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Using standardised vignettes to assess practicum competencies in psychology and other disciplines

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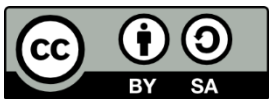

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List of acronyms used

ALTC – Australian Learning and Teaching Council

CΨPRS – Clinical Psychology Practicum Competencies Rating Scale

EPR – End-Placement Review

MPR – Mid-Placement Review

OLT – Australian Government Office for Learning and Teaching

V-MAT – Vignette-Matching Assessment Tool

Key Terms

Field Placement: The term is used in an inclusive manner, and refers to postings (usually a few months in duration) of students undergoing professional training in diverse agencies to conduct professional work under supervision. Alternative terms include 'clinical rotations', 'field practicum', 'internships' (often of one-year duration), and 'externships'.

Field supervisors: The term is used in an inclusive manner, and refers to qualified agency professionals, often approved by training institutions and accrediting bodies, who provide training and professional supervision to students during their placements in the agency. Alternative terms used in the literature include 'clinical supervisors', 'clinical tutors', 'field instructors', and 'preceptors'.

Executive summary

Context

The last few decades have witnessed the rise and rise of competency-based pedagogies and systematic efforts towards application of their principles to professional education and training. Increasing attention and rigorous research have led to a deeper realisation that a major barrier in the path of "the competency revolution" is the lack of valid and reliable assessments of practitioner competence. Supervised field placements (also called internships, externships, clinical rotations), have been essential in the training and credentialing of psychologists. Placement supervisor judgments of trainee competence have good ecological validity and have been accorded a high level of credibility (Gonsalvez & Freestone, 2007). However, recent empirical research indicates that supervisor assessments are compromised by halo and leniency biases (Bogo et al., 2004; Gonsalvez et al., 2013; Gonsalvez & Freestone, 2007) and this may "be the most critical quality assurance issue confronting clinical psychology…" (Robiner et al., 1998, p. 62). Moreover, similar concerns about competency ratings have been raised in other disciplines including in social work (Bogo et al., 2004; Regehr et al., 2007), medicine (Williams et al., 2003), and nursing (Dolan, 2003) highlighting a pattern of results that needs urgent attention.

Historically, most competency ratings scales have used Likert-type response formats. Despite attempts to revise these formats (e.g., more response points, changed anchors etc.), the halo and leniency biases seem to have persisted. Other methods of assessment have been proposed with the use of vignettes and a vignette matching process showing promise.

Aim

The aim of the project was to establish the Vignette Matching Assessment Tool (V-MAT) as a new and superior instrument for the measurement of practicum competencies in clinical psychology by designing, standardising and testing the V-MAT in a multi-site study. Additional aims were to revise, improve and establish normative data for the Clinical Psychology Practicum Competencies Rating Scale (CΨPRS), to disseminate the use of the two instruments across Australia, and to pilot cross-disciplinary and international applications of the V-MAT.

Project approach

From a theoretical perspective, the V-MAT is framed within competency-based pedagogies. The attainment of competence is viewed from a developmental perspective – a journey through several stages as the trainee accrues a range of knowledge, skills, and attitude competencies before attaining competence. Like other competency-based approaches, competence is evaluated in relation to a criterion-based standard (e.g., effective, adequate, and acceptable practice by a qualified psychologist) rather than in relation to a normative standard (e.g., as good as peers at the same stage of development).

From a methodological perspective, principles and procedures from psychometry were used to guide the design and evaluation of both the V-MAT and CΨPRS. For instance, the

vignettes were first crafted by experts and subjected to blinded peer review, before revised vignettes were subjected to calibration by a panel of experts. Vignettes that did not meet predetermined criteria were re-crafted, peer-reviewed, revised and re-calibrated to ensure all vignettes met quality-assurance criteria. A full catalogue of 41 vignettes constituting the standardised V-MAT was then evaluated against the CΨPRS and also evaluated by supervisors to establish its psychometric properties.

Project outputs and deliverables

1. Training: In addition to the committed deliverables specified in the project proposal, a brief online training program was designed and its effectiveness evaluated in an empirical study. Supervisors who undertook the training prior to commencing a CΨPRS assessment, gave trainees lower scores than untrained supervisors, findings consistent with the interpretation that training helps reduce leniency effects.
2. International applications of the instruments have been piloted. Both the CΨPRS and the V-MAT have been tested at two international sites – the University of Glasgow, UK and the University of Canterbury, New Zealand. Pilot data from these sites have informed two brief reports that testify to the relevance and applicability of the two instruments for international consumption. Because of variations in credentialing requirements, the anchor for competence may vary among countries and independent calibration of vignettes may be required.
3. Cross-disciplinary applications: The project has also produced a catalogue of revised vignettes to evaluate psychiatry competencies of medical students and a modified version of the CΨPRS. Pilot data for the CΨPRS but not for the V-MAT for medical students have been collected.
4. Scientific publications: Since the completion of the previous project, two peer-reviewed scientific papers have been published (Gonsalvez et al., 2013) with one of them being an invited contribution in an international journal (Gonsalvez & Crowe, 2014). Under the current project, two journal articles have been published (Gonsalvez et al., 2015; Terry et al., 2016) and one is under review for a special issue of the *Australian Psychologist*.
5. Dissemination workshops aimed to increase knowledge and awareness of competence assessment and to increase uptake of the two instruments, were conducted in Melbourne and Brisbane. The workshops were attended by 73 participants who evaluated the workshops very positively. At the current time, the V-MAT has not been made available for use by other training institutions. However, uptake of the CΨPRS has exceeded expectations. Online or hardcopy versions of the CΨPRS (some with minor variations) are being used by as many as 20 institutions in the country.

Impact

Building upon initial work completed in a previous OLT project, the current project completes the ambitious endeavour to produce the vignette-matching assessment tool (V-MAT) to measure clinical psychology practicum competencies. Collectively, this work involved the crafting and re-crafting, revising and re-revising, calibrating and re-calibrating of an entire catalogue of 41 vignettes that capture competencies across a matrix of 10 competence domains, and across four developmental stages within each domain. A standardised vignette is a carefully crafted description of competencies a trainee possesses that has an acceptable calibration score (arrived at by expert consensus).

The impact of the project has been substantial and far-reaching. For the 11 partners, there has been a deepening awareness of competency-based pedagogies, theories and applications, and the direct use of the instruments. Twenty of 37 universities offering clinical psychology training currently use the online or hardcopy versions designed under the two projects and at least five others are using variants of the instrument. It is expected that V-MAT uptake in combination with the CΨPRS will grow strongly in the immediate future. In the international arena and across disciplinary boundaries, the project has demonstrated impact through presentation of these results at multiple conferences (10 national + 2 international conferences), invited presentations including keynote presentations at international forums, and several scientific papers that have already generated positive peer acclaim.

Key findings and recommendations

1) The V-MAT is superior in several areas to the CΨPRS in providing an overall evaluation of trainee competence.
   a) It has superior face and ecological validity (e.g., evaluated more positively by supervisors)
   b) It has superior psychometric support in that supervisor judgments derived from the V-MAT are anchored against empirically derived calibration scores, whereas Likert-scales such as the CΨPRS are based on subjective estimations.
   c) Findings between trained and untrained assessors are consistent with the interpretation that the V-MAT reduces leniency effects.
   d) The pattern of correlations among competency domains supports the notion that the V-MAT reduces halo bias.
2) Large data sets of CΨPRS ratings have enabled a systematic analysis of the hierarchical organisation of clusters among discrete competencies – a first for psychology. The empirically derived clusters generally support the distinction between two large mega-clusters: (1) assessment and intervention and (2) appropriate practitioner attributes, and offers evidence that these clusters have different developmental trajectories.
3) Recommendation: A combination of the V-MAT for *overall* assessment of trainee competence and the CΨPRS for *item-wise* evaluation of individual competencies will improve student evaluation and potentially practicum outcomes. The increased time (10-15 minutes) to administer both instruments is justified because the V-MAT has the potential to provide a more accurate and reliable assessment of competence. This is critical to practitioner training and for maintaining standards within clinical psychology.
4) Additional research
   a) Expansion of international research to determine the applicability to international training contexts.
   b) Further psychometric validation to confirm clustering of V-MAT items and distinctiveness of competency domains.
   c) Assessment of the potential for cross-disciplinary applications (e.g., counselling, social work, medicine).
      The potential of the V-MAT and CΨPRS to detect under-performing students during early placements and to guide training processes to improve competency.

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Chapter 1

Context

In an overall sense, competency-based pedagogies have dominated practitioner education and training during the last few decades, leading to systematic efforts to ensure that competency-based principles are applied, with fidelity, to all aspects of education, including training and supervision. Learning and teaching within Australia have been responsive to these international developments. For instance, of 43 completed Australian Learning and Teaching Council reports on assessment, 11 were directly related to competency assessment in a range of health disciplines (ALTC, 2010). Concerns about assessment are echoed in each of the reports, and often constituted primary reasons for the projects to be undertaken. An important element of and central to the success of the competency paradigm is reliable and valid assessment of competence. Since its early years, practitioner training in psychology has largely been modelled after a time-honoured formula that combines the dissemination of knowledge through lectures and tutorials within a training institution, followed by a range of supervised field placements (also called internships, externships, clinical rotations) to ensure theory-practice integration. Field placements offer excellent opportunities for trainees to demonstrate a range of knowledge, knowledge-application, skills, attitude-value and relationship competencies, and generalisation of these competency types across many domains (e.g., assessment and intervention) and client presentations. Therefore, field placements have served as both essential and central to the training of the health practitioner in general, and specifically also to the psychology practitioner. Within such a context, field supervisors, chosen carefully for their experience and expertise, qualify as expert practitioners, and their judgments of trainee competence accorded a high level of credibility.

The emphasis on competency principles has recently led to a greater scrutiny of competency assessments within institutions and in field placements. Against expectations, research, including a previous ALTC-funded project (PP10-1624), indicate quite consistently that supervisor assessments are compromised by systematic biases including halo and leniency effects (Gonsalvez & Freestone, 2007; Gonsalvez & Crowe, 2014). It has been argued that the extent of supervisory bias is "...the most critical quality assurance issue confronting clinical psychology…" (Robiner et al., 1998, p. 62). Moreover, similar concerns about competency ratings have been raised in other disciplines including in social work (Bogo et al., 2004; Regehr, Bogo, Regehr & Power, 2007), medicine (Williams, Klamen & McGahie, 2003), and nursing (Dolan, 2003) highlighting a pattern of results that warrants concern and indeed urgent attention.

Factors contributing to rating bias

A careful analysis indicates that several factors contribute to poor reliability and validity of field supervisor assessments. First, an important factor that contributes to biased ratings is the instrument itself. Across health disciplines including psychology, the most widely used instrument for rating competencies has been the Likert scale. The popularity of Likert scales is understandable. They are inexpensive, easy to use, and sufficiently versatile to measure a range of global and specific competencies (Gonsalvez et al., 2013; Kaslow et al., 2007).

However, whilst these scales may provide reliable evaluations of one's moods, attitudes, and satisfaction because the rater is the best judge of an internal state of mind, these scales may be poorly suited to competency assessments where the rater is required to make judgments against external criteria. Specifically, because they supervise no more than one or two students at a time, field supervisors typically lack both a normative reference point (relative to performance of a representative group of peers) and clearly defined external anchors (e.g., clear sense of performance levels for each developmental stage of competence) against which to evaluate a particular student's performance at placement. Further, because supervision sessions are often conducted face-to-face in supportive one-to-one sessions, supervisors may feel invested in a trainee in much the same way as a sports coach identifies with an athlete under their training. Further, poor trainee performance at the end of a placement may be construed as reflecting badly on the supervisors themselves. Therefore, accurate evaluation about competence is both difficult to achieve and hard to deliver contributing to leniency biases. A further problem with Likert scales is their vulnerability to halo effects. Halo effects occur when generic impressions about the person rated bias the direction of ratings and/or obscure true differences between specific domains. For instance, a positive relationship with a well-liked trainee could induce a positively biased rating and also blur actual differences between assessment and intervention competencies that are apparent to a neutral assessor. Halo biases generate high correlations among competency domains when rated by the same rater, but lower inter-rater reliabilities, a pattern observed by research for competency ratings on Likert scales (Gonsalvez & Freestone, 2007).

Aim

The overarching aim of the project was to improve practicum assessment outcomes for clinical psychology trainees by designing better instruments for competency assessments, particularly for field supervisors. Specifically, the current project attempted to design a new instrument, the Vignette-matching assessment tool (V-MAT), standardise the instrument, and evaluate its effectiveness in a multisite study. A multisite study was required because training institutions typically recruit a small number (15-25) of clinical psychology trainees each year. The key construct that underpins the rationale for the new instrument is the vignette, which, for the purpose of the study, is a capsule summary of a trainee's profile of competencies (see box below for an example vignette).

Counselling Competencies

Trainee A demonstrates the ability to relate well to a range of clients. She/he is able to maintain a good rapport with clients, and demonstrates empathic listening and reflective skills. She/he is able to balance being directive in the session when necessary with a more collaborative style. When faced with challenging presentations she/he tends to revert to a more directive or passive style that occasionally limits progress in therapy sessions

The goal was to establish sets of carefully crafted vignettes that could serve as milestones (e.g., for each of four stages) along the developmental path towards competence attainment for each of many competence domains. Additional aims were to revise, improve and establish normative data for the CΨPRS (Clinical Psychology Practicum Competencies Scale), to disseminate the use of the two instruments across Australia, and to pilot cross disciplinary and international applications of the V-MAT. Chapter 2 summarises the approach and outcomes derived from the project's work on the CΨPRS. Details about the development and evaluation of the V-MAT are provided in Chapter 3.

Chapter 2 Clinical Psychology Practicum Competencies Rating Scale (CΨPRS)

Approach

The Clinical Psychology Practicum Competencies Rating Scale (CΨPRS) is a commonly used tool for assessing the competencies of clinical psychology trainees. These assessments are typically administered at the mid- and end-points of a trainee's placement and are critical for tracking the development of competency and for credentialing new clinical psychologists. Placements are a critical component of master's and doctoral training programs and in Australia typically, trainees participate in three or more field placements. The first placement is usually in the university's psychology clinic, while successive placements occur in external setting (e.g. hospitals, community-based psychological services). Placements vary widely across client populations and disorders, and each requires between 200-300 placement hours, with a minimum of 80-100 hours of face-to-face client contact. The CΨPRS is a key tool used to determine that a trainee has reached the required competency benchmarks, therefore it is critical that it accurately reflects the performance of trainees.

An overall aim of the project was to enhance practicum outcomes for clinical psychology trainees by improving the currently used rating instruments. Specifically, the project sought to determine the extent to which supervisors allocate ratings that are higher than would be expected for a trainee's level of experience. In addition, CΨPRS ratings provided a comparison with V-MAT scores as a means of assessing the effectiveness of V-MAT as a tool that delivers more accurate assessments (See Chapter 3).

The CΨPRS is based on a competency framework (Hatcher & Lassiter, 2007; Fouad et al, 2009), and comprises assessment items that measure specific theoretically-based domains. In the current project, mid- and end-placement assessments measured 10 competency domains: *Counselling, Clinical Assessment, Case Conceptualisation, Intervention, Ethical Attitude and Behaviour, Scientist-practitioner Approach, Professionalism, Psychological Testing, Reflective Practice and Response to Supervision* (see Appendix C: for domain descriptors). The version of CΨPRS used in the study presented here is the culmination of four-years of research undertaken by the project leaders. Based on cluster analyses, item-wise analyses, and revisions recommended by expert supervisors the following amendments were made:

1. Redundant items were removed and/or substituted to ensure a better representation of the domains assessed and current developments within competency-based literature.
2. Text was revised to more accurately reflect psychological and pedagogical principles.
3. The rating scale was modified to return a value from 1.0 – 4.9 accommodating four anchor points corresponding to four developmental stages that respectively ranged from: Stage 1 "Beginner" to Stage 4 "Competent" (see Appendix D:).
4. The random presentation of sub-domain items (i.e. items measuring specific

competencies) was retained following results demonstrating that a random sequence generated a different organisation of items into clusters.

Consequently, the current mid-placement CΨPRS comprises 10 overall items (one per domain) and the end-placement CΨPRS comprises 60 items: 10 overall items (one per domain) and 50 sub-domain items. Figure 1 presents an example overall item and rating scale.

