the art of a well-structured and comprehensive neurological assessment'. Clinicians wanted students to be very familiar with, and know 'what to do when face to face with a CVA (cerebro-vascular accident) patient.

The group of clinicians discussed, at length, the importance of observational skills in conjunction with standardized assessments. One person noted that standardized assessments 'come up with a numerical value (or a result) but don't necessarily reflect what the patient can do'. Standardized assessments such as the Lowenstein Occupational Therapy Cognitive Assessment (LOTCA; Katz *et al.*, 1989); the Rivermead Perceptual Assessment Battery (RPAB; Bhavnani *et al.,* 1983); and the Chessington Occupational Therapy Neurological Assessment Battery (Tyerman *et al.* 1986) were seen to have limitations, including the time taken to administer many of them. Functionally orientated assessments such as the Arnadottir

Occupational Therapy Neurobehavioural Evaluation (or A-ONE; Arnadottir, 1990) and the Assessment of Motor and Process Skills (or AMPS; Park *et al.,* 1994) were favoured by some respondents, because they assessed a patient performing meaningful occupations. There was a perception that:

> Often the best cognitive assessment is getting the patient to do what they need to do… Students need to have a sound understanding of why they are assessing and treating a certain aspect of a person's condition, especially with cognitive and perceptual activities… and be able to explain this.

There were several references to the term 'functional' in relation to assessment, particularly the need to explain occupational therapy findings in functional terms. Without a functional context, students and other professionals may be unsure of the difference between an occupational therapist and a physiotherapist.

Accurate activity analysis was considered an important part of the assessment phase. Without detailed analysis of performance, the subsequent treatment plan and goals may be incorrect: 'Analysis of patients' movement – the hand and shoulder movements … to help analyse why… a weakness affects your ability to pick up a cup and take it to your mouth.'

Clinicians suggested that educators use more videotapes of patient assessments in class. They were also strongly in favour of students interacting with more simulated or actual patients in the classroom.

Treatment approaches in neurology

The majority of comments about treatment referred to motor retraining, particularly of the upper limb. The general consensus was that occupational therapists in New South Wales should learn three of the more commonly used approaches for motor retraining: Proprioceptive Neuromuscular Facilitation (PNF; Voss *et al.* 1985); Neurodevelopmental Therapy (NDT), or the Bobath approach (Bobath, 1990); and the Motor Relearning Programme (MRP; Carr & Shepherd, 1987). These three approaches were named and discussed with almost equal frequency by questionnaire respondents, as well as in the group discussion. There was considerable debate about the problems which clinicians perceived could arise, when students learn 'a little of everything'. They were concerned that students would become a 'jack of all trades and master of none' if teaching hours were split between too many approaches. 'I think that one or a couple should be decided upon, so that they get practice in trying to implement one … or two approaches'.

Most clinicians reported using a variety of approaches in their work because 'the same thing doesn't work each time, and different clients really need different things'. However, some clinicians did use only one of the three approaches in daily practice.

The Brunnstrom and Rood approaches to motor retraining (cited in Pedretti, 1996 and McCormack, 1996) were considered less relevant for today's clinical practice. Clinicians felt that students should be made aware of these approaches for historical purposes, but reported that neither were used much in practice. Other aspects of treatment in neurology which were identified as important, but discussed less frequently by respondents, are shown in Table 2.

Building confidence

Neurology was perceived as a particularly difficult area of practice for students to gain confidence in. This was partly because of the complexity of the assessment procedures and technical skills to be mastered, the variability in level of disability between patients, and the high level of physical disability and risk associated with transferring and working with some patients.

In order to gain confidence, students first needed to have a sound theoretical basis. Educators were seen to have a responsibility for building confidence by ensuring that students read, understood, and could discuss current literature in neurology. Clinicians respected colleagues who could articulate clearly why they were using a particular treatment approach, and could support this confidently using current scientific literature.

