

For implementing real-life practice to enhance workforce readiness of Sport and Exercise Science and Exercise Physiology (Clinical) students

SUMMARY OF CONTRIBUTION AND CONTEXT

My teaching philosophy is based upon my belief that our prime responsibility of service is to benefit students and the community. This is achieved by facilitating learning experiences that empower students to attain knowledge, skills and personal attributes that enable them to become work professionals who can engage with and actively contribute to the community. In line with my teaching philosophy, the pedagogical approaches at the forefront of my innovative teaching practices that motivate and inspire student learning are to focus teaching activities on deep learning to emphasise conceptual understanding and subsequent wide contextual applicability of knowledge sets; and on structural alignment of courses (Biggs & Tang, 2007). My curriculum content is aligned such that the content and assessment progress from theoretical concepts to scenario-based learning and to real-life complex case management in order to foster the continual development of students' skills and competencies culminating in real-world practice to elicit workforce readiness. I employ the pedagogical strategies of scenario-based learning and real-life experiences in my teaching as they have been identified as a means of developing the skills and qualities needed for workplace success (Landrum, Hettich & Wilner; 2010). In conjunction with evidence-based teaching pedagogies, my teaching practice is further strengthened by my explicit passion for the curriculum content, passion for the field, and most importantly by commitment to ensuring that students are engaged in an enjoyable, productive, challenging, yet supportive learning process; with one student commenting "It was great to have a teacher so passionate about the subject. Her passion flowed into students." SP3011, 2008.

Since 2008 I have been developing and re-designing the three-year Bachelor of Sport and Exercise subject, *Sports Training and Rehabilitation*, and more recently, the 4th-year content (all subjects) of the Bachelor of Exercise Physiology (Clinical) degree to foster workforce readiness through the embedding of an additional workforce accreditation and scenario-based learning. The scenario-based learning involves a combination of personal industry-based accounts of practice, the use of virtual clients and other paper-based scenarios in the 3rd-year subject. In the 4th-year, these strategies are again utilised, along with the innovative introduction of real clients to close the gap between University-practice and the workforce. These teaching and design innovations result in graduates who are confident, highly competent and are competitive and successful in the workforce, as evidenced by the following email received from an external 4th-year clinical placement supervisor:

I am more than happy to provide feedback regarding the quality of students from JCU as I am extremely impressed with all the JCU students I have had so far. In terms of knowledge the JCU students far exceed other students in clinical knowledge. All the JCU students have arrived with a thorough understanding of cardiovascular and musculoskeletal anatomy, physiology and pathophysiology. I have found students from some other Universities struggle in the areas of cardiovascular pathophysiology while the JCU students do not. JCU students are also skilled at exercise prescription for musculoskeletal rehabilitation. All the students are able to come up with excellent exercise choices for each of our clients. The students I have had from JCU have also had outstanding client rapport. Our clients are very grateful and have nothing but praise for all the JCU students. I have also found JCU students to be very accepting of advice and feedback from myself and other supervisors within our clinic. They are always very friendly, professional and make valuable contributions to our clinic every day. I am thoroughly enjoying working with JCU students and hope to have many more next year.

Please feel free to call me for verification of any of these points. Narelle Humphries. Exercise Physiologist; Capricornia Allied Health Partnership

CRITERION 1: Approaches to learning and teaching that influence, motivate and inspire students to learn

Embedding additional workplace qualifications and real-life scenarios that assist students with workforce readiness into my curriculum, influences, motivates and inspires students to learn as it provides an obvious link between university course content and real-world work practice. This section provides an overview of my teaching innovations that enhance student engagement and learning, with evidence demonstrating the effectiveness of these teaching innovations. The innovations are based around the curriculum re-design of five subjects within the three-year Bachelor of Sport and Exercise Science and four-year Bachelor of Exercise Physiology (Clinical) courses.