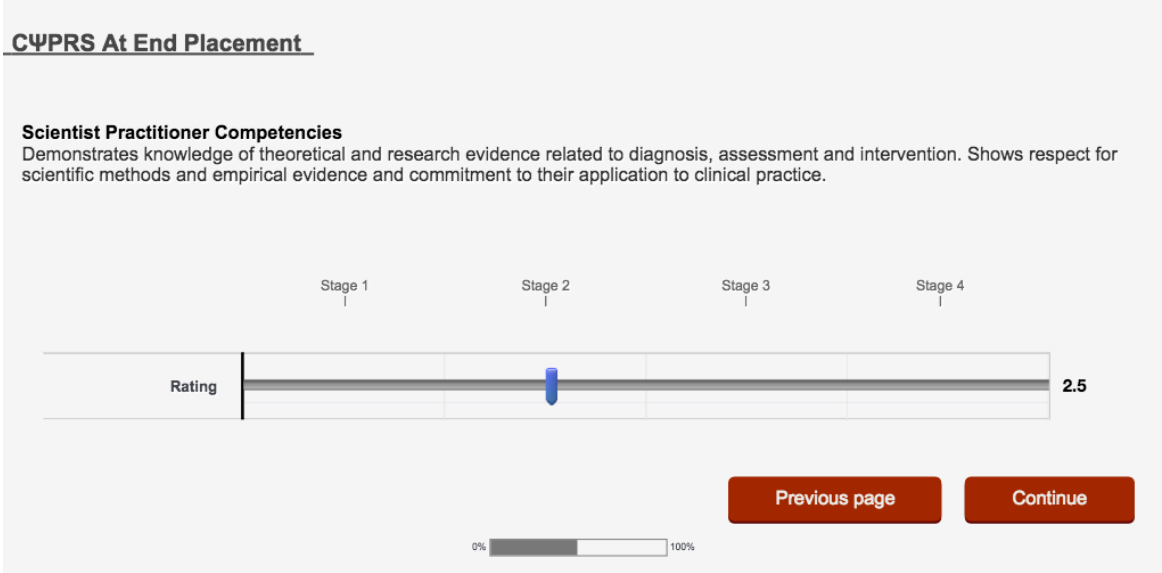


Figure 1. Example CΨPRS overall rating item (Scientist Practitioner Competencies) and rating scale.

The CΨPRS was administered via an online platform (http://www.uws.edu.au/vmp/submit) and mid- and end-placement data were collected from all 11 sites (nine Australian and two international). (N.B. The data presented in this report are derived from the project's nine Australian sites.) The custom built website allowed supervisors to access the CΨPRS assessments, trial a sample assessment, to obtain information about the project, and access dissemination material. Importantly, supervisors and placement coordinators received immediate automated email reports providing their trainee's ratings (See Appendix E: for an example report). A key benefit of online data storage is the capacity to provide detailed reports to placement coordinators. For instance, placement coordinators can receive, on a six-monthly basis, an Excel-chart that contains data from their institution (e.g. means of CΨPRS ratings across domain and placement, mean of placement progress ratings), allowing them to compare these data to a mean of all other participating institutions. Importantly, data is maintained with strict confidence and not disclosed across institutions.

Results

The number of CΨPRS entries received over a period of 18 months from Jan 2015 to June 2016 (Mid-placement = 535; End-placement = 587), far exceeded expectation (N = 400). This

can be attributed to the promotional efforts of the site directors and to the benefits offered by the online platform (i.e. ease-of-use, electronic data storage, automated email reports).

The 587 end-placement assessments were of 331 trainees enrolled in a Clinical Psychology Master's or Doctoral program at one of the nine partner universities. Programs were accredited by the Australian Psychology Accreditation Council (APAC) and the Clinical College of the Australian Psychological Society (APS). Prior to commencing their professional program, trainees had completed a four-year psychology degree at the undergraduate level. Assessments were provided by 220 supervisors with Masters or Doctoral qualifications in clinical psychology from an accredited training institution. All supervisors were eligible for full membership of the Australian Psychological Society (APS) College of Clinical Psychologists and had current supervisor accreditation with the Psychologists Board of Australia. In accordance with the approval received from the Western Sydney University Human Research Ethics Committee (H10828), supervisors gave informed consent and trainees were given the opportunity to opt-out of the research. The data presented in this report was obtained with consent and any identifying information (i.e. trainee and supervisor names, and email address) was removed.

Developmental trajectories among competency domains

Overall, there was a linear increase in competence from Placement 1 to Placement 4 and this trajectory is broadly evident across domains (See Table 1). At Placement 1, most trainees obtain scores in the Stage 3 range. In other words, trainees were rated as demonstrating levels of competence between Stage 3 (*growing independence/responsibility for own practice*) and Stage 4 (*graduate level competence*). Given their current level of experience, these trainees would be expected to obtain Stage 1 ratings (*beginner level competence*). In addition, the mean ratings of trainees completing Placement 2 are indicative of Stage 4 competence (Grand mean = 4.09). Again, these findings suggest that supervisors provide inflated ratings of trainee competence.

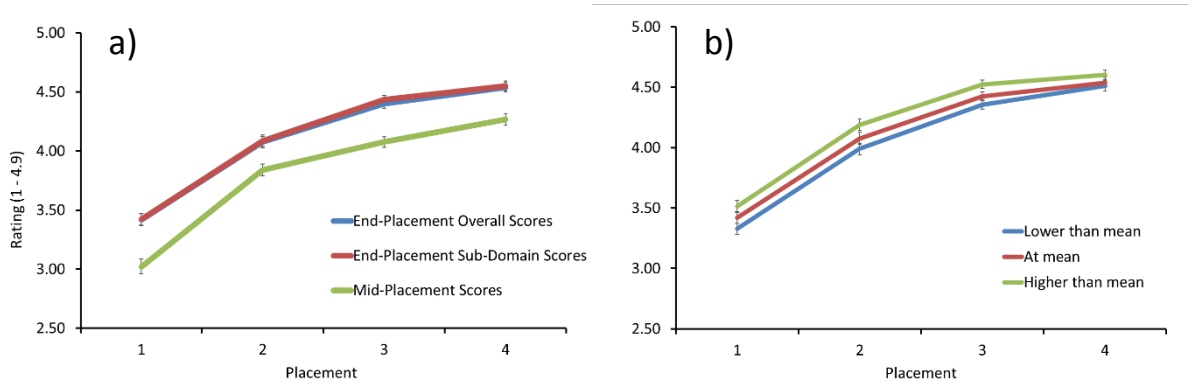
High ratings at the end of the first placement may be due to two factors: i) Systematic training and intensive supervision in the University Clinic, and/or ii) Leniency/halo bias. While further research is required to tease apart these factors, the findings are consistent with the propositions that CΨPRS assessments are vulnerable to the effects leniency and halo biases.

Table 1. ***Mean CΨPRS sub-domain ratings across placements. Number of trainees in each placement is indicated in parentheses. Rating range is 1.0 – 4.9.***

	Placement				
Domain	**1 (N = 185)**	**2 (N = 158)**	**3 (N = 117)**	**4 (N = 107)**	**Mean (N = 567)**
Counselling	3.42	4.15	4.48	4.59	4.06
Clinical Assessment	3.35	4.02	4.40	4.52	3.97
Case Conceptualisation	3.31	3.96	4.35	4.51	3.93
Intervention	3.34	4.02	4.34	4.52	3.95
Ethics	3.48	4.13	4.52	4.60	4.09
Scientist Practitioner	3.39	4.03	4.38	4.50	3.98
Professionalism	3.53	4.21	4.52	4.61	4.13
Psychological Testing	3.42	3.96	4.36	4.41	3.86
Reflective Practice	3.42	4.09	4.43	4.55	4.03
Response to Supervision	3.53	4.23	4.53	4.59	4.13
Grand Mean	**3.42**	**4.09**	**4.44**	**4.55**	**4.03**

In terms of the development of competence across placements, both mean overall and sub-domain ratings increased significantly across Placements 1, 2 and 3 ($p < .001$). However, there was no significant increase at Placement 4 (see Figure 2a). This pattern of results was consistent across domains with the exception of Psychological Testing which showed no improvement from Placement 2 to 3 for overall ratings only (See Table 1). A possible implication of this finding is that trainees reach peak competency by the end of their third placement and additional placements are redundant in terms of improving performance. Alternatively, ratings are at ceiling by virtue of the possible effects of leniency and halo biases.

Although ratings are consistently high across domains, there are some theoretically important differences between particular domains. Analyses reveal that competency ratings of Ethical Attitude and Behaviour, Professionalism, and Response to Supervision are significantly higher ($p < .001$) than the grand mean (i.e. mean of all domains). Conversely, ratings of Clinical Assessment, Case Conceptualisation and Intervention are significantly lower ($ps < .001$) than the grand mean. Figure *2*b displays the mean ratings for domains that were lower than the grand mean, at the grand mean, or higher than the grand mean across placements (P1 – P4). These results are discussed below (see "Identifying domain clusters").



Counselling, Scientist-practitioner Approach, Psychological Testing and Reflective Practice. Higher than mean = Ethical Attitude and Behaviour, Professionalism and Response to Supervision.

Identifying domain clusters

The project's access to a large, rich data set across multiple sites is currently unrivalled in the existing literature, and enables the study to conduct a hierarchical clustering analyses of the fifty independent competencies examined. This clustering statistical technique determines item-relatedness as they progressively link with one another to form clusters and super-clusters. The results offer new insights into the dimensional structure of competencies and will be reported in greater detail in future scientific publications. A key finding is worthy of mention in the current report. Consistent with the analyses of mean ratings, items fell into one of two large clusters: *Cluster A: Assessment and Intervention Competencies*, and *Cluster B: Appropriate Practitioner Attributes and Conduct*. Table 2 lists the domains that link together to form the two super-clusters. These super-clusters largely replicate the findings of a previous initiative by the current group of researchers (Gonsalvez et al., 2015) and also provide some justification for the distinction between foundational and functional competency domains as suggested by the work of other groups interested in mapping the structure and organisation of competencies (e.g., Fouad et al., 2009; Rodolfa, et al., 2005).

Table 2. *Hierarchical clustering of domains and items into two super-clusters A and B.*

Cluster A: Assessment and Intervention Competencies	Cluster B: Appropriate Practitioner Attributes and Conduct
All items from Case Conceptualisation and Clinical Assessment.	All Items from Counselling, Ethical Attitude and Behaviour, Professionalism and Response to Supervision.
Domains with items loading onto both clusters	
Intervention (5 of 7 items) *a) Knowledge of principles and procedures of interventions* *b) Effective application of theoretical knowledge of evidence-based treatment* *e) Efficiently conducts evidence-based treatment approaches* *f) Overcomes common difficulties in therapy through skilful interviewing* *g) Uses appropriate measures to regularly monitor treatment progress and outcomes.*	Intervention (2 of 7 items) *c) Implements interventions relevant to the needs of the client.* *d) Demonstrates flexibility and responsiveness in the application of treatments and/or in the implementation of manualised programs.*
Scientist-Practitioner (2 of 4 items) *a) Demonstrates knowledge of theoretical and research evidence* *d) Demonstrates systematic and habitual application of scientific principles*	Scientist-Practitioner (2 of 4 items) *b) Demonstrates the ability to critically analyse and evaluate the empirical literature* *c) Demonstrates respect for, and use of, the scientific method in clinical practice*
Reflective Practice (1 of 7 items) *e) Actively reflects on ways in which others' cross-cultural values and perspectives influence one's own responses and vice versa*	Reflective Practice (6 of 7 items) All items except e).

Note. Conducted on Placements 1 – 3. Psychological Testing was excluded from the analysis as only 57% of trainees were assessed on this domain.

Indeed, the cluster analysis confirms the trajectory data presented in Figure 2b which shows differential ratings across particular domains. Foundational competencies emerge from practitioner attitudes and values, whereas as functional competencies define the skills and knowledge that a practitioner draws on in their day-to-day work (Rodolfa et al., 2005). The distinction between these two competency types is important because if different domains have different developmental trajectories, then there are implications for training and supervision. For instance, it may be the case that a 4-stage model does not fit all domains. Indeed, it might be that training and supervision should focus on some domains early and others later, with some domains requiring additional training.

Overall, the current data confirms earlier findings (Bogo, Regehr, Hughes, Power, Woodford & Regehr, 2002; Gonsalvez & Crowe, 2014; Gonsalvez & Freestone, 2007; Robiner et al,

1998) suggesting that CΨPRS assessments are vulnerable to the effects of possible leniency and halo biases, with trainee's at early stages of placement receiving ratings that exceed expectations. The findings highlight the importance of developing assessments that more accurately reflect trainee competence. Indeed, there are implications for stakeholders when trainees are deemed as performing at graduate level competence (via CΨPRS) when in fact, they are still acquiring the skills and competencies required. Failure to identify deficits in competence risks causing harm to consumers of psychological services and averts the implementation of remediation (Forrest, Elman, Gizara & Vacha-Haase, 1999).

Brief training using vignettes improves CΨPRS ratings

In an effort to improve rating accuracy, an online training was developed early in the project. Although not formulated as an outcome at the commencement of the project, the training proved to be a valuable addition and elicited some important findings. Prior to completing the CΨPRS, supervisors were invited to complete the optional training. The training required supervisors to rate the competency level described in five standardised vignettes (*Beginner* through to *Competent*). These vignettes were designed to provide a more objective and thorough description of expected trainee performance at stages along the developmental trajectory (a catalogue of training vignettes are presented in Appendix F:). Vignette ratings, as determined by a panel of expert supervisors, were provided as feedback with which supervisors could compare their own ratings.

The 64 supervisors who opted to complete the online training provided fewer Stage-4 ratings compared to the untrained supervisors. Training reduced the overall number of Stage 4 ratings from 61 percent to 55 percent - a decrease of 7 percent. When considering early placements only, (Placement 1 and 2), training reduced the percentage of Stage 4 ratings from 43% to 31% - a difference of 12 percent. Hence, it appears that presenting vignettes in a brief training task calibrated supervisors' expectations of trainee performance more closely to those of experts. Consequently, fewer trainees were rated as performing at levels commensurate with a graduate, particularly trainees at early placements.

In addition to the effects of the brief online training, it is important to note that the ongoing campaign to improve the CΨPRS and to educate supervisors on the issues of trainee assessment, has been beneficial. Comparing a data set collected in 2012 with the current data, it is evident that CΨPRS ratings have lowered. Specifically, the percentage of trainees in Placement 1 receiving ratings consistent with Stage 3 has decreased from 68 percent to 48 percent (N.B. supervisors who completed the online training were excluded). This effect can be most likely accounted for by the various improvements made to CΨPRS over the past 4 years (e.g., clearer criteria for competence at each stage) and to the increased awareness within the field of the issues of leniency and halo bias. Nonetheless, new supervisors are recruited on an ongoing basis and are called upon to assess trainee competence. As these supervisors have no previous experience with assessing trainees, and have not had access to a reliable reference point for developmental milestones, it is important to retain a vignette-based training to remediate the potential effects of bias.

Establishing a normative data set

An invaluable outcome was the collection of over 500 mid- and end-placement assessments. This large and unique data set is unrivalled by prior research and has provided an extraordinary opportunity to explore a multitude of issues in trainee assessment (e.g. halo and leniency bias, trajectory of competency development across placements and across mid- and end-placement, identification and trajectory of under-performing students, competency domain structure). The potential for broad-scale dissemination of findings is vast and the research outcomes will be of interest both nationally and internationally, and across disciplines.

Importantly, the data provides a robust set of norms that allows clinic directors and placement coordinators to compare their institution's performance against overall performance (i.e. across institutions), and an individual trainee's performance with their institution's means (N.B. An institution's data is not divulged to other clinic directors or placement coordinators). This normative data set is vitally important for the identification and remediation of underperforming students. The normative data is also informative in identifying particular domains within an institution that are not developing according to the expected trajectory (e.g. inflated positive ratings or consistently low ratings across particular domains). Hence, clinic directors and placement coordinators are provided a comprehensive and panoramic view of their institutions ratings, allowing them to make informed decisions about the needs for individual trainees training (e.g., specific placement experiences allowing further development of particular competencies). The normative data set derived from ratings from all Australian partner institutions is presented in Appendix G.