Students also developed competence and confidence through supervised practice of skills. While videos of assessment and treatment procedures were strongly recommended as teaching aids, clinicians felt that they should not replace supervised practice. Emphasis was placed on the need for more hands-on experience, on and off campus with actual patients prior to placement. Some clinicians noted increased confidence in students from other disciplines with whom they had worked, and attributed this partly to practical experience: 'I have noticed a differ-

ence [between] occupational therapy and physiotherapy students where physiotherapists, from first year up, do lots of hands-on practical treatment. By fourth year they have more confidence.'

Fieldwork supervisors were seen to have a responsibility for building confidence in students, in relation to practical skills. However, if a supervisor had limited experience, for example, in upper limb retraining, a student could still graduate with limited skill and confidence in this area. One graduate recounted how she:

> …came out (of university) and had no skills to retrain [the] upper limb. That's a risk you take. They [graduates] go and work in the country and there's no one to supervise and direct them on [treatment of the] upper limb… and they just won't do it.

DISCUSSION

Better integration of neuroscience subjects was first identified as an area of need. Neuroscience subjects are often the most difficult for students to learn during their occupational therapy training. Courses which use problem-based learning have the advantage of teaching basic science content and patient case studies simultaneously (Jacobs & Lyons, 1992; Sadlo, 1994; VanLiet, 1995). This may assist with the integration and understanding of complex material about the brain. Computer assisted learning may also help students to integrate this material more easily (Coninger *et al.,* 1995; Toth-Cohen, 1995). The main message from clinicians in the present study was that educators across departments needed to spend more time together, planning and developing teaching resources, to improve the integration of neuroanatomy and neurophysiology with occupational therapy subjects.

Preparing graduates to undertake assessment procedures, which place them and the patient at risk of injury remains a challenge, for example, where patients have a dense hemiplegia and may fall during transfers. University education aims to prepare students for fieldwork, where many will undertake their first supervised initial assessment of such patients. In the present study, participants recommended greater use of videotapes and simulated patients in the classroom. Rehabilitation students have previously stated a preference for simulated patients over videotapes when learning clinical skills (Liu *et al.,* 1997). However, in this earlier study, the learning outcomes of different teaching methods were not conclusive. The use of simulated patients in the classroom should continue to be explored as a teaching tool, on and off campus.

Research is also required into the skills and knowledge of students, before and after different types of classroom education, after a neurology fieldwork placement, and during the first months of working as a graduate in neurology, to determine which factors contribute the most to competence.

Functionally based, as opposed to standardized occupational therapy assessments were also recommended by clinicians in this study. This preference was stated mostly by clinicians from acute-care settings, where decisions need to be made promptly about a person's ability to return to pre-injury life roles. Standardized assessments were considered too lengthy and time consuming to administer in acute-care settings, although some clinicians still used them in rehabilitation settings. The need to describe patient problems in functional terms following assessment was mentioned repeatedly. Role overlap with other professionals in neurology makes the emphasis on function by occupational therapists particularly important, since other professions also assess and report on daily living skills such as use of cutlery, handwriting, reading and memory.

The findings on treatment approaches concur partly with those of Nelson *et al.* (1990), the only study to date against which findings can be compared. For motor retraining, they found that Neurodevelopmental Therapy received the greatest number of teaching hours on average, followed by 'motor control' therapy (not defined) and Proprioceptive Neuromuscular Facilitation, respectively. In the present study, Neurodevelopmental Therapy received slightly more emphasis from clinicians than the Motor Relearning Programme and Proprioceptive Neuromuscular Facilitation. However, clinicians recommended that each approach be given equal emphasis, and that students learn practical application of each.