Teaching innovation 1: Inclusion of external qualification

I have embedded the Sports Medicine Australia Level 1 Sports Trainer Certification, a nationally-recognised external accreditation, into the *Sports Training and Rehabilitation* lectures, practical classes and assessment structure. The qualification includes both theoretical and practical competencies and is included in the curriculum to improve

employability/workforce readiness of our students, and to demonstrate an obvious link between subject theory and national sports training practice. The inclusion of the additional qualification is very well received with one student commenting *"I think the introduction of the sports trainer course is highly regarded and recommended for future. I believe more certificates like this should be incorporated in the Sport and Exercise degree."*SP3011, 2009. The inclusion of the external certification into *Sports Training and Rehabilitation* resulted in approximately 35% of the cohort across 2009 and 2010 gaining employment as casual Sports Trainers while completing their current or subsequent degrees, providing students with the opportunity to gain industry-based employment prior to gaining their formal University degree. This certification has been included again in 2011.

Teaching innovation 2: Introduction of virtual clients into 3rd year curriculum

The implementation of virtual clients as an on-going in-class discussion/workshop item and the major assessment piece for *Sports Training and Rehabilitation* provides students the opportunity to prepare for real-client cases both in the 4th year of the Exercise Physiology (Clinical) curriculum and in the workplace, as highlighted by this student comment: *Virtual client gave good 'practical' experience in dealing with rehab and injuries, as much as could be done in a class setting* 2009. Specifically each student is provided with a sport-based client biography and is required throughout the semester to build a case folio for the client. The folio incorporates all of the core content items covered in the curriculum and provides students with the opportunity to develop and demonstrate deep learning via active and long-term engagement with the assessment task that is based on real-life scenarios, as noted by one student *Assessment was relevant and useful in building confidence for future rehab situations or clinical.*, 2010 . The use of virtual clients provides a safe, interactive and supportive learning environment where students can role-play real-life professional practice while gaining continual feedback from myself and other professional clinicians to ensure that the virtual client solutions remain realistic and achievable. This ongoing feedback is appreciated by students, with one student commenting: *The interaction with the teaching staff was great, they could help us with any problems we had with our virtual clients by explaining it in a real life situation.*, 2009.

Teaching innovation 3: Introduction of real clients into 4th year curriculum

In 2010 I undertook a major curriculum re-design of the entire 4th-year curriculum, migrating the course from a curriculum that was taught by external academics in limited-attendance block-mode to a full-contact, full-semester, internally coordinated course that involves extensive opportunities for face-to-face learning engagement. This major curriculum re-design provides the perfect opportunity to further progress the scenario-based learning pedagogy of 3rd-year to incorporate real clients into the student experience. Specifically in the revised curriculum, students engage with real clients from the community who present with complex chronic diseases and/or conditions in both practical classes and as part of a weekly in-house placement experience within the Departments' Exercise Rehabilitation Clinic in semester one of the 4th year of the Bachelor of Exercise Physiology (Clinical) course. Students' reflections on their experiences and subsequent learning outcomes that occur via interaction with clients form an integral component of in-class tutorial discussions. To highlight the importance of progression from virtual to real client experience, major assessment tasks in the 2010 4th year curriculum included specific clinical skills competencies such as interviewing, assessing and exercise prescription to clients, and a complex case folio documenting the complete student-client experience of complex case management. In 2011, the assessment-based emphasis of real client interaction has been expanded to include not only the clinical competencies and complex case folio, but also the requirements of students to perform postural and gait analyses on the clients and to design medication fact sheets for their clients which are two common workplace duties within the field of chronic disease rehabilitation.

The provision of real-client contact while studying the theoretical bases of chronic disease management enables students to identify and understand the importance of underpinning practice with theory and provided students with first-hand experience at explaining to clients the 'why' that forms the foundation for clinical practice. The opportunity for students to work with clients in class and clinic time allows them to develop the necessary expert skills under an appropriate level of supervision and provided ample opportunity for students to use theory to establish their client-based practices: *The amount of practical experience that we are provided with has been extremely beneficial. I feel very confident in my ability to prescribe progressions and regressions to exercise that are specific to the client.* 2010. In-turn the practical client contact inspires students to gather further evidence and theory to explain practice to their clients, a vital skill to have when entering the workforce. In addition to the theory-practice link fostered by student-client interaction throughout the curriculum, students are able to experience the personal satisfaction of helping at-need community members, instilling in them the sense of community engagement and belonging. The inclusion of real clients into the Exercise Physiology (Clinical) curriculum has contributed to the 92% course-relevant employment success of the 2010 graduating cohort within 1-month of graduation (24 students) and has contributed to the national Accreditation of the course.