Chapter 3 Vignette Matching Assessment Tool

Approach

The current initiative builds on the success of an ALTC-funded multisite project (PP10-1624). This previous work was designed to i) establish that the initiative satisfied basic criteria to establish proof-of-concept, ii) gather and evaluate pilot data across several domains of competence, and iii) determine if the assessment tool had the potential to reduce leniency and halo biases associated with the traditional Likert-based rating scale. A feature of the V-MAT is the use of standardised vignettes to capture the bounds of competencies demonstrated by a trainee. Thus, rather than providing an arbitrary rating of trainee performance, supervisors indicate whether a trainee's performance is higher than, equal to, or lower than performance described in the vignette. Results from the previous ALTC-funded project indicated that the vignette-based tool (V-MAT) yielded ratings that were more aligned with those expected for trainees at particular developmental stages. In other words, pilot data indicated that the V-MAT attenuated the leniency and halo effects seen in conventional assessment tools (e.g. CΨPRS).

Two key aims of the current project were to revise and recalibrate vignettes designed under the previous project, to test a larger sample in order to establish the effectiveness of the V-MAT, and to obtain a set of normative data. The initial creation of the vignettes was implemented under the aforementioned ALTC project and details are available in the project report (Gonsalvez, 2012) and have been published in a peer-reviewed journal (Gonsalvez et al., 2013).

Vignette standardisation

In the current project, the vignettes were revised, and parallel vignettes were created. They were then recalibrated on a visual analogue scale identical to that used for CΨPRS ratings, by an additional group of experts for use in the current V-MAT (Appendix H: presents the vignettes used for the Case conceptualisation domain). The expert calibrators were supervisors from Australian Universities (*N* = 25, 12 females, 13 males) and were mostly university Clinic Directors or Practicum Coordinators. They had considerable clinical experience as registered psychologists (*M* = 18.68 years in practice, *SD* = 5.37), as supervisors (*M* = 14.76 years; *SD* = 6.83), and in rating the competencies of psychology trainees (*M* = 10.45 years; *SD* = 6.55). Vignettes had to satisfy stringent criteria (e.g., means were close to mid-point of stage, good agreement among experts) before they were chosen for use in the V-MAT task (see Table 3). Calibrated vignettes that satisfied these criteria are *standardised vignettes*. Forty-one standardised vignettes were included in the catalogue that comprised the V-MAT. Thirty-six vignettes, four-vignettes per set, captured competencies in each of four stages in the following nine domains: *Counselling, Clinical assessment, Case conceptualisation, Intervention (Generic), Cognitive-behavioural intervention, Ethical attitude and behaviour, Scientist-practitioner approach, Professionalism, Psychological testing, Response to supervision*. Five vignettes were required to capture typical patterns of progress during placement (Unsatisfactory, Slow, Inconsistent, Good, and Excellent progress), so the Response to Supervision and Progress during Placement domain was represented by five (rather than four) vignettes.

Table 3. *List of Domains and Stages with corresponding calibration scores (and standard deviations)*

Domain	Vignette/Stage				
	1	2	3	4	5
1. Counselling	1.58 (0.37)	2.32 (0.51)	3.52 (0.43)	4.57 (0.24)	-
2. Clinical Assessment	1.35 (0.35)	2.30 (0.48)	3.34 (0.53)	4.65 (0.24)	-
3. Case Conceptualisation	1.73 (0.38)	2.37 (0.46)	3.29 (0.61)	4.54 (0.27)	-
4. Intervention (Generic)	1.60 (0.31)	2.56 (0.36)	3.65 (0.46)	4.31 (0.46)	-
5. Cognitive-Behavioural Intervention	1.58 (0.36)	2.79 (0.50)	3.55 (0.36)	4.46 (0.42)	-
6. Ethical Attitude and Behaviour	1.75 (0.52)	2.10 (0.58)	3.00 (0.55)	4.33 (0.68)	-
7. Scientist Practitioner	1.87 (0.35)	2.92 (0.54)	3.28 (0.48)	4.65 (0.24)	-
8. Professionalism	1.35 (0.35)	2.39 (0.56)	3.71 (0.53)	4.64 (0.27)	-
9. Psychological Testing	1.41 (0.36)	2.41 (0.64)	3.56 (0.51)	4.61 (0.25)	-
10. Response to Supervision and Placement Progress	1.83 (0.48)	2.55 (0.22)	3.45 (0.22)	4.38 (0.33)	5.45 (0.22)

Results

Administration and scoring of the V-MAT

The V-MAT was presented online, with a random presentation of the 10 domains - either in ascending or descending stage order. Supervisors were required to carefully review the vignette before making a simple judgment: whether their trainee's profile of competency was higher, lower or equal to the level of competency depicted in the vignette. If a supervisor indicated that a trainee was performing higher than the vignette from a particular stage (e.g. Stage 2) but performing lower than the vignette from the subsequent stage (i.e. Stage 3), they were directed to indicate where between these stages the trainee was performing, using a sliding scale (See Appendix I:). For the current project, the V-MAT was an optional assessment that supervisors were invited to complete after the CΨPRS in exchange for a $50 entertainment voucher. Ninety-one supervisors from Australian universities opted to complete the V-MAT and, on average, it took about 12 minutes to complete.

To compare developmental paths among domains, mean rating was compared to the grand mean (mean of all domains excluding Response to Supervision). Relative to the grand mean, trainees were rated highly across the Counselling, Ethical Attitude and Behaviour and Professionalism domains, but were given lower scores for Case Conceptualisation, Intervention (Generic, CBT), and Scientist-Practitioner Approach (*p*s < .004). These findings are similar to those reported for the CΨPRS (see Chapter 2) in which ratings tended to be higher for foundational compared to functional domains (see Figure 3b). In terms of V-MAT scores across placements, there was a significant linear increase ($p < .001$) from Placement 1 to Placement 4 but planned comparisons evaluating differences between Placement 1 and 2, Placement 2 and 3, and Placement 3 and 4 fell short of being statistically significant(See Figure 3a).

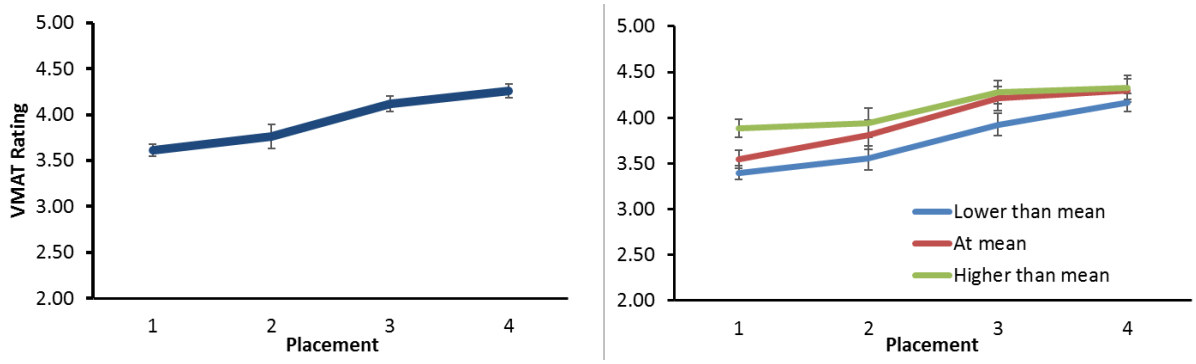


Figure 3. a) V-MAT rating collapsed across domains as a function of placement, b) Mean ratings across Placements 1 to 4. Lower than mean = Case Conceptualisation, Generic Intervention, Cognitive-Behavioural Intervention and Scientist-Practitioner Approach. At mean = Clinical assessment and Psychological Testing. Higher than mean = Counselling, Ethical Attitude and Behaviour and Professionalism. Error bars represent standard error of the mean. (N = 90) N.B. Response to Supervision data was excluded because this domain comprised a set of 5 vignettes that were scaled differently (1.0 to 5.9).

For five of the nine domains, ratings at Placement 1 were significantly lower than at Placement 4 (*p*s < .01), but the remaining four domains (Ethical Attitude and Behaviour, Intervention (CBT), Psychological Testing, Professionalism) show no statistically significant improvement, despite increases in their means ratings. As Table 4 shows, ratings for Ethical Attitude and Behaviour ($M = 3.89$) and Professionalism ($M = 3.96$) were high at Placement 1, indicating that trainee's had almost graduate levels of competency early in their training, allowing little room for improvement.

Table 4. *V-MAT ratings for the 10 domains across placement*

	Placement				
Domain	**1 (N = 35)**	**2 (N = 25)**	**3 (N = 14)**	**4 (N = 16)**	**P1 and P4 Difference**
Counselling*	3.80	4.02	4.15	4.39	**0.59**
Clinical Assessment*	3.54	3.94	4.27	4.38	**0.84**
Case Conceptualisation*	3.40	3.51	3.94	4.40	**1.00**
Intervention (Generic) *	3.42	3.74	4.09	4.21	**0.79**
Intervention (CBT)	3.49	3.48	4.11	3.97	**0.48**
Ethical Attitude and Behaviour	3.89	3.77	4.33	4.33	**0.44**
Scientist-Practitioner Approach*	3.38	3.53	3.82	4.10	**0.72**
Professionalism	3.96	4.05	4.37	4.28	**0.32**
Psychological Testing	3.42	3.62	3.96	4.14	**0.72**
Response to Supervision*	4.68	4.78	4.90	5.32	**0.64**
Grand Mean (9 Domains)#	**3.61**	**3.76**	**4.12**	**4.26**	**0.65**

Note. * refers to domain scores that demonstrated a significant increase at Placement 4, relative to Placement 1. # Response to Supervision was excluded.

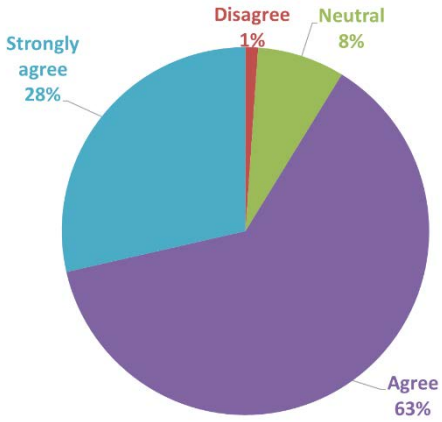
One of the key goals of the project was to compare CΨPRS and V-MAT ratings to determine whether a vignette-based approach reduces the leniency and halo effects evident in CΨPRS. In order to compare the two assessments directly, raw scores were converted into stage-based scores for those domains that were common across both instruments. The mean ratings of these domains (*Counselling, Clinical Assessment, Case Conceptualisation, Intervention, Ethical Attitude and Behaviour, Scientist-Practitioner Approach, Professionalism and Psychological Testing*) derived from the V-MAT and CΨPRS instruments were compared. This analysis revealed that there was no initial evidence of an improvement in leniency. However, a clearer picture can be obtained by viewing the percentage of trainee's falling within each of the stages across CΨPRS and V-MAT (see Table 5). This data reveals that across both scales, very few trainees were assigned to Stage 1, and this was the case for both CΨPRS and V-MAT. Although there was no overall difference in terms of leniency across the two assessment tools, V-MAT identified a much larger proportion of trainees as falling within Stage 3 (41.31%), compare to CΨPRS (32.31%). In other words, fewer trainees were assigned to Stage 2 and Stage 4 using V-MAT. This pattern was particularly prominent for Case Conceptualisation, Scientist-Practitioner and Professionalism domains that show fewer Stage 4 ratings in V-MAT (vs. CΨPRS); 7.67 per cent, 24.17 per cent and 9.89 per cent respectively. Because field supervisor ratings are anchored against calibration scores of experts in the V-MAT, these results suggest that for these domains, the expert panel had higher expectations/standards than supervisors did for competence at Stage 4, but lower standards than supervisors for competence at Stage 2.

Table 5. *Percentage of Trainees (N = 90) Assigned to the Four Developmental Stages based on the CΨPRS and V-MAT*

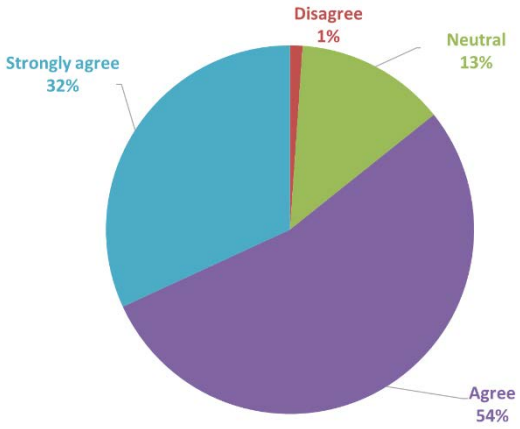
	CΨPRS				V-MAT				
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 1	Stage 2	Stage 3	Stage 4	Stage 4 % Differences
Counselling*	1.10	9.89	29.67	59.34	1.10	3.30	38.46	57.14	-2.2
Clinical Assessment	1.10	15.38	35.16	48.35	1.10	6.59	42.86	49.45	1.1
Case Conceptualisation*	1.14	11.36	42.05	45.45	2.22	5.56	54.44	37.78	-7.67
Intervention	1.12	12.36	46.07	40.45	-	9.76	46.34	43.90	3.45
Ethical Attitude and Behaviour	1.10	6.59	20.88	71.43	3.30	2.20	19.78	74.73	3.3
Scientist-Practitioner*	1.10	9.89	31.87	57.14	2.20	17.58	47.25	32.97	-24.17
Professionalism*	1.10	7.69	16.48	74.73	1.10	4.40	29.67	64.84	-9.89
Psychological Testing*	-	26.53	40.82	32.65	2.04	14.29	53.06	30.61	-2.04
Grand Mean*	1.03	11.60	32.31	55.07	1.73	7.40	40.31	50.55	-4.52

To explore the validity of V-MAT, correlations were conducted between CΨPRS and V-MAT scores and these were highly significant, (Pearson's *r* ranging from .46 to .67, each significant at .002 or lower) suggesting that both assessments are measuring similar constructs. This is important as it provides evidence that V-MAT is a likely to be a valid measure of trainee competency and consequently, is a viable alternative to CΨPRS. In terms of determining the presence of halo effects, between-domain correlations within CΨPRS and V-MAT were informative. Predictably, domain scores within each of the assessment tools were significantly correlated (V-MAT: $p < .05$, CΨPRS: $p < .002$). However, correlations between domain scores were lower for V-MAT (mean *r* of .55) compared to CΨPRS (mean *r* of .80). The difference between Pearson's r values across the two assessments was highly significant ($p < .001$). This pattern of very high correlations among the different competency domains observed for the CΨPRS is consistent with and supports the interpretation that the CΨPRS like other Likert instruments are vulnerable to halo effects. The reduced magnitude of correlations observed for the V-MAT (mean *r* of .55) is indicative that the V-MAT reduces halo bias and therefore holds a major advantage over the CΨPRS.

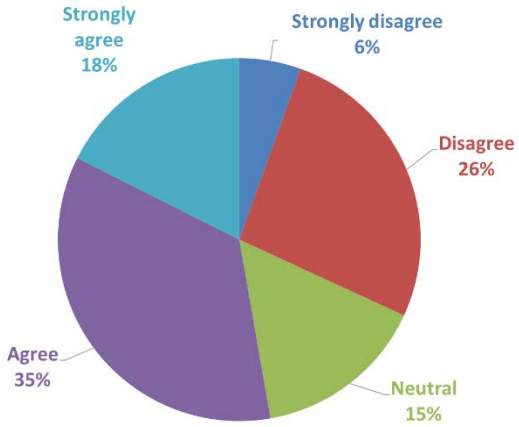
The useability of the V-MAT is of critical importance in terms of increasing uptake and the project outcomes indicate that indeed, V-MAT has potential for widespread use. Feedback from supervisors who used both instruments was collected at the end of each trainee assessment and the results reveal that supervisors responded positively to the V-MAT. For instance, 63 per cent of respondents agreed that V-MAT better facilitated accurate and valid competency judgements, with 28 per cent strongly agreeing with this statement. Overall, 84 per cent of supervisors preferred V-MAT over CΨPRS, which is a very positive outcome for the project. Furthermore, qualitative comments confirmed a positive evaluation of the V-MAT, highlighting its innovation, useability and ecological validity. Figure 4 presents supervisors' attitudes to the four evaluation statements.