The Motor Relearning Programme was not published until 1987, and appeared in the first occupational therapy textbook in the late 1980s (Trombly, 1989). This may partly explain its absence as a named approach in the study by Nelson *et al.* (1990), as information for their research was collected in 1987. The Motor Relearning Programme is now included in two of the leading occupational therapy textbooks (see Poole, 1997 and Sabari,

1995). There has also been increased interest in motor learning principles and motor control by occupational therapists in recent years (Goodgold-Edwards & Cermak, 1990; Poole, 1991; Sabari, 1991; Jarus, 1994). These factors add support for inclusion of the Motor Relearning Programme in current curricula (now referred to as Movement Science, Carr & Shepherd, 1998).

Nelson *et al.* (1990) commented that motor therapies appeared to be receiving more attention in occupational therapy curricula, than cognitive and perceptual rehabilitation in the late 1980s. They suggested that this might be due to the emphasis placed on motor rehabilitation by educators, resulting from their own personal view of the profession's role in neurology. In the present study, considerably more discussion occurred in relation to motor retraining, than for cognitive and perceptual retraining. Perhaps the focus on motor rehabilitation is also because educators, in their previous roles as clinicians, have had more success and experience performing motor rehabilitation, and have been less inclined to use extended cognitive and perceptual remediation programmes with patients. This issue warrants further investigation, to determine if students are learning how to plan and implement a balanced treatment programme which targets all areas of deficit.

It is interesting to note that perceptual assessments were mentioned more frequently (33 times), and received more emphasis from questionnaire respondents, than perceptual retraining (mentioned 22 times). It would be worthwhile exploring if students receive a greater focus on assessment of perception, than on remediation of deficits during their undergraduate education.

The group of clinicians discussed sensory retraining with interest, recognizing that this was an area often neglected in neurological rehabilitation. Some were attempting to institute a programme of sensory retraining with their patients, as described by Carey *et al.* (1993) and Carey (1995), and hoped that lecturers would take time to explain this important research, which was conducted by an occupational therapist, to their students.

The way in which confidence develops in occupational therapy graduates, across a range of clinical areas and geographical locations, requires investigation. It would be interesting, for example, to ask clinicians to reflect on their initial experiences of working in different areas of practice, and to compare these with the experiences of graduates in neurology. Contributing factors, such as hours of supervised practice on and off campus could also be explored.

Limitations of the study

One limitation of the present study was the low response rate to the mailed questionnaire. This should be considered when interpreting the results. Follow-up letters may have helped to improve the response rate. A further limitation was that in some facilities, up to six clinicians contributed to one questionnaire. Knowledge of other participants' opinions may have influenced responses. As with any qualitative research, the results cannot be generalized to other areas of practice, or to other countries.

Future studies

Future studies might examine: (i) the benefits of different modes of instruction when teaching neuroscience material; (ii) the development of clinical reasoning skills in neurology, particularly in relation to initial assessments in acute-care settings where decisions and reasoning must occur promptly; (iii) the amount of curriculum time dedicated to motor versus cognitive and perceptual retraining; (iv) the manner in which cognitive and perceptual remediation is taught and the effectiveness of this education; and (v) factors that contribute to increased confidence in occupational therapy graduates across different areas of practice.

Summary

This study identified four areas or themes related to practice in neurology which clinicians felt should be addressed in undergraduate education. There was a perceived need to integrate neuroscience content more effectively with professional occupational therapy subjects, partly by increasing communication across university departments. It was recommended that observational skills and activity analysis be allocated extra teaching time in the curriculum, instead of spending hours teaching students how to administer lengthy standardized assessment batteries. When teaching students about motor retraining, respondents suggested that equal time be allocated to Neurodevelopmental Therapy, Proprioceptive Neuromuscular Facilitation, and the Motor Relearning Programme (or Movement Science approach), and that some degree of

competence should be achieved in using each approach. Finally, more practical experience on and off campus, and a better knowledge of current scientific literature in neurology were recommended, to help students become more confident practitioners.

CONCLUSION

One of the aims of our profession is to prepare students better for the real world (Wittman, 1990). To do so requires consultation with clinicians. This study provides information from a group of clinicians in New South Wales, to inform occupational therapy educators involved in curriculum planning.

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