Teaching innovation 4: Real-life scenarios used in lectures to link theory to practice

Throughout my teaching I regularly include real-life examples from professional practice, research and consultancy experience to provide students with real-life scenarios to substantiate the theoretical content of the subjects, as evidenced with the student comment *Great content that is interesting, specific to real-life and can be used in a practical situation later in life.* 2009. The inclusion of real-life, industry-based scenarios provide students with ample opportunity for discussion regarding strengths and weaknesses of the clinicians' initial response to, and lessons learnt from real-life experiences. Students are inspired by discussing the impact that experiences of mine and that of other professional practice clinicians have on the community and communicate an increased desire to contribute to the community through this field of work., Evidence that my teaching practice fosters workforce confidence and competence is reflected in the following student comments: *...My confidence in my ability to take my place in the workforce has increased a lot this semester.*, 2010 and *In my current role as a Pre Employment Assessor I have been able to use skills and techniques learnt under the guidance of Rebecca with confidence.* 2010 Graduate.

SUSTAINED IMPACT ON STUDENT LEARNING

My teaching has had a sustained impact on students, as evidenced by the official University Student Feedback about Teaching (SFT) and Student Feedback about Subject (SFS) results from 2008 through 2010, listed in table format below, and has been noticed by my Discipline Director: *In my opinion, the exceptional teaching evaluations exhibited by Dr Sealey over the past 3 years would classify her as one of the premium current educators at JCU.* Associate Professor Anthony Leicht, Director, Discipline of Sport and Exercise Science.

SFT data – scores out of 4 (3= more than acceptable; 4 = outstanding)

SUBJECT	SP3011	SP3011	SP3011	SP4103/ SP5103	SP4104 SP5104
YEAR	2008	2009	2010	2010	2010
N	15(18)	32 (32)	11(34)	20(24)	22(24)
Is well organised	3.33	3.43	3.64	3.65	3.82
Communicates clearly	3.67	3.63	3.73	3.55	3.73
Is approachable	3.20	3.28	3.82	3.60	3.64
Provides useful feedback	3.33	3.22	3.45	3.40	3.68
Appears knowledgeable in the subject area	3.27	3.03	3.91	3.70	3.77
Is enthusiastic about teaching this subject	3.67	3.75	3.64	3.65	3.73
Makes the subject interesting	3.67	3.19	3.55	3.55	3.55
Involves students	3.40	3.09	3.27	3.45	3.32
Assesses fairly	3.20	3.25	3.45	3.55	3.50
Makes good use of available information communication technology	3.20	3.22	3.64	3.45	3.59
Is an effective teacher	3.53	3.28	3.64	3.60	3.73
AVERAGE	3.41	3.30	3.61	3.56	3.64

SFS data – scores out of 5

SUBJECT	SP3011	SP3011	SP4103/ SP5103	SP4104/ SP5104
YEAR	2009	2010	2010	2010
N	9 (32)	4(34)	9(24)	9(24)
The teaching staff of this subject motivated me to do my best work	4.20	4.25	4.44	4.44
The teaching staff worked hard to make this subject interesting	4.90	4.50	4.78	4.56
My lecturers were extremely good at explaining things	4.40	5.00	4.67	4.78
Staff made a real effort to understand difficulties I might be having with my work	4.00	4.50	4.11	4.33
The staff put a lot of time into commenting on my work	4.20	4.25	4.11	4.22
The teaching staff normally gave me helpful feedback on how I was going	4.20	4.25	4.22	4.33
The staff made it clear right from the start what they expected from students	4.30	4.75	4.67	4.78