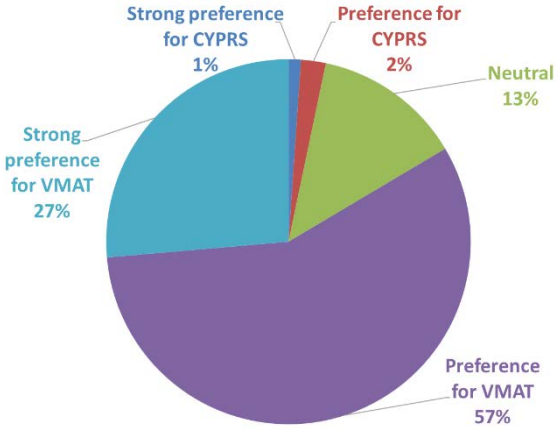
Compared to CΨPRS, VMAT better facilitated accurate and valid judgements of competencies



If trainee evaluated by myself and colleague, VMAT likely to be more reliable than CΨPRS



Compared with VMAT, CΨPRS made it easier to differentiate between developmental stages



Preference between VMAT and CΨPRS

Figure 4. Supervisor ratings of CΨPRS and VMAT assessment tools (N = 91).

In addition to the calibration scores provided by the panel of Australian experts, 13 experts from the United Kingdom and New Zealand scored the vignettes. While these calibration scores were not factored into the decision to retain or discard vignettes, they have become part of a database of international calibration scores that will be used to create version of V-MAT that are applicable to the UK and New Zealand. With the strong support from site coordinators from the University of Canterbury and University of Glasgow, the collection of international calibration scores is ongoing. Further details concerning the project's international collaborators are presented in Chapter 5.

Chapter 4: Dissemination

Dissemination strategies and outcomes are described and broadly comprise two overlapping components:

1. Dissemination of products that have been developed. Specifically, the methods and measures for assessing supervisee competencies in field placements.
2. Dissemination of the research findings and broader learnings from conduct of the project.

The components overlap because the products which include the measures have been developed with close attention to the research and feedback of this research through peer review and feedback. Further, promotion of the products and the research findings coming from the overall project were disseminated simultaneously through a range of strategies (e.g., workshops, conference presentations).

Dissemination of products

The two main products from this project are the CΨPRS and V-MAT measures. However, another major product is the online system for training, completion and reporting of these measures. The uptake of the CΨPRS in particular has been outstanding and exceeded expectations. At time of submission of the OLT project proposal, 5 universities were using the online version of the CΨPRS, currently, 13 universities, including 2 international universities are using the online version of the CΨPRS. In addition, 10 other universities are using hardcopy versions or slightly modified versions to suit requirements of their institutions. In a nutshell, approximately 62 per cent (23 of 37 universities offering clinical psychology) of institutions in the country offering clinical psychology are using instruments designed and refined by the project. At the current time, the V-MAT has not been made available for use by other training institutions.

This relatively high level of uptake has been achieved through the following dissemination strategies. One of the dissemination outcomes was the development of an online platform to administer the CΨPRS and V-MAT, score them, and report the results. This was identified as a priority early in the project and consequently, a website hosted by Western Sydney University was developed (http://www.uws.edu.au/vmp/vmat). This website was designed with both users and the general public in mind and it served a number of specific purposes. Firstly, it provided clinic directors, supervisors, trainees and interested parties with access to information about the project, the project team, and about the V-MAT in more detail. It acted as a platform for disseminating conference material and publications, and most importantly, it provided links for both mid- and end-placement assessment tools (CΨPRS and V-MAT). From a dissemination perspective, it allowed easy remote access to any potential users not only within Australia, but from around the world. Further to that, we have integrated into the website training in the use of the measures, so that not only are the measures themselves readily available, but training is also readily available.

Another key outcome was the promotion of the project via a systematic and comprehensive dissemination program to facilitate the uptake of the instrument by additional Australian universities. A number of strategies were implemented, including the development of

promotional flyers, the presentation of dissemination workshops and conference talks, and the publication of research findings. One-page promotional flyers were designed to promote both the online CΨPRS platform and the V-MAT, and targeted clinic directors around Australia (see Appendix K and Appendix L). The dissemination workshops were particularly important in the promotion of the project and in bringing awareness to the issues facing trainee assessment. Two workshops held at The University of Queensland and The University of Melbourne were attended by clinic directors and supervisors and lead by two of the project team members, Mark Donovan and Kathryn Nicholson Perry. The aim was to highlight the issues that face current trainee assessment tools, to present project findings and to promote the V-MAT. Importantly, the workshops provided an opportunity for supervisors and clinic directors to discuss their own experiences and concerns about trainee assessment. The workshops drew such interest that attendee numbers were capped, with 45 attending in Brisbane and 28 in Melbourne. Formal rated feedback was positive with participants indicating that they found the workshop to be informative and that the content and presented material improved their knowledge of the issues of trainee assessment and gave them a greater understanding of the assessment tools (see Appendix M for a summary of feedback). Given their success, three additional workshops have been scheduled to cater for Sydney-based universities.

Dissemination of research

Thirteen conference presentations have been completed and are listed in Appendix J. Of particular note was a symposium lead by Professor Craig Gonsalvez at the 50th Australian Psychological Society Annual Conference, 2015. This symposium, “Assessing competence development of psychologist practitioners: Promises, pitfalls and progress”, consisted of four presentations from project team members and was an important forum for highlighting the issues and future directions of trainee assessment. In addition, project findings were disseminated at two international conferences: Twelfth International Interdisciplinary Conference on Clinical Supervision (IICCS), New York, June 2016 and the 31st International Congress of Psychology (ICP), Japan, July 2016. Feedback from IICCS was illustrative of the success and broad interest in the project outcomes. Craig Gonsalvez presented on the design, calibration and standardisation of the V-MAT, and the outcomes of the brief training initiative (i.e. online training with vignettes). The presentation was extremely well received with several international leaders in the field, including Ed Watkins (Editor of International Handbook of Clinical Supervision) and Marion Bogo (pioneer of the vignette method), expressing their strong interest in the project. In addition, a leading researcher in the field of education and counselling training, Michael Ellis, expressed interest in using the vignettes in a large study involving several universities in the United States. Notably, Craig Gonsalvez was invited to give the plenary address at the same conference in 2017.

Dissemination through peer reviewed scholarly journals has also continued. A publication plan was developed from the outset of the project and is discussed at regular team meetings. Since the completion of the previous project, two peer-reviewed scientific papers have been published (Gonsalvez et al., 2013) with one of them being an invited contribution in an international journal (Gonsalvez & Crowe, 2014). Since the commencement of the current project, one additional publication on the topic has been published in the journal, *Clinical Psychology: Science and Practice* (Gonsalvez et al., 2015). Two others have been submitted for publication in a special issue of the Australian Psychologist with the theme,

“Recent developments in professional supervision: Challenges and Practice implications” (at the time of this report the first paper has been accepted and the second is undergoing minor revisions).

The first of these publications reports on the beneficial effects that participating in an online training has on reducing CΨPRS ratings (Terry, Gonsalvez, & Deane, 2016) (Also see Chapters 2 and 3 for more information). The second publication (Nicholson Perry, Donovan, Knight, & Shires, 2016) describes the processes and methods used in clinical psychology programs to address slow or problematic progress amongst clinical psychology trainees. This work was conducted in order to better clarify how the CΨPRS and V-MAT might be utilised to detect and remediate difficulties with progress early.

In addition, four manuscripts were identified as deliverables and all are currently in progress. A delay in their submission is primarily due to the slow uptake of the V-MAT in the initial stages of the project. However, preliminary findings comparing CΨPRS with V-MAT ratings were presented at the ICP conference in Japan and the final version of the manuscript is in preparation. A second manuscript reporting the dimensional structure of CΨPRS is near completion and will be followed by another reporting the structure of V-MAT. In progress, and nearing completion, are two additional manuscripts: a report on the trajectory of trainees across multiple placements, and an investigation of the outcomes of trainees identified as under-performing in early placements. A substantial manuscript presenting an in-depth comparison of V-MAT and CΨPRS is awaiting a finalised data set and will be a central focus for project leaders at the close of this project. In addition to the aforementioned manuscripts, project team members have nominated to lead the preparation of additional manuscripts that present project outcomes aligning with their particular interests (e.g. comparisons of ratings across new and experienced supervisors). Team members are committed to the dissemination of project outcomes and will receive continued support from project leaders to prepare and finalise their selected manuscripts. The publication plan currently has 10 further papers specified.

Chapter 5: Impact and Sustainability

The current project has engaged a strong and far-reaching dissemination program that has resulted in the formation of important disciplinary and interdisciplinary linkages. Its success is considered as a part of a broad pedagogical context: The development of accurate, valid and reliable assessment tools that are underpinned by a theoretically informed and rigorously tested framework is a *priority concern* for trainers across multiple disciplines (e.g. psychology, medicine, social work, counselling). Indeed, the enthusiasm of international partners and the emerging interest from experts in cross-disciplinary fields (i.e. medicine) demonstrate that issues of bias in trainee assessment are widely recognised. Consequently, this project has significant implications both nationally and internationally, as it offers a novel, flexible and effective model of trainee assessment.

International Impact

While the CΨPRS and V-MAT are intended to be internationally applicable, it is important that competency benchmarks are appropriately mapped across the developmental trajectory. In other words, benchmarks must be set for each site and assessment items matched to expected levels of competency. International sites also require adequate norms to which trainee performance can be compared since competency benchmarks may vary somewhat by country. Project collaborators from the United Kingdom (Glasgow University, Scotland) and New Zealand (University of Canterbury) have taken important first-steps towards validating CΨPRS and V-MAT cross-nationally. Both sites have participated in the research, with supervisors providing CΨPRS and V-MAT data that will contribute to the development of international norms. Importantly, the calibration of V-MAT items by experts from UK and New Zealand is underway. These calibration scores will inform the revision of vignettes for international use and will form part of a normative set of data for each country. The project team has also received requests from researchers in the USA who also have an interest in trialling and validating the measures in that country. Finally, the involvement of overseas collaborators offers an invaluable opportunity to disseminate the research findings from each site on an international stage. Indeed, it is well known that the effects of halo and leniency bias on trainee assessment is not isolated to Australia, but are identified as major concerns for supervisors across all regions. Therefore, it is expected that the outcomes of this project will continue to be widely and well received by international colleagues. Reports from the University of Canterbury and Glasgow University are presented in Appendix M and Appendix O.

Cross-disciplinary Impact

While the V-MAT was originally conceived as a tool for assessing the competencies of psychology trainees, it is apparent that the vignette approach has broad application to other disciplines. One objective of the project was to offer an online assessment tool analogous to the CΨPRS but with items applicable to psychiatry (MYPRS). An additional aim was to pilot a

version of the V-MAT to assess competencies of psychiatry trainees. This aspect of the project was conducted in association with the School of Medicine at University of Wollongong (UoW). The MYPRS yielded only 30 assessments from supervisors which were below our targets. In addition, the psychiatry V-MAT was not adopted by supervisors. Despite the best efforts of project leaders and the UoW researchers, supervisors demonstrated a strong preference to retaining the paper-version of their current assessment tool. However, project leader Professor John Bushnell has secured a strong expression of interest from the School of Medicine to trial a V-MAT to assess medical trainees. This internally funded research will be conducted with the support of Associate Professor David Garne and Professor Ian Wilson from the School of Medicine, UoW. Please refer to Appendix P for a detailed report on the cross-disciplinary application of the V-MAT.

Future Directions and Sustainability

Following feedback from users, the project team has already commenced a trial of a hybrid CΨPRS and V-MAT application that combines the strengths of both approaches while reducing the time required for completion. Given the superior results with V-MAT in reducing halo effects, an obvious version of the hybrid could involve the use of the V-MAT to capture the overall limits of competence for the various domains, followed by the use of selected CΨPRS items to drill down into the detail. Further, because of the need for a quick overview of competence the V-MAT could replace the CΨPRS for mid-placement assessment. Together the dissemination strategies and expressions of interest suggest that the project has already had a substantial impact. Several strategies have also been implemented in order to increase the sustainability of the assessment tools and processes into the future. Specifically, a costing per clinical program has been calculated and is charged to each University to continue to use the online delivery system. These fees will sustain the database and allows an approximately half-day position to trouble shoot and maintain the programming and respond to specific enquiries from universities as well as setting up new universities on the system. There are plans to explore the development of additional specialised reporting that may allow further user-pay fees to sustain the system. Ultimately, a goal of the research and development team is to have all clinical psychology programs within Australia utilising either the CΨPRS or V-MAT in some form (either core item sets or full measures). We will continue to monitor dissemination and impact through our close links with clinical psychology program Directors.

Sustaining the research programs that underpin and inform the tools and applications has also been considered. All participating partners maintain an interest in contributing to the research programs and through the publication plan have committed to working on existing data. The project team have also planned to apply for future national competitive research funds in order to improve, test and refine the sophistication of these instruments and to advance their applications.

Appendix A: Certification

Certification by Deputy Vice-Chancellor (or equivalent)

I certify that all parts of the final report for this OLT grant provide an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.

27/09/2016

Name: Professor Denise Kirkpatrick Date:

Appendix B: References

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Appendix C: Domain Descriptors

Domain Name	Descriptor
1. Counselling	Includes ability for empathic understanding, application of basic counselling techniques, and collaborative goal formulation with clients.
2. Clinical Assessment	Includes ability to perform adequate assessments in a time efficient and in a personally/socio-culturally sensitive manner. Ability to demonstrate appropriate diagnostic skills, prioritise issues and assess risk.
3. Case Conceptualisation	Ability to appropriately conceptualise and formulate cases.
4. Intervention	Ability to generate realistic treatment plans and monitor treatment progress and outcomes. Knowledge and skills required to conduct a range of empirically supported treatment interventions.
5. Ethical Attitude and Behaviour	Knowledge of and commitment to ethical/professional codes, standards and guidelines, and recognition of applicable circumstances. Maintains appropriate and respectful boundaries and seeks consultation on ethical issues.
6. Scientist-Practitioner Approach	Knowledge of theoretical and research evidence related to diagnosis, assessment and intervention. Respect for scientific methods and empirical evidence and commitment to their application to clinical practice
7. Professionalism	Effective organisation and time management for client care and management. Clear and professional expressive skills, professional dress and demeanour. Good interactional skills with colleagues and other professionals.
8. Psychological Testing	Ability to apply knowledge to correctly select, administer, score and interpret relevant psychometric tests. Good reporting skills. Knowledge of psychometric issues and testing theory.
9. Reflective Practice	Demonstrates self-care, self-awareness and reflectivity reflection on own emotions, beliefs, values and behaviour and their effect on others. Appropriately self corrects.
10. Response to Supervision	Good preparation and collaboration within supervision, openness to and effective use of feedback. Ability to self-reflect and self-evaluate accurately

Appendix D: Stage Descriptors

Stages	Description of Stages
Stage 1. Beginner	Knowledge, skills, attitude-value and relationship competencies are yet to be developed or at an early stage of development, and are on par with trainees commencing training without any practicum experience. Frequent minor or major inadequacies may be apparent, including difficulty applying knowledge to practice, difficulty managing sessions or conducting specific tasks, or little awareness of process issues. In later placements, a Stage 1 rating indicates failure to demonstrate adequate competency, with more frequent or intensive supervision required than would be expected.
Stage 2.	Knowledge, skills, attitude-value and relationship competencies are developing and while more basic competencies are demonstrated under some circumstances, they may be inconsistent or not generalised. More complex competencies may be absent. Minor inadequacies occur frequently and major problems may occur occasionally, although insufficient to cause serious harm. In later placements, a Stage 2 rating may indicate a failure to demonstrate adequate competency in the domain or a requirement for additional supervision to ensure adequate performance.
Stage 3.	The trainee demonstrates a moderate repertoire of basic knowledge, skills, attitude-value and relationship competencies which are generalised to a wide range of common contexts, with more complex competencies emerging. There is a growing independence and responsibility for their own practice, with only minor inadequacies occurring.
Stage 4. Competent	The trainee demonstrates a wide repertoire of basic to advanced knowledge, skills, attitude-value and relationships competencies applied across a wide range of contexts. Performance is consistent with competencies of a graduate who has just completed all requirements of their professional Master's degree. There is an appropriate level of independence and development of adequate professional identity.

Appendix E: CΨPRS Automated Email Report

Trainee Information	
Clinical Trainee	Jill Bloggs
Institution of Study	University of Excellence
Course	Professional Masters Degree
Year of Training	2
Placement Hours before this placement	0
Supervisor Information	
Primary Supervisor	Dr. Smith
Additional Supervisors	Dr Jones
Placement Information	
Placement Agency	University Psychology Clinic
Date of Placement - from/to	11/01/16 - 20/06/16
Client Population/s	Older Adult, Adult, Adolescent, Child and Family
Client Type/s	Individual
Placement Setting	University Training; University Psychology Clinic, Initial Placement
Placement Type/s	Community Health, Mental Health
Placement Context / Focus/es	Clinical Assessment, Interventions, Psychological Testing

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Numerical ratings signify a point (station) you have reached along a continuum (journey) of development from "Beginner" (Stage 1) to "Competent clinician" (Stage 4). Descriptions of these stages are provided below.

The ratings, on a scale from 1.0 to 4.9, represent your supervisor's judgment in regards to your progress towards competence within each of the domains. Thus, students early in their training (e.g., doing Practicum 1) would be expected to obtain lower scores than students later in their training (e.g., Practicum 3 or 4).

If a practicum mark or grade is generated at your institution, these grades are usually the product of developmental ratings AND consideration of additional factors including other assessment components.

STAGES	DESCRIPTION OF CATEGORIES
STAGE 1. BEGINNER Range: 1 - 1.9	*Knowledge, skills, attitude-value and relationship competencies are yet to be developed or at an early stage of development, and are on par with trainees commencing training without any practicum experience. Frequent minor or major inadequacies may be apparent, including difficulty applying knowledge to practice, difficulty managing sessions or conducting specific tasks, or little awareness of process issues. In later placements, a Stage 1 rating indicates failure to demonstrate adequate competency, with more frequent or intensive supervision required than would be expected.*
STAGE 2. Range: 2 - 2.9	*Knowledge, skills, attitude-value and relationship competencies are developing and while more basic competencies are demonstrated under some circumstances, they may be inconsistent or not generalised. More complex competencies may be absent. Minor inadequacies occur frequently and major problems may occur occasionally, although insufficient to cause serious harm. In later placements, a Stage 2 rating may indicate a failure to demonstrate adequate competency in the domain or a requirement for additional supervision to ensure adequate performance.*
	The trainee demonstrates a moderate repertoire of basic knowledge, skills, attitude-value and relationship

STAGE 3. Range: 3 - 3.9	*competencies which are generalised to a wide range of common contexts, with more complex competencies emerging. There is a growing independence and responsibility for their own practice, with only minor inadequacies occurring.*
STAGE 4. COMPETENT Range: 4 - 4.9	*The trainee demonstrates a wide repertoire of basic to advanced knowledge, skills, attitude-value and relationships competencies applied across a wide range of contexts. Performance is consistent with competencies of a graduate who has just completed all requirements of their professional Master's degree. There is an appropriate level of independence and development of adequate professional identity.*

*Blank fields indicate these domains were not targeted as part of this placement.

1. Counselling Competencies - Overall Rating *Demonstrates empathic understanding, application of basic counselling techniques, and collaborative goal formulation with clients.*	2.9
a) Applies basic counselling techniques appropriately including clarification, paraphrasing and summarising responses.	2.9
b) Forms and communicates an empathic understanding to clients, carers, and significant others.	2.5
c) Formulates client goals in a collaborative manner.	2.2
d) Demonstrates accurate empathy in complex situations where affect is covert, controlled or denied.	2.6
2. Clinical Assessment Competencies – Overall Rating *Performs adequate assessments in a time efficient and in a personally / socio-culturally sensitive manner, appropriately prioritises issues, and assesses risk.*	2.8
a) Demonstrates knowledge of psychopathology and diagnostic criteria for clients seen at the placement.	2.9
b) Demonstrates a systematic and logical sequence of questioning during the clinical assessment interview.	2.5
c) Skilful and efficient in conducting a clinical assessment, including a mental state examination.	2.9
d) Undertakes clinical assessments in an interpersonally engaging and in a socio-culturally sensitive manner.	2.5
3. Case Conceptualisation Competencies - Overall Rating *Appropriately integrates information from multiple sources to inform appropriate case conceptualisations, diagnoses, and treatment plans.*	2.9
a) Makes appropriate use of diagnostic frameworks (e.g., DSM5) to arrive at correct diagnoses and differential diagnoses.	2.8
b) Draws upon different psychological theories and approaches to derive a meaningful case conceptualisation.	2.7
c) Integrates cultural knowledge into case conceptualisation.	2.4
d) Integrates assessment and other information into realistic treatment plans.	2.2
4. Intervention Competencies - Overall Rating *Skilfully implements appropriate, empirically supported treatment interventions; monitors treatment progress and outcomes.*	2.9
a) Demonstrates knowledge of principles and procedures of relevant interventions.	2.9

b) Demonstrates effective application of theoretical knowledge of evidence-based treatment methods (e.g. CBT, IPT, MI).	2.2
c) Implements interventions relevant to the needs of the client.	2.9
d) Demonstrates flexibility and responsiveness in the application of treatments and/or in the implementation of manualised programs.	2.9
e) Efficiently conducts evidence-based treatment approaches (e.g. CBT, IPT, MI). Fluently transitions between elements/techniques.	2.2
f) Overcomes common difficulties in therapy through skilful interviewing to maintain therapy direction and progress.	2.9
g) Uses appropriate measures to regularly monitor treatment progress and outcomes.	2.9
5. Ethical Attitude and Behaviour - Overall Rating *Demonstrates knowledge of ethical/professional codes, standards and guidelines, and commitment to their application. Maintains appropriate and respectful boundaries and seeks consultation on ethical issues.*	3
a) Demonstrates knowledge of ethical/professional codes, standards and guidelines.	2.6
b) Recognises ethical and legal issues that arise across the range of professional activities, and demonstrates good discernment and judgment in these situations.	2.9
c) Acknowledges the limits of one's competence and makes appropriate referrals when required.	2.9
d) Demonstrates commitment to ethical practice across a range of clinical situations.	3
6. Scientist Practitioner Competencies - Overall Rating *Demonstrates knowledge of theoretical and research evidence related to diagnosis, assessment and intervention. Shows respect for scientific methods and empirical evidence and commitment to their application to clinical practice.*	2.6
a) Demonstrates knowledge of theoretical and research evidence related to assessment, diagnosis, case conceptualisation and treatment, and to intervention monitoring and evaluation of interventions.	2.9
b) Demonstrates the ability to critically analyse and evaluate the empirical literature.	2.9
c) Demonstrates respect for, and use of, the scientific method in clinical practice.	2.8
d) Demonstrates systematic and habitual application of scientific principles (e.g., hypothesis testing) to assessment, diagnosis, case conceptualisation and treatment, and to intervention monitoring and evaluation of interventions.	2.9
7. Professionalism - Overall Rating *Demonstrates effective organisation and time management. Clear and professional expressive skills, professional dress and demeanour. Good interactional skills with colleagues and other professionals.*	3.2
a) Demonstrates responsibility and accountability, reliably and punctually attending client appointments and work-related activities.	2.8
b) Demonstrates an organised, disciplined, and timely approach to maintaining case notes and records.	3

c) Effectively prioritises competing tasks.	3
d) Demonstrates concern for the welfare of others including the profession, organisation and community, and shows respect for cultural values and diversity.	2.9
e) Clearly and effectively communicates in verbal, non-verbal and written forms for a range of purposes.	2.5
f) Conducts self professionally in dress and demeanour.	3
g) Works collaboratively with colleagues across a range of disciplines.	2.5
h) Copes professionally with disapproval and criticism, and works constructively towards resolution of interpersonal conflicts at work.	3
i) Demonstrates progress in developing an integrated sense of self as a professional psychologist.	2.9
8. Psychological Testing Competencies - Overall Rating *Applies knowledge to correctly select, administer, score and interpret common psychometric tests, and to generate psychometric reports. Demonstrates knowledge of psychometric issues and testing theory.*	2.5
a) Correctly administers and scores common/core psychological tests.	2.5
b) Demonstrates knowledge of psychometric issues, testing theory, and bases of assessment methods.	3
c) Interprets and integrates information in accordance with psychometric principles.	2.5
d) Demonstrates ability to write psychological test reports that are clear, accurate, and tailored appropriately to the user.	2.5
9. Reflective Practice Competencies - Overall Rating *Demonstrates self-care, self-awareness and reflectivity on own emotions, beliefs, values and behaviour and their effect on others. Appropriately self-corrects.*	2.9
a) Demonstrates problem-solving ability, organised reasoning, intellectual curiosity and flexibility.	2.8
b) Demonstrates affect tolerance, understanding of interpersonal conflict, tolerance of ambiguity and uncertainty.	2.8
c) Demonstrates consideration of the way in which personal issues and concerns impact on one's professional practice.	2.8
d) Effectively uses observation and feedback including supervision to hone reflection skills.	3
e) Actively reflects on ways in which others' cross-cultural values and perspectives influence one's own responses and vice versa.	2.9
f) Accurately assesses own strengths and weaknesses and level of competence and plans necessary learning to address gap.	2.8
g) Demonstrates appropriate and timely care of personal health and wellbeing to ensure effective professional functioning.	2.4
10. Response to Supervision - Overall Rating *Demonstrates good preparation and collaboration within supervision, openness to and effective use of feedback.*	3
a) Demonstrates adequate preparation for supervision.	3

b) Seeks and accepts supervisory input, including direction.	3
c) Appropriately balances autonomy and dependency needs.	2.4

SECTION B PLACEMENT PROGRESS
DEVELOPING WELL - Consistent and good progress has been achieved. The rate of progress matches expectations for trainees at this stage of training. Additional Comments:

SECTION C SUPERVISOR'S OVERALL EVALUATION
Satisfactory (Pass) - Trainee has demonstrated competencies at or exceeding expected standards at this stage of training. Additional Comments: Jill is developing well across all domains. She possesses particular strengths in rapport building and attention to detail.

Appendix F: Training Task Vignettes

Domain	Vignette
Counselling Competencies	Trainee TA relates effectively with clients in commonly encountered situations and this capability is developing in more complex cases. She/he maintains a comfortable, warm and respectful demeanour with most client situations. She/he frequently demonstrates good reflective listening skills and makes appropriate emotional and meaningful responses that help validate client experiences and clarify client issues. She/he appropriately directs and guides client focus in most client situations, but tends to become less effective when dealing with complex presentations including client resistance.
Clinical Assessment Competencies	Trainee TB collects sensitive information and uses session time effectively in most cases. She/he integrates collected information into hypothesis, diagnosis and case formulations for commonly encountered cases and is developing this skill with more unusual or difficult cases. She/he displays an awareness of incorporating socio-cultural factors into clinical assessments but is sometimes inconsistent in integrating this information. She/he is capable of conducting risk assessments and/or formulating risk management plans for standard cases, but needs some assistance for complex cases (e.g., multiple diagnoses).
Intervention Competencies	Trainee TC demonstrates the ability to conduct a few structured behavioural and cognitive techniques relatively well, but has a limited repertoire of CBT skills. The trainee appears unable to move fluently from one technique to the other making the session feel disjointed and significantly reducing the effectiveness of the strategies employed. She/he is often able to identify negative cognitions, and makes attempts to pose Socratic questions, but these attempts are typically restricted to a variant of "what's the evidence for that?" Slow but modest progress is made during typical sessions with cooperative clients presenting with low levels of severity. With more difficult cases, progress is less obvious and may stall.
Ethical Attitude and Behaviour	Trainee TD generally follows most aspects of the relevant legal, professional and cultural ethical guidelines. She/he recognises the relevant ethical issues in simple cases but occasionally has difficulties with more complex cases. She/he displays a developing awareness of one's own values and biases, including cultural biases. She/he displays the capacity to apply an appropriate problem solving approach to ethical issues encountered but these may be simplistic. She/he does not always recognise when it might be helpful to seek appropriate consultation and supervision in order to guide her/his ethical practice.
Professionalism	Trainee TE requires close supervision in order to ensure that workload responsibilities are being adequately met in a timely manner. She/he is able to communicate with other team members and respond to direct instructions. Some difficulties present in prioritising competing demands, and being appropriately assertive within the team when needed. Minor instances of poor record-keeping, poor case preparation or unprofessional demeanour have occurred. Self-reflection and self-awareness are limited, leading to overly negative or positive self-evaluations. There are also some concerns about punctuality and the occasional insensitive comment when interacting with peers and professionals.

Note: Standard deviations are presented in parentheses

Appendix G: CΨPRS Normative Data Set

Mid-Placement: Domains	1	2	3	4+	Grand Mean
D1 – Counselling	2.99	3.86	4.09	4.29	3.81
D2 – Clinical Assessment	2.85	3.65	3.90	4.20	3.65
D3 – Case Conceptualisation	2.83	3.62	3.84	4.11	3.60
D4 – Intervention	2.84	3.62	3.90	4.10	3.62
D5 – Ethical Attitude and Behaviour	3.22	4.13	4.33	4.49	4.04
D6 – Scientist-Practitioner	2.97	3.73	4.00	4.18	3.72
D7 – Professionalism	3.28	4.08	4.33	4.52	4.06
D8 – Psychological Testing	2.39	3.46	3.72	4.01	3.42
D9 – Reflective Practice	3.07	3.87	4.12	4.30	3.84
D10 – Response to Supervision	3.31	4.05	4.30	4.46	4.03
Number of responses	**130**	**136**	**146**	**124**	**536**

End-Placement Domains	1	2	3	4+	Grand Mean
D1 – Counselling	3.40	4.14	4.45	4.61	4.09
D2 – Clinical Assessment	3.32	4.00	4.32	4.52	3.98
D3 – Case Conceptualisation	3.29	3.97	4.31	4.45	3.95
D4 – Intervention	3.30	3.98	4.28	4.48	3.95
D5 – Ethical Attitude and Behaviour	3.59	4.26	4.57	4.67	4.22
D6 – Scientist-Practitioner	3.41	4.03	4.37	4.53	4.03
D7 – Professionalism	3.56	4.28	4.53	4.66	4.21
D8 – Psychological Testing	3.35	3.91	4.22	4.16	3.89
D9 – Reflective Practice	3.42	4.08	4.42	4.58	4.07
D10 – Response to Supervision	3.58	4.30	4.53	4.63	4.21
Number of responses	**204**	**182**	**151**	**152**	**689**

End Placement Sub Domain Ratings

	D1a	D1b	D1c	D1d	D1 Mean	D2a	D2b	D2c	D2d	D2 Mean	D3a	D3b	D3c	D3d	D3 Mean	D4a	D4b	D4c	D4d	D4e	D4f	D4g	D4 Mean
1	3.46	3.50	3.44	3.31	**3.43**	3.34	3.37	3.31	3.40	**3.35**	3.33	3.31	3.32	3.33	**3.33**	3.36	3.34	3.42	3.38	3.27	3.28	3.35	**3.34**
2	4.24	4.26	4.13	4.09	**4.18**	4.03	4.05	4.00	4.13	**4.05**	4.00	3.97	3.99	4.04	**4.00**	4.05	4.03	4.15	4.11	3.95	4.00	4.03	**4.04**
3	4.53	4.56	4.45	4.40	**4.48**	4.37	4.38	4.37	4.46	**4.40**	4.36	4.32	4.33	4.39	**4.35**	4.36	4.36	4.43	4.40	4.27	4.30	4.32	**4.35**
4+	4.63	4.66	4.59	4.55	**4.61**	4.51	4.50	4.50	4.62	**4.53**	4.48	4.45	4.49	4.53	**4.49**	4.54	4.55	4.60	4.58	4.52	4.48	4.49	**4.54**
M	4.16	**4.19**	**4.10**	**4.03**	**4.11**	**4.01**	**4.02**	**3.98**	**4.09**	**4.03**	**3.99**	**3.96**	**3.98**	**4.02**	**3.98**	**4.02**	**4.01**	**4.10**	**4.06**	**3.94**	**3.96**	**3.99**	**4.01**

	D5a	D5b	D5c	D5d	D5 Mean	D6a	D6b	D6c	D6d	D6 Mean	D7a	D7b	D7c	D7d	D7e	D7f	D7g	D7h	D7i	D7 Mean
1	3.50	3.44	3.43	3.59	**3.49**	3.37	3.41	3.48	3.34	3.40	3.67	3.51	3.45	3.56	3.47	3.74	3.48	3.49	3.41	3.53
2	4.19	4.07	4.12	4.26	**4.16**	4.01	4.06	4.16	4.00	4.06	4.35	4.24	4.16	4.26	4.19	4.39	4.22	4.15	4.12	4.23
3	4.54	4.43	4.45	4.60	**4.51**	4.33	4.38	4.48	4.35	4.38	4.60	4.50	4.44	4.58	4.47	4.64	4.53	4.46	4.44	4.52
4+	4.62	4.57	4.57	4.69	**4.61**	4.50	4.48	4.60	4.49	4.52	4.73	4.62	4.57	4.67	4.55	4.74	4.63	4.57	4.58	4.63
M	**4.16**	**4.07**	**4.09**	**4.23**	**4.14**	4.00	4.03	4.13	3.99	4.04	4.29	4.16	4.10	4.21	4.12	4.33	4.16	4.12	4.08	4.17