The assessment requirements and criteria were clearly specified	4.80	4.50	4.11	4.44
The teaching and learning experiences of this subject were well organised	4.70	4.75	4.44	4.56
This subject helped me develop my ability to work as a team member	3.90	4.50	4.67	4.56
This subject sharpened my analytical skills	4.10	4.25	4.56	4.56
This subject developed my problem solving skills	3.90	4.25	4.44	4.56
This subject improved my skills in written communication	3.90	4.50	3.89	4.00
As a result of this subject, I feel more confident tackling unfamiliar problems	4.10	4.50	4.56	4.56
This subject helped me to develop the ability to plan my own work	4.00	4.75	4.33	4.33
Good learning resources were provided to help me learn in this subject	3.90	4.50	4.00	4.11
Overall, I am satisfied with the quality of this subject	4.70	4.75	4.67	4.67
Overall, I am satisfied so far with the quality of the degree course I am undertaking	3.90	4.50	4.56	4.67
AVERAGE	4.18	4.47	4.35	4.42

TEACHING AND LEARNING THAT EMBRACES THE UNIVERSITY STRATEGIC PLAN

My innovative teaching practices serve the JCU strategic intent by 'embracing the community we serve and engaging with them at all levels, sharing a sense of pride in the University's achievements'; and by fostering the purpose that 'our key responsibility is to our students, we aim to inspire students to make a difference in their fields of endeavour and in their communities'. Specifically, by actively engaging the community members as real clients in the 4th-year curriculum, the students develop an appreciation of the role that they may play and of the impact that this may have on society once they enter the workforce.

PEER RECOGNITION AS EVIDENCE OF MY OUTSTANDING CONTRIBUTION TO TEACHING AND LEARNING

My outstanding teaching contribution has been recognised not only by students, graduates, placement supervisors and my direct supervisor as evidenced in the previous sections, but also by peers within the University and teaching & learning fraternities. A particularly humbling quote was recently provided by my Discipline Director, Associate Professor Anthony Leicht, stating that *"A recent comment from one of the most respected Professors and educators at JCU further highlights Dr Sealey's outstanding ability with the professor telling me quite emphatically 'hold on to Rebecca as she was fantastic'."*

My passion for teaching and learning is evidenced by my active representation on the University School of Public Health, Tropical Medicine and Rehabilitation Sciences Teaching & Learning committee from 2009-2011 (deputy chair in 2011), the University Faculty of Medicine, Health and Molecular Sciences Teaching & Learning Committee 2010 and 2011, and the University WIL working party during 2008 and 2009. As a result of my active involvement with the WIL@JCU activities, I presented 'WIL to ensure workplace readiness in Allied Health: a regional University perspective' at the 2008 IRUA Australia Leadership of Learning and Teaching Forum on Work Integrated learning, and in 2009 presented 'Using debates as an effective T&L tool,' to the University Faculty of Medicine, Health and Molecular Sciences Teaching & Learning Symposium. In 2009 I was awarded a JCU Teaching and Learning Development Grant for 'Integrating virtual clients and community practitioners to develop higher-order skills in Sports and Exercise Science,' with this grant culminating in presentations at the 2010 JCU Faculty of Medicine, Health and Molecular Sciences Teaching & Learning Symposium, and at the ANZAME (Australian and New Zealand Association for Health Professional Educators) Conference, with a manuscript of these findings currently under review with *ANZAHPE Focus on Health Professional Education Journal*. In 2010 I was awarded a Certificate of recognition by the Australian College of Educators "for the integration of valid client-based scenarios into the Exercise Physiology (Clinical) degree at JCU that has provided students with real world experience to enhance their workforce readiness." Most recently, at the start of 2011 the Exercise Physiology (Clinical) degree received provisional national accreditation from the Exercise and Sports Science Australia NUCAP (National University Course Accreditation Program), with my curriculum re-design comprising the entire 1st semester of 4th year, forming the basis of the 'clinical' component of the course. This provisional accreditation confirms that my teaching pedagogies and content align with professional industry standards, and is further evidence of the effectiveness of my teaching for ensuring workforce readiness of graduates because this accreditation endorses the eligibility of our graduates to join the professional governing body as accredited exercise physiologists.