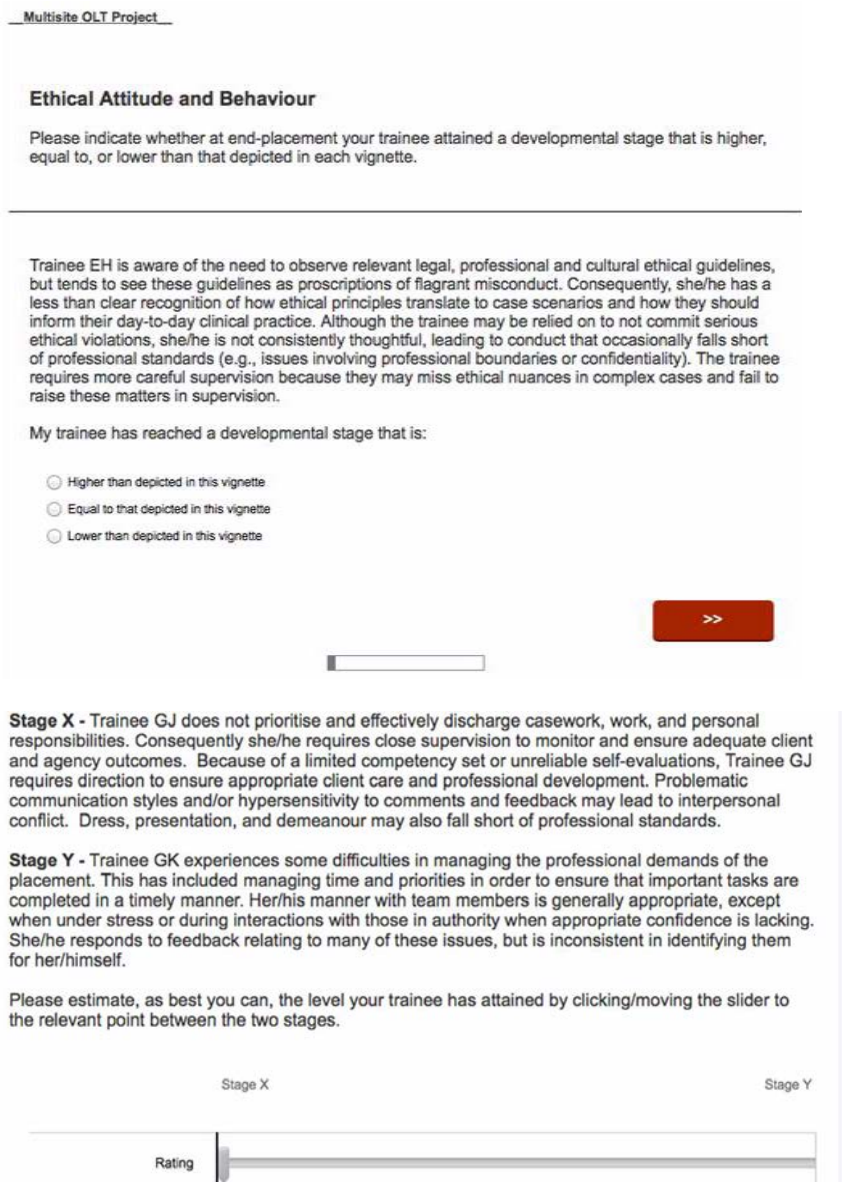
	D8a	D8b	D8c	D8d	D8 Mean	D9a	D9b	D9c	D9d	D9e	D9f	D9g	D9 Mean	D10a	D10b	D10c	D10 Mean
1	3.46	3.40	3.35	3.39	3.40	3.49	3.34	3.38	3.50	3.34	3.43	3.50	3.43	3.58	3.64	3.42	3.51
2	4.04	3.96	4.01	3.97	4.00	4.21	4.10	4.09	4.17	4.03	4.09	4.14	4.12	4.31	4.33	4.13	4.22
3	4.49	4.34	4.37	4.36	4.39	4.51	4.39	4.44	4.48	4.38	4.37	4.45	4.43	4.52	4.58	4.48	4.50
4+	4.40	4.27	4.30	4.29	4.31	4.61	4.53	4.56	4.58	4.54	4.54	4.63	4.57	4.61	4.67	4.58	4.61
M	4.05	3.94	3.96	3.96	3.98	4.15	4.03	4.06	4.13	4.02	4.06	4.13	4.08	4.20	4.26	4.09	4.16

Appendix H: VMAT Vignettes – Clinical Assessment Competencies

Stage	Vignette	Calibration Score
Clinical Assessment Competencies		
1	Trainee BE typically fails to efficiently collect sensitive and complex information and consistently fails to maintain a structured format. She/he may often allow the client to talk excessively without direction or containment or may employ an interrogatory style of questioning. She/he typically fails to integrate collected information into hypothesis, diagnosis and case formulations. She/he displays little awareness of the need to incorporate socio-cultural factors into their clinical assessments and typically fails to identify relevant major risk factors.	1.35 (0.35)
2	Trainee BF has early skills in the collection and management of sensitive and complex information during the assessment interview. The trainee demonstrates the ability to control the session and to maintain a structured format with some but not with other clients. She/he may adhere to a rigid set of pre-prepared questions. The trainee makes appropriate judgements about diagnosis and differential diagnoses in some but not all cases, and needs supervisory assistance for case formulation even in commonly encountered clinical cases. She/he is inconsistent in incorporating socio-cultural factors into clinical assessments and is unreliable in conducting adequate risk assessments and/or devising risk management plans.	2.30 (0.48)
3	Trainee BG is capable of carrying out thorough assessments for a range of client presentations. She/he is able to collect information that is crucial to understanding the client and conceptualising the client's problems. In more complex cases or challenging presentations she/he typically experiences difficulty in efficiently collecting sufficient breadth or depth of information, and this limits her/his ability to effectively construct hierarchies for diagnoses and differential diagnoses. She/he reliably covers key criteria in risk assessments, although their skills to conduct interviews in an interpersonally and culturally sensitive manner could improve in several minor ways.	3.34 (0.53)
4	Trainee BH efficiently collects sensitive and complex information in simple and in unusual or difficult cases and employs the available time with the client to greatest advantage. She/he integrates available information into hypothesis, diagnosis and case formulations. She/he incorporates socio-cultural factors into their clinical assessments. She/he consistently identifies relevant risk factors and formulates appropriate risk assessment and risk management plans.	4.65 (0.24)

Note: Standard deviations are presented in parentheses

Appendix I: VMAT Example Item with Sliding Scale



Appendix J: List of Conference Presentations

Conference Presentations
1. McLeod, H., & Richardson, G. (2014) Assessing clinical competence using vignette matching procedures. *Group of Trainers in Clinical Psychology Conference*, Belfast, Nov.
2. Gonsalvez C.J., et al. (2014) Innovations in the assessment of practicum competencies: Designing for Learning Showcase, UWS, Sydney, Dec.
3. Gonsalvez C.J., et al. (2014) Assessment of Clinical Psychology Practicum Competencies. Challenges and Innovations, *Advances in Clinical & Health Psychology at the Clinical and Health Psychology Research Initiative (CaPHRI)*, UWS, Sydney, Dec.
4. Bushnell, J.A., et al. (2015) Is the Vignette Matching Task a way to get less biased supervisor assessments of student performance? *Annual Conference of the New Zealand College of Clinical Psychologists*, Auckland, March.
5. Shires, A., (2015) Using Standardised Vignettes to Assess Practicum Competencies in Psychology and Other Disciplines, *Why Health Matters: Bench to Bedside and Beyond UTS Research Symposium*, UTS, April.
6. Gonsalvez, C.J., Deane, F.P., Terry, J., & Middleton, J. (2015). Critical issues in the measurement of psychologist practitioners' competencies, *50th Australian Psychological Society Annual Conference*, Gold Coast, QLD, October.
7. Middleton, J., Ratajec, H. E., Blackman, R., Nasstasia, Y., Knight. R., & Gonsalvez, C.J. (2015). The organisation of clinical psychology competencies into clusters, *50th Australian Psychological Society Annual Conference*, Gold Coast, QLD, October.
8. Terry, J., Shires, A., Nicholson Perry, K., & Ratajec, H.E. (2015). Developmental trajectory of clinical psychology competencies across domains, *50th Australian Psychological Society Annual Conference*, Gold Coast, QLD, October.
9. Richardson, G. (2015), *Trainers in Clinical Psychology Annual Conference*, Nottingham, UK, November.
10. Knight, R. (2015). Assessment of underperforming provisional psychologists in Clinical Masters programs, *50th Australian Psychological Society Annual Conference*, Gold Coast, QLD, October.
11. Donovan, M., Nicholson Perry, K., Knight, R., & Shires, A. (2016). Trainees with professional competence problems, *Clinical Psychology Programs Placement Coordinators Meeting*, Melbourne, June.
12. Gonsalvez, C. (2016). Innovations in the assessment of practicum competencies: The use of standardised vignettes, *Twelfth International Interdisciplinary Conference on Clinical Supervision*, Garden City, New York, June.
13. Deane, F. P., Gonsalvez, C., Terry, J., & Blackman, R. (2016). Development and acceptability of a vignette-matching procedure to assess clinical psychology trainees' competencies in field placements, *31st International Congress of Psychology,* Yokohama, Japan, July.

Appendix K: CΨPRS Promotional Flyer

ASSESSING PSYCHOLOGY TRAINEE COMPETENCIES:

CΨPRS ONLINE

Supervised field placements are essential in the training and credentialing of psychologists and other clinical practitioners. As supervisors directly observe trainee performance across a wide variety of real-life situations, and over an extended period of time, their judgments of competence must accurately reflect the expertise and skills of the trainee.

CΨPRS (*Clinical Psychology Practicum Competencies Rating Scale*) is an **online** assessment tool that allows supervisors to rate trainee competencies against ***developmental stages***: **Stage 1 Beginner through to Stage 4 Competent.**

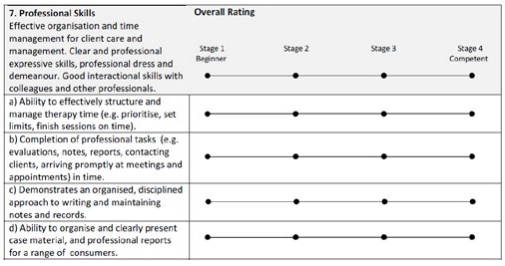
WHAT DOES CΨPRS MEASURE?

At mid- and end-placement, trainees are assessed across 10 competency domains:

- Counselling
- Clinical assessment
- Case conceptualisation
- Intervention
- Ethical attitude and behaviour
- Scientist-practitioner approach
- Professionalism
- Psychological testing
- Reflective practice
- Response to supervision

HOW DOES IT WORK?

Using a slider, supervisors provide their student with an overall rating for each domain. They also rate their student on a series of specific sub-domain items. This allows for a **precise measure of particular skills and competencies**.



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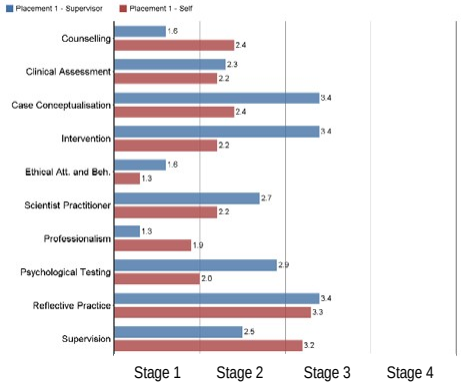
WHAT DOES CΨPRS OFFER?

CΨPRS provides a measure of trainee competency that is **stage-based**, **comprehensive**, **effective** and **reliable**.

- Measures trainee competencies using developmental stages as criteria
- Comprehensively measures 10 essential competencies
- Easy-to-use ONLINE tool
- Accurate and reliable
- Easy to administer
- Electronic storage of assessments
- Capacity for provision of comprehensive reports that track ratings over multiple placements (including self-rating)



HOW CAN YOU GET INVOLVED?

Our team of highly experienced clinic directors and researchers from 10 Australian and 2 international universities is currently undertaking research to measure the reliability and validity of the online CΨPRS assessment.

You are invited to trial our online sample CΨPRS assessment at http://www.uws.edu.au/vmp/about.

If you would like more information about the project, please visit http://www.uws.edu.au/vmp/home or email the Project Officer at OLTProjectOfficer@western.edu.au.

Appendix L: VMAT Promotional Flyer

ASSESSING PSYCHOLOGY TRAINEE COMPETENCIES:

A NOVEL AND EFFECTIVE TOOL

PROBLEM...

Commonly used rating scales are often simplistic and lack nuanced descriptors that reflect competencies at different developmental stages. Ratings gathered from these scales are frequently prone to halo or leniency bias.

SOLUTION...

VIGNETTE-MATCHING ASSESSMENT TOOL (VMAT)

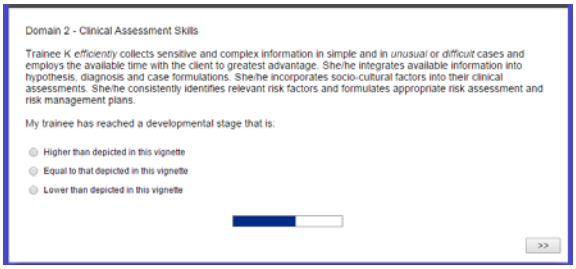
Our team of highly experienced clinic directors and researchers from 10 Australian and 2 international universities have developed a **Vignette-Matching Assessment Tool (VMAT)** to evaluate trainee competencies.

The VMAT is a catalogue of vignettes that describe clinical scenarios that cover 10 domains of competence.

HOW DOES IT WORK?

Supervisors judge their trainee as performing at a level "higher than", "equal to" or "lower than" the profile described in a vignette.

Importantly, the VMAT provides a profile of competencies at **4 developmental stages from Beginner to Competent**. Trainee competencies are compared to scenarios that reflect the expected developmental trajectory.



HOW CAN YOU GET INVOLVED?

Our team is currently undertaking research to assess the existing CΨPRS and to examine the reliability, validity and usability of the VMAT. You are invited to trial our CΨPRS online sample assessment at http://www.uws.edu.au/vmp/about.

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If you would like more information about the VMAT, please visit http://www.uws.edu.au/vmp/home or email the Project Officer at OLTProjectOfficer@westernsydney.edu.au.

WHAT DOES VMAT MEASURE?

- Relational Competencies
- Clinical Assessment Competencies
- Case Formulation Competencies
- Generic Intervention Competencies
- Cognitive-Behavioural Intervention Competencies
- Psychometric Competencies
- Scientist Practitioner Competencies
- Ethical Practice
- Professionalism
- Response to Supervision

WHAT DOES VMAT OFFER?

The VMAT provides a measure of trainee competency that is **realistic**, **credible**, **effective** and **efficient**.

- Measures trainee competencies against **realistic expert-validated vignettes**
- Provides a measure appropriate to the trainee's developmental stage
- Assesses ten essential competencies
- Easy-to-use ONLINE tool
- Accurate and reliable
- Time efficient - takes less than 30 minutes to complete
- Objective
- Reduces leniency bias

Appendix M: Dissemination Workshops Feedback Report

University of Queensland, 20th April 2016, hosted by Mark Donovan
University of Melbourne 30th May 2016, hosted by Kathryn Nicholson Perry

Table 1. *Overall workshop feedback University of Queensland and University of Melbourne*

Item	*N*	*M*	*SD*
1. Overall, the workshop was of a high standard	41	4.02	.57
2. The facilitator presented the material presented clearly and effectively	41	4.44	.50
3. The workshop has improved my knowledge and understanding of the topic	41	4.07	.69
4. The small group activities were valuable	33	3.21	.70
5. The workshop handouts were informative	40	4.05	.88
6. Catering and facilities were good	41	4.39	.63

Note. Items were assessed on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (Strongly agree).

Qualitative feedback for Brisbane and Melbourne workshops

Participants were given the option to provide positive feedback and areas for improvement. Participants left positive comments for the content presented (*n* = 8) and the use of discussion and interaction (*n* = 7). Both presenters received positive feedback with attendees describing them as "interesting" and "engaging" (*n* = 5). Areas for improvement included a need for more time (*n* = 7) and a desire for more group discussion and more practical information about the application of these tools with a chance to practice using the tools (*n* = 5).

Appendix N: International Site Report – University of Canterbury

College of Science

Department of Psychology
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Email: office@psychology.ac.nz www.psyc.canterbury.ac.nz

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

26 August 2016

University of Canterbury Site Summary for OLT Project Report

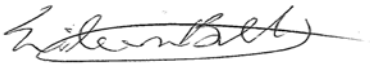
The Post-Graduate Diploma in Clinical Psychology programme at the University of Canterbury chose to be partner in the OLT project as we considered the research to be of great importance to the work of our programme which is charged with the responsibility of evaluating student skill development and competence to practice, as well as to the profession and wider community.

For the last two years all of our clinical psychology students on placement have been evaluated by their placement supervisor using the Clinical Psychology Placement Rating Scale (CΨPRS) – currently a total of 56 separate evaluations. Additionally, 16 students (28.57%) have also been concurrently evaluated by their supervisor using the Vignette Matching Assessment Tool.

We have held two (annual) training sessions for our clinical placement supervisors from the community as part of our involvement in the OLT project to introduce supervisors to the research, and the reason for it, and to train supervisors on the use of the CΨPRS. This has led to increased awareness among supervisors of issues relating to the assessment of competencies.

The CΨPRS appears applicable, and to work well, as an assessment tool within the New Zealand context. It is an efficient means of obtaining valuable information on student progress, across a broad range of domains which are important to the practice of clinical psychology. The VMAT has promise however it appears that more research is required in order to adequately calibrate the VMAT for the New Zealand situation.

We have valued being part of the research and hope that there will be some way in which this research can be continued.



Dr Eileen Britt
Senior Lecturer
PGDipClinPsych Programme
University of Canterbury

Appendix O: International Site Report – University of Glasgow

1. Reasons for being a partner

The OLT Project provided an excellent opportunity to participate in the development of new methods for evaluating clinical competencies and providing useful feedback to trainee clinical psychologists. The Vignette Matching procedure was the main drawcard as this provided a chance to test an innovative method of competency grading that has the potential to reduce known problems with scale based ratings (e.g. leniency and halo biases). The use of the CΨPRS was less important as we have an existing clinical practicum rating method that is compliant with UK regulatory standards set by the HCPC and professional training standards stipulated by the British Psychological Society

Another factor that encouraged our involvement was that the cross-border movement of clinical psychologists raises questions about the generalization of competence standards from one country to the next. The OLT project data allows some preliminary comparisons of the profile of competencies exhibited by trainees completing different training pathways in Australia, NZ, and the UK. The tradition of qualified psychologists moving between Commonwealth countries and the UK National Health Service (NHS) makes the development of harmonized approaches to competency assessment potentially very useful.

2. The extent of your involvement in the project (mention data numbers on CΨPRS /VMAT)

The Glasgow site provided a trial of the VMAT prototype in a UK training setting. We contributed to the project in two main ways. First, we added to the already collected data on VMAT calibration by recruiting senior Clinical Psychologists (n =5) to provide grading of the competencies used in the VMAT. Secondly, we recruited clinical supervisors in UK National Health Services (n=25) who provided ratings of Doctoral trainees (n=25) across the three years of the training course (Y1=10, Y2=8, Y3=9[1]).

3. Perceived benefits of involvement

As noted above, we face an ongoing challenge of using clinical competence assessments that are cost-effective, rigorous, and able to provide maximum learning opportunities for our trainee clinical psychologists. Answering some of the bigger questions about how to improve assessment methods is beyond the resources of our single Programme and so joining the OLT consortium provided a huge benefit arising from the scale and ambition of the project. We also benefitted from the sharing of knowledge and experience of other training providers who are working in different regulatory environments and with different training structures.

4. Comments about feasibility/applicability (including challenges and barriers) of the instruments to international sites

The instrument of greatest applicability to our UK setting was the VMAT. Because of our regulatory and professional approval processes we were committed to use our existing competence

[1] 2 trainees were rated on more than one placement hence the total number of ratings is 29

assessment methods during the lifecycle of the OLT project and so widescale implementation of the CΨPRS was not viable. However, the VMAT proved to be a highly attractive rating method to our clinical supervisors and so the challenge of enrolling supervisors in the VMAT arm of the study was not a major issue. The development of hybrid CΨPRS -VMAT approaches to competence assessment through the iterative lifecycle of the project was more relevant to the Australian based partners.

On the practical side, the time differences and geographical distance from Australia proved to be a barrier to full participation in project teleconferences and interactive elements (e.g. face to face meetings). However, the project leads and support staff did an excellent job of managing these issues so that they caused the least disruption.

5. Recommendations for future application/research

The OLT project progresses work on the important question of how to best capture nuanced clinical competence assessment based on behaviours seen in complex health care settings. Addressing problems of leniency and halo bias along with a common reluctance to use the full range of numerical competency rating scales remain highly relevant to the science of clinical psychology training and evaluation. Continuing to refine, test, and calibrate the VMAT within Australia and internationally would be an excellent investment. In Glasgow we plan to analyse our VMAT competency gradings relative to our existing assessment method and consult with our stakeholders (e.g. Government funded commissioners of training) to decide whether the VMAT approach can be phased in as our standard approach to grading clinical competencies.

Hamish J McLeod
Programme Director

Gavin Richardson
Clinical Practice Director

29 August 2016

Appendix P: Cross-Disciplinary Application

The feasibility study to determine if VMP (i.e. V-MAT) is a viable option to reduce supervisor bias among supervisors of medical students was implemented at the University of Wollongong's (UOW) Graduate School of Medicine. The study team produced an electronic version of existing supervisor reports, and a series of Vignettes describing four levels of competence for each of the dimensions assessed by supervisors in the existing approach.

Over two consecutive academic years a strategy of introducing electronic capture of a version of existing supervisor reports was implemented, with VMP to be implemented subsequently as supervisors were successfully engaged with the study. Rates of engagement of supervisors were low despite the efforts of Professor Pai, with an apparently strong preference for existing paper-based forms. Virtually no fully completed VMP data has been received.

However, although the psychiatry trial failed to achieve direct success, it attracted significant attention within the School of Medicine, which has for some considerable time held concerns about the problem that leniency and halo bias is widespread in supervisor reports. That interest and concern has led to a firm expression of interest in using internal funding for further work in developing and applying the VMP to supervisor reports in medicine.

The academic program of the MBBS degree at UOW contains a novel longitudinal rural placement where all medical subspecialties (Internal medicine, Surgery, Obstetrics and Gynaecology, Paediatrics, Psychiatry, Public Health and General Practice) are learned over the course of a year-long rural placement. The Director of this component of the programme, Associate Professor David Garne, is very keen to see the model trailed in Psychiatry developed further for use as a generic approach to capturing supervisor feedback suitable to other aspects of performance of a medical undergraduate student. He is supported in this plan by Professor Ian Wilson, an experienced researcher who is stepping back from his role as Dean to foster research activity in the school. Professor John Bushnell will provide some expertise and experience drawing on the existing work in Psychology in order to help further develop the approach in Medicine, and link with Professor Gonsalvez and others in the team as needed.

Although the trial in Psychiatry has had significant difficulties with implementation in a dysfunctional mental health system, the trial has, perhaps paradoxically, produced an excellent outcome. It has produced sufficient interest in the approach to establish an ongoing partnership that will develop and trial a larger scale more generic version of the VMP than that specific to mental health issues alone.

Professor John Bushnell
School of Medicine
University of Wollongong

Appendix Q: External Evaluator's Report

Project Title: Using standardized vignettes to assess practicum competencies in psychology and other disciplines (ID14-3639).

Chief Investigators: Professor Craig Gonsalvez, Professor Frank Deane, Professor John Bushnell.

OLT External Assessor: Professor Mary Katsikitis, University of the Sunshine Coast, Queensland.

Context

The lead up to the design and execution of this project is a strong indicator of the dedication and sustained passion this team of researchers has shown for the topic of assessment of the practicum-based competencies in psychology. This focus began with a view to a stand- alone (introductory) project (then funded by the ALTC: PP10-1624; Vignette Matching Procedure) in 2010-2012. Importantly for the sector, this proof of concept project (i.e., that evaluations of competency using matched vignettes which depict a model of student capabilities at each stage of their developmental cycle through the various practicum courses/units), can be accomplished and be a valid measure for practicum assessment, was further funded for 2014-2016.

That initial ALTC funded study laid the foundations for the next phase and seamless extension into this project titled, "*Using standardized vignettes to assess practicum competencies in psychology and other disciplines"* led by Professor Craig Gonsalvez, Western Sydney University. This extended timeline has afforded psychology the most unique opportunity for the development of an evidence-based tool for measuring practicum competencies. That first study innovatively turned the assessment of competencies (in Australia) on its head. It did so by questioning the validity of relying on a Likert scale (common across field placements in Australia) to confirm (1) a student's progress (or lack thereof) through a series of practica, and then (2) final satisfactory unit completion and acquisition of a set of stated professional competencies (also vary across Australian psychology programs).

The main outcome of the ALTC-funded project (first study) showed (1) that vignettes are a workable alternative to Likert scale ratings; (2) adoption and engagement by field supervisors of this evaluation method; and (3) preliminary data suggesting a significant reduction in halo and leniency effects in the assessment process overall – halo/leniency effects plague the Likert scale assessment process.

The Current Project

The current project addressed the OLT's innovation and development program priority of "*assessment and promotion of student learning*". On application, the researchers listed 4 major objectives and one additional proposed outcome, as follows (taken directly from the submitted proposal):

- The establishment of the Vignette Assessment Tool (VAT) as a reliable and valid instrument for the assessment of psychology competencies. The VAT will comprise a catalogue of 40 calibrated and standardized vignettes across 10 domains of practitioner competence.
- The development of an online platform to administer the VAT, score it and report the results.
- The completion of a multisite study involving nine universities that will establish a normative data set, essential for the interpretation of scores derived from the instrument
- Uptake of the instrument by several Australian universities following a systematic and comprehensive dissemination program

A fifth and additional outcome was also included in the application, and that is:

- Detailed knowledge informed by empirical data about the viability of VAT applications in cross disciplinary and international contexts

This evaluation will focus on the statement of, and satisfactory (or otherwise) completion of the deliverables associated with each of the four main outcomes, and one additional outcome, listed above. Further, a brief outline of the methods used to achieve each objective/outcome, successes and barriers to achieving the optimum result along the way, and ultimately a summary and conclusion as to the sustained use of the VAT into the future.

An additional feature of this project and hence also included in this report, will be a discussion also of any design/revision modifications to the CΨPRS – Clinical Psychology Practicum Rating Scale – which was used in conjunction with the vignette matching assessment tool to evaluate student competency at specific developmental stages.

This evaluation will not raise commentary on the empirical results emanating from the analyses of data. This is best left for the full report from the principal and deputy investigators.

Governance

The reputation of the three project leaders is outstanding. Craig Gonsalvez, Frank Deane and John Bushnell are experts in their fields of psychology with special interests and expertise in professional education, medical education, evaluation, accreditation and competency measurement. Two of the three project leaders (CG and JB) were recipients of an ALTC grant (November 2010-2012) which was also a multisite project focusing on competency measurement in professional psychology. All have experience as project leaders having led many grant funded projects to completion.

The project team created two major governing bodies for this project. The first consisted of the full team that included several (N=9) Clinical Directors or Practicum Coordinators from various professional programs across Australia. This committee also included a psychiatry professor with an international track record in medicine and psychiatry training, and three international site directors or senior staff representing two international sites (University of Glasgow, University of Canterbury) to provide advice on the cross disciplinary aspect of this trial and the international perspective, respectively. This group met every 2 months over the course of the project.

The second group, the Reference group (later changed its name to the Planning and Evaluation Committee: PEC), was composed of members with specialist expertise in psychology education, evaluation, dissemination, international education and stakeholder interests. The PEC had bimonthly meetings and reported to the project group. The OLT external assessor was invited as a member of the PEC and attended 2 annual face to face meetings of the larger project group in Sydney.

In addition, small groups of team members were allocated to specific publication-focused topics, thus ensuring the success of the dissemination of the data from multiple standpoints (e.g., VMAT (previously VAT) versus CΨPRS comparisons; dimensional analyses of scoring results from the use of these tools; within-subject progression across the practica; online training results; and dealing with special and specific groups of students such as underperforming students).

The project group, PEC and smaller publication groups, were real assets for this project. The PEC was nimble, fast acting and operational in many ways, whilst the larger project group convened to steer and manage the trial through to completion. It is expected that the publication-focused groups will continue to work together as the manuscripts are written and published.

Impact of this Project

The impact of the project will be evaluated against the five outcomes below.

Objective 1: *The establishment of the VAT as a reliable and valid instrument for the assessment of psychology competencies. The VAT will comprise a catalogue of 40 calibrated and standardized vignettes across 10 domains of practitioner competence.*
This objective has been **fulfilled**. At the time of writing this report, full data analyses addressing this objective were not yet available. These will be reported in the full report of by the chief investigators. However, the preparatory work towards the compilation and ultimately, the use of the catalogue of vignettes, has been completed. The vignettes have been recalibrated following the finding in the first study, that is, eleven of the forty vignettes were not deemed suitable to the task of discriminating accurately the developmental stage of the student in practicum. In that first study, of the 40 calibrated and standardized vignettes used, near 75% of vignettes (N=29) satisfied strict validation criteria for the evaluation of ten assessment competencies. However, eleven vignettes did not reach this standard. Thus, in the current project, those underperforming vignettes were refined and/or rewritten and calibrated by a group of Australian (N = 25) and international (N = 14) experts (i.e., University Clinic Directors or Practicum Coordinators). At the completion of the (re) calibration process, the Vignette Assessment Tool (VAT) was renamed and relaunched online as the Vignette Matching Assessment Task or VMAT.

Deliverables: There were 2 deliverable outcomes associated with this objective and both have been successfully completed. Firstly,

D1: The production of a full catalogue of calibrated vignettes available for a multi-site study. This has been achieved. A full catalogue of 41 vignettes were available to nine universities for use with their current cohort of students. To-date, data on N=150 completed VMAT forms has been collected. Secondly,

D2: The production of a vignette calibration table for the purposes of benchmarking. This has been achieved. Additionally, 11 new vignettes have been calibrated for training purposes.

Objective 2: The development of an online platform to administer the VMAT, score it, and report the results.

This objective has been **partially fulfilled**. The online platform to administer and score the VMAT has been completed, however, the automated reporting of the VMAT results is still pending.

Deliverables: There was one deliverable associated with this objective.

D3: Online application for delivery and scoring of the VMAT. This has been completed, however the scoring software development is pending.

Objective 3: The completion of a multisite study involving nine universities that will establish a normative data set essential for the interpretation of scores derived from the instrument.

This objective has been **fulfilled**. This is an important achievement and one that acts as the capstone for this project. Common practice for the assessment of student competencies in psychology in practicum, is to rate the students on Likert scales, with regard to their performance in professional/clinical settings. These scales are easy to use, efficient, and very popular with external supervisors because they are time efficient. Therefore, managing a change away from this process (a process currently that the supervisors find easy to use and familiar), was going to be a real challenge for these researchers in this project. The VMAT offers a substitute assessment practice, one that captures competencies whilst taking knowledge and application into account along a developmental trajectory from beginner to a practitioner who is ready for independent practice.

The VMAT embeds the competencies into a summary (100-150 words) of what a student is capable or not capable of doing within a specific competency domain (e.g., ethics). The supervisor uses this exemplar vignette to then rate their current student's performance in relation to the domain and developmental stage described in the vignette (as "higher than", equal to" or "lower than").

Deliverables: There was one deliverable associated with this objective.
D4: A normative data set has been established. This project aimed to acquire 300 new VMAT completions in order to gauge any patterns or associations across the different stages of development for students in those practicum stages (e.g., Practicum 1-4). Just having a normative data base is important for a number of reasons. Firstly, it places any new trainee that a supervisor has within the developmental stage that has been set, adjudicated and calibrated at that specific competency level by a number of experts (N=25). Secondly, it enables the supervisor to track the supervisee's progress based on the previous (where they have come from) and indeed, next (where they need to be on the cycle), developmental stage. Thirdly, it allows for a comparative marker for the supervisor with regard to how their supervisee is performing relative to peers at the same practicum stage within the postgraduate program.

The research team encountered a somewhat slower uptake of the VMAT midway through the trial but initiated several strategies to kick-start its use. These initiatives included increasing the incentive for participation, stating a more realistic time to complete the VMAT, and more networking with Clinical Directors on the trial sites.

Objective 4: Uptake of the instrument by several Australian Universities following a systematic and comprehensive dissemination program.
This objective has been **partially fulfilled**. The 11 partner universities engaged readily with both the CΨPRS and the VMAT and the research team employed several strategies to steadily increase the simultaneous uptake of both instruments. Although there has been an impressive uptake of the CΨPRS across Australia, the VMAT has not as yet been made available to non-partner university academic staff and placement supervisors. It is expected that this will occur in 2017 as the data collection and analyses on the effectiveness of the VMAT is further investigated and reported.

The project adopted a number of strategies to ensure a successful trial, especially with regard to uptake and adoption of the VMAT as the new tool for the assessment of psychological competencies in postgraduate programs. The dissemination initiatives tackled three core and related aspects vital for the success of the project: change, engagement, and transfer. As previously reported, the partner universities were quite engaged with both the CΨPRS and the VMAT. The survival of the VMAT tool depends on the success of the dissemination program.

Deliverables: The following deliverables have been achieved:
D9 and D10: Dissemination workshops in two states in 2016 (Queensland and Victoria);
D5 and D11: Notably, presentation at the psychology Director's Conference, the annual APS conference in 2015, and the International Conference of Applied Psychology in Japan, July 2016. In total, 12 conference presentations have been made since the commencement of this project.
D8, D12, D14, D15: To date, one manuscript reporting on the success of the CΨPRS uptake and data outcomes has been published in the peer reviewed journal, Clinical Psychology: Science and Practice. In addition, three new papers will be submitted for publication to peer reviewed journals. Further to these, there have already been two papers submitted and both are currently under revision for an Australian Psychologist special issue – one on the effects of brief online training using the CΨPRS scores and the other one reporting the results of a survey examining supervisor responses/experiences with under- performing students.

Deliverables: The following deliverables have been achieved:
D6: A catalogue of vignettes for use by psychiatry staff has been produced.

The deliverables that are still pending are:
D13: Although the catalogue of vignettes has been produced, the pilot data for use of the VMAT for medical students has not eventuated.

It is also worthy to note that the lead investigator was invited to give a keynote address at an interdisciplinary supervision conference in New York City in June, 2016, highlighting the impact and reach that this work is commanding internationally.

Currently, there is also interest from two universities who would like to trial the VMAT in the USA.

The continued success for the uptake of the VMAT very much depends on the establishment of a web-based platform to (a) house the data, (b) score the completed assessments and (3) report the findings. This has been achieved with the development of a customized user-friendly web application that is relatively inexpensive to run and upkeep, and is versatile, convenient and sustainable into the medium and long term.

Additional Outcomes: Detailed knowledge informed by empirical data about the viability of VMAT applications in cross disciplinary and international contexts. Specifically, two pilot studies will be conducted: the development and testing of vignettes to available psychiatry competencies of medical students, and a trial examining the applicability of the Australian catalogue of vignettes to assess psychology competencies at international sites including the University of Glasgow, UK, and the University of Canterbury, New Zealand.

This additional outcome has been **partially fulfilled**. Two international universities – the University of Glasgow and the University of Canterbury have provided data for the VMAT. Requests are also coming in for trialing VMAT in the USA. Regrettably, the cross disciplinary application of the VMAT has not eventuated as planned. However, a pilot study was conducted where CΨPRS data was obtained from psychiatry supervisors and the report on the psychiatry vignettes is pending. Further to this, a catalogue of vignettes calibrated and standardised for use in psychiatry has been produced but as yet, no data is forthcoming.

Summary

This project is a timely response to the growing trend both in Australia and internationally toward a demonstrable competency-based assessment of professional psychology skills. The Australian Psychology Accreditation Council (APAC) has adapted very quickly to this trend by embarking on a major reform of accreditation standards for the Areas of Practice Endorsement (AoPEs) which have been prescribed by the Psychology Board of Australia. The new APAC Standards document particularly focuses on, and requires evidence for, the measurement methods adopted by Australian psychology professional programs and the outcomes achieved for their student cohorts.

The results from this project, once released, will assist all Heads of Schools and Departments of Psychology (HODSPA) and professional program Directors, because the outcomes reported in the main report from the chief investigators, provide psychology departments with an evidence-based tool with which to measure professional competencies.

This project has successfully highlighted the advantages for educators of using the VMAT. In summary, these are:

- Evidence-based tool constructed from a sound theoretical framework aligned to a contemporary competence-based paradigm which is gaining traction internationally
- Innovative approach to competency as it moves away from traditional methods of Likert- scale rating evaluations
- Benchmark data obtained from the generation of normative calibration values across all vignettes
- Translation to other professions e.g., psychiatry
- Engagement across Australia from internal and external supervisors
- Inexpensive to run and relatively simple to manage which makes its sustainability as a long- term prospect much more viable
- Web-based application methodology is time-efficient, cost efficient and allows for constant building of database of responses for future research enquiries
- The data from the CΨPRS has provided an evidence-based foundation to further examine competency assessment, including but not limited to, the underlying structure of competence, and the developmental trajectories of these domains over time. Although this was not an integral part of the current project it has increased the impact that the current project has had, and will have, into the future assessment of postgraduate competencies.
- Training of supervisors was evaluated against the principal tenet of this project: Training opportunities were evaluated and the outcomes reported indicated that trained supervisors were less susceptible to bias and halo effects in supervision assessment of postgraduate student competency level

- Addressing and adhering to priority areas set by OLT for the Innovation and Development Program grant round applicable to this project
- OLT external assessor was invited to larger project group committee meetings annually and was a member of the Planning and Evaluation Committee which met every two months.

Future Prospects

At the mid-project review, two major risks were identified as potential threats to the sustained use of the VMAT into the future. Firstly, the uptake of the VMAT. This seems relevant, still, as a risk, now at the end of the project. Secondly, preparation of manuscripts that are not driven by the lead investigators (e.g., but moreso the small groups set up for this purpose). To overcome this potential risk, the team needs to regroup and devise a strategy to ensure that manuscript preparation through to journal publication has the best opportunity of occurring, with goals for each milestone along the way (e.g., research member meetings, workload allocations, deadlines).

With regard to the first risk, i.e., the continued uptake of the VMAT, two proposed hybrid models have been suggested and are currently being considered by the project team as it looks into the future, post OLT funding. The first model, a "*vignette assisted hybrid"* model involves combining the CΨPRS and the VMAT into one assessment tool, such that vignettes are provided as objective descriptors of expected trainee performance, with all appropriate anchor points represented. The second model, "*VMAT hybrid*" model sees the CΨPRS overall domain items replaced by vignettes, which then is the assessment tool supported with minimal technical and web support.

I would like to thank the team for inviting me to evaluate this project and look forward to reading much more about their successes as the manuscripts come into print.

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Appendix R: Impact Plan

	Anticipated changes at:		
	Project completion	**Six months post-completion**	**Twelve to twenty-four months post-completion**
1. Team members	• Implementation and regular use of a revised CΨPRS via an online system **(complete)** • Training in the administration of CΨPRS **(complete)** • Familiarity with and experience in using the VMAT **(complete)** • Knowledge of underlying theoretical principles and applications of CΨPRS and VMAT instruments **(complete**) • Matrix of calibration scores to be able to interpret and report on VMAT scores **(complete)** • Ability to train supervisors within their institutions to use the CΨPRS and VMAT as appropriate **(complete)**. • Access to website for the assessment instruments and resources **(complete)** • Further enhancement of resources available on the website **(ongoing)** • Production of a brief CΨPRS instruction document **(complete)**	• All points listed under project completion **In addition:** • Enhanced resources for practicum assessment on website	• All points listed under project completion **In addition:** • Improved CΨPRS and VMAT instruments for effective and efficient assessment of students • Resources for benchmarking so developmental progress of students and cohorts can be monitored and evaluated • Enhanced and updated resources for practicum assessment on website • Established protocols and resources for administration and training in use of CΨPRS and VMAT.
2. Immediate students	• Improved ratings of student competencies based on CΨPRS **(complete)** with additional ongoing evaluation. • Better and more informed feedback to students about their developmental progress **(partially complete)**. Work	• All point listed under project completion **In addition:** • Accurate feedback provided	• All point listed under project completion **In addition:** • Enhanced professional

	Anticipated changes at:		
	Project completion	**Six months post-completion**	**Twelve to twenty-four months post-completion**
	on additional strategies is ongoing. • Early Identification of students that require additional support **(partially complete). With a full set of data, we are now able to use CΨPRS and VMAT scores to track the developmental trajectory of under-performing students in order to establish guidelines for early identification.**	to students based on the VMAT • Improved awareness of one's strengths and needs in terms of practicum competencies • Enhanced outcomes of training via feedback based on improved CΨPRS and VMAT ratings	outcomes driven by reliable and valid procedures to measure and evaluate competencies • Better instruments and protocols for early identification of underperforming or unsuitable students.
2b: Immediate supervisors	• Regular use of CΨPRS by clinical supervisors associated with the team member's institutions **(complete)** • Access to a brief online CΨPRS training task **(complete)** • Experience using the VMAT. Currently, 150+ supervisors have used VMAT **(complete)**. • Access to website for the assessment instruments and resources **(complete).**	• All points listed under project completion **In addition:** • Routine use of the new instrument, VMAT to assess student competencies • Expertise to administer, score and interpret both the CΨPRS and VMAT instruments • Enhanced resources for practicum assessment on website	• All points listed under project completion **In addition:** • Access to better data on standardisation and evaluation to inform scoring and interpretation of the CΨPRS and VMAT instruments • Enhanced and updated resources for practicum assessment on website
3a: Spreading the word – Conferences	• A website promoting the project has been developed and is being hosted by Western Sydney University: http://www.uws.edu.au/vmp/home	• Enhanced resources for practicum assessment on website	• Enhanced and updated resources for practicum assessment on website

	Anticipated changes at:		
	Project completion	**Six months post-completion**	**Twelve to twenty-four months post-completion**
	• At project completion, the number of presentations given at conferences and workshops has exceeded expectation. A list of presentations is provided in Appendix J:.	• It is expected that conference presentations and publications will continue to have impact beyond the duration of the project. • Team members will be encouraged to continue their efforts to disseminate the outcomes of the project to new Clinic Directors and Directors of Clinical Training.	• Opportunities will be identified and used for relevant conference and workshop presentations **Planned/invited presentations:** • Clinic Directors conference (Nov 2017 and 2018) • APS Conference 2017 • *Thirteenth International Interdisciplinary Conference on Clinical Supervision, 2017 (invitation to give a plenary address).*
3b: Spreading the word – Scientific, peer-reviewed publications	**Publications:** A publication plan has been implemented and a number of key manuscripts have been identified as priorities: • Hierarchical clustering of practitioner competencies in clinical psychology (CΨPRS) **(complete). Paper has been published in Clinical Psychology: Science and Practice.** • Two manuscripts have been accepted for publication in a special issue of *Australian Psychologist*. This issue is due for publication in early 2017. • Developmental trajectory of competency attainment among psychology practitioners (CΨPRS) **(in progress).**	• Special issue in Australian Psychologist has been accepted (2017). • Additional publications using follow-up data	• Additional publications will ensue from continued involvement in data collection by the team • Improved reputation and standing within scientific and professional circles following peer-reviewed publications

	Anticipated changes at:		
	Project completion	**Six months post-completion**	**Twelve to twenty-four months post-completion**
	• Vignettes: An innovation that improves the reliability and validity of competency assessment (VMAT) **(in progress).** • Hierarchical clustering of CΨPRS and VMAT items **(in progress)**. • Trajectory of CΨPRS ratings across mid- and end-placement **(in progress)**.		
4. Narrow opportunistic adoption	• Uptake of CΨPRS and VMAT by additional supervisors within partner institutions leading to enhanced assessment of student competencies **(complete). The number of CΨPRS entries received far exceeded expectation (Mid-placement: N = 800+; End-placement: N = 940+). Nearly 1000 end-placement entries have been received and this is both a testament to the useability of the CΨPRS and to the dedication of the research partners.** • Online and workshop-based training for new users to enhance effectiveness of CΨPRS and VMAT **(complete). An online CΨPRS training was implemented (130 completed). In addition, two dissemination workshops conducted in Brisbane and Melbourne in 2016 (n = 73 participants).** • Enhanced efficiency and ease of student assessment via the online assessment tools **(complete).**	• Increased uptake of CΨPRS and VMAT through promotion on website and via conferences, workshops and publications. At project completion, four additional institutions have subscribed to the online CΨPRS. • Enhanced online and workshop-based training to facilitate the effectiveness and efficiency of assessment. Two scheduled for Oct and Nov 2016	• Increased uptake of CΨPRS and VMAT through promotion on website • Increased uptake following additional promotional strategies (e.g., newsletters, dissemination and professional development events for targeted groups)
5. Narrow systemic adoption	• Access to a training module will be designed that could be used as a PD opportunity for supervisors on an annual basis **(partially complete). Additional work is ongoing.**	• Adoption of the online assessment tool as the primary and default means	• Increased uptake of CΨPRS and VMAT through promotion on website

	Anticipated changes at:		
	Project completion	**Six months post-completion**	**Twelve to twenty-four months post-completion**
	• Team members (i.e. clinic directors) will strongly encourage and support new and existing placement supervisors to utilise the VMAT for student assessment **(complete). Despite the initial slow uptake of the VMAT, the project has now procured 150+ VMAT assessments.** • This will result in more efficient and accurate assessments and will facilitate effective student feedback **(complete)**. **The effectiveness of the VMAT has been established via analyses of the collected data. Evidence suggests that the VMAT is effective in reducing halo bias. Positive reports on the utility of the VMAT have also been provided by supervisors. Specifically, VMAT is perceived by supervisors to provide more accurate, reliable and valid ratings than CΨPRS.**	of assessing students **(partially complete). Partner institutions have committed to the continued use of the online platform. In addition, four other training sites have requested access to the online system.** • Enhanced confidence in the CΨPRS and VMAT as an effective assessment tool supported by the validation of data collected and disseminated throughout the project. Dissemination workshops are scheduled to take place in Sydney in Oct-Dec 2016.	• Increased uptake following additional promotional strategies (e.g., newsletters, dissemination and professional development events for targeted groups).
6. Broad opportunistic adoption	• A training module that has online components will be developed and be made available to interested institutions around Australia and internationally **(partially complete). Currently, online training is available to supervisors associated with partner institutions. Approximately 130 supervisors have completed this**	• Online versions of the CΨPRS and VMAT tools to be made accessible and available to other institutions at low cost. **At project completion, Bond University, University of**	• Increased uptake of CΨPRS and VMAT through promotion on website, and via publications. • Increased uptake following additional promotional strategies (e.g.,

	Anticipated changes at:		
	Project completion	**Six months post-completion**	**Twelve to twenty-four months post-completion**
	training. A CΨPRS "how-to" document has also been produced and disseminated to all institutions using the online CΨPRS. • Dissemination workshops in Victoria and Queensland will be conducted to facilitate knowledge, training, and adoption of CΨPRS other Australian universities. **(complete)** • With permission, PDF versions of the CΨPRS made available to other non-partner institutions **(complete). Multiple requests have been received from several universities, including Queensland University of Technology, University of Queensland, Griffith University, James Cook University, University of Canberra, Tasmania, and National University, Singapore.** • Brochure/information flyer for Directors of Clinical training for distribution via email **(complete). Both CΨPRS and VMAT promotional flyers were produced and distributed to partners and disseminated at the 2015 Clinic Director's Conference in Tasmania.**	**South Australia and Australian Catholic University have subscribed to the online CΨPRS. An expression of interest has also been received from Deakin University.** • Increased uptake and dissemination of issues concerning trainee assessment. Additional dissemination workshops are scheduled to take place in Sydney in Oct-Dec 2016.	newsletters, merits of online administration and scoring, professional development and dissemination events for targeted groups, etc.).
7. Broad systemic adoption	• Pilot study results of a cross-disciplinary application of the VMAT in Psychiatry **(partially achieved). Both** CΨPRS **and Vignettes were revised to examine basic psychiatry competencies of medical students. Pilot data from**	• Preliminary collaboration with the School of Medicine at UoW to develop a VMAT appropriate for assessing	• Development and implementation of medicine VMAT in collaboration with the

	Anticipated changes at:		
	Project completion	**Six months post-completion**	**Twelve to twenty-four months post-completion**
	CΨPRS **but not the VMAT has been accrued.**	medical trainees.	School of Medicine (UoW) • Increased uptake of CΨPRS and VMAT through promotion on website • Increased uptake following additional promotional strategies (e.g., newsletters, merits of online administration and scoring, professional development and dissemination events for targeted groups, etc.)