

HEMF Research Grants Report

Developing an iPad app for assessment in dance movement therapy

Researchers Sue Mullane and Kim Dunphy are partners in the consulting organization, *Making Dance Matter*, which was established in 2012 to contribute to evidence-based practice in dance movement and other expressive arts therapies. The two were successful in their application to the Hanny Exiner Memorial Foundation (HEMF) in 2013 for a grant to support an iPad app they were developing for assessment in dance movement therapy. This invention responded to a problem Sue and Kim had identified for their profession: a dearth of relevant and accessible assessment frameworks and functional tools to collect data, and a lack of technological innovation to support data collection and analysis.

Recently the process reached a significant milestone with the launch of the app at the DTAA's recent conference. Professor Sherry Goodill, Chair of Creative Arts Therapies Department at Drexel University, Philadelphia, officiated at the launch, offering her very enthusiastic support for the project and its potential to address therapists' challenges with assessment. She imagined a future that included 'Big DMT Data' – which she thought might be possible if practitioners adopt the app, and use it to collect and share data. This would address many of the problems for the dance movement therapy profession, which has a developing, but not yet adequate, evidence base for its work, and professionals whose mode of practice precludes the writing of client notes and assessments that other deskbound professionals can make as they sit with their clients.



Photo: Professor Sherry Goodill (centre), and audience members at the launch.



Photo: Sue Mullane presenting at the launch

Sue and Kim also spoke at the launch about the impetus for the development of the app. It is based on an earlier invention, a *Framework for Dance Movement Assessment* the two devised for assessing progress of clients with disability, including intellectual disability in dance movement therapy (DMT) programs. This, in turn, was based on an earlier assessment tool published by Kim Dunphy and Jenny Scott in their book *Freedom to Move: movement and dance for people with intellectual disabilities* (Elsevier, 2003). The *Framework* measures therapeutic progress across five domains: physical, cognitive, emotional, personal and interpersonal.

However the very first application of the Framework in Sue's classroom made it clear it was not a practical tool. 96 pages of assessment data (12 pages for each of 8 students) were generated in the first of six sessions Sue would run on a normal school day. These needed processing after class, yet the day's program allowed nothing near the time required to deal with that much paperwork. A more efficient process was clearly required.

A search for a technological solution led the two to the creative team from Advaita Digital, Frank Ryder and Dennis Claringbold. These technical experts brought backgrounds in education and assessment to the task of devising an app that would be easy to use, while providing strong data on which the DM therapist could base her assessment of

clients. The initial request of an app that a DM therapist could tap, rather than write, assessment notes on was soon achieved. This allows the therapists to tap the appropriate number on a Likert scale for each measure selected to match the goals of a particular session or program. The scale can be tapped once in a session, or each time the behaviour is observed, or at time intervals throughout a session. The data is graphed – with number of taps measured and average of assessments recorded as well.



Figure 1: the home page of *Marking the Moves* app.

This initial brief was expanded by requests for additional features including photo and video capacity to enable capture of specific moments in a session, and a notes function to allow inclusion of information beyond quantitative assessment responses. The next request was for a drawing function to enable therapists to draw or sketch notes to supplement their notes. This feature could also potentially be used by clients to respond to assessment data, a capacity particularly important for this client group who are mostly non-verbal and not literate.

Figure 2 (see next page) shows the function of participant assessment on the app. To the far left are the nine *Learning Foci* for the whole program, from which the therapist selects for each program, session or client. In this image, she has chosen *Learning Focus 1: Body Awareness, Body Mastery and Expansion of Movement Range* to focus on. The next heading, *Assessment Indicator*, shows the indicators that enable assessment of the client within that *Focus*. The eight options are *Articulation of Body Parts, (upper, centre, and lower); Use of Kinaesphere;* and *Access to Effort Qualities (Flow, Weight, Space and Time)*. The column to the right, *Average*, shows the average score for assessment taps made for that *Indicator*, and *Count* shows how many taps for that *Indicator* have been made in that session. The numbers 1-9 to the right are the ratings for each *Indicator*, which the therapist taps on when she makes an assessment (a score of 1 is *least* and 9 is *most* evidence of that behaviour or outcome). The *Chart* button provides scores of assessments in graph form. Above this table are two additional buttons: the *Notes* function that enables the therapist to type in notes and *Multimedia* that allows access to *Photo, Video* and *Drawing* functions. This enables the therapist to substantiate her quantitative assessment with three types of recorded images.

Preliminary trials of the app were undertaken with therapists and peer professionals in two sites, a special developmental school in Melbourne, where Sue works as a dance movement therapist, and a community program for children with special needs in Chicago, USA. The app was found to be usable by DM therapists as well as education staff with varying degrees of training, with a high degree of consistency between assessments made by each different group. Favourable responses to the app were offered by all users, indicating its potential for use by dance movement therapists in different contexts and client groups. An international trial is planned for 2016, with DM therapists in a wide range of contexts and countries having signed up to trial it after seeing it in use at the American Dance Therapy Association Conference in 2014.

Figure 2: An assessment of a participant on *Marking the Moves*

The screenshot shows the 'Marking The Moves TRIAL' app interface. At the top, it displays 'iPad', '10:55 pm', and '93%' battery. The app title 'Marking The Moves TRIAL' is centered, with a search icon on the right. Below the title is a purple banner with the app logo and a 'Return to Session' button. The main section is titled 'Assess Participant' and includes a dropdown for 'Participant' (Fletcher), a 'Group' field (Blue), and a 'Session Date' field (Fri, 10 Jul 2015). There are buttons for 'ADD:', 'Note', and 'Multimedia'. The assessment table has columns for 'Learning Focus', 'Assessment Indicator', and a 9-point scale. The table contains 9 rows of assessment items, each with a 'Chart' button and 'Delete Last' and 'Chart' buttons.

Learning Focus:	Assessment Indicator:	Avg (All)	Count (All)	1	2	3	4	5	6	7	8	9	Delete Last	Chart
1 Body Awareness, Body Mastery and Expansion of Movement Range	Articulation of Body Parts - Upper: (Head, Shoulders, Arms, Hands)													
2 Fitness and Co-Ordination	Articulation of Body Parts - Centre: (Spine, Chest, Abdomen, Pelvis)													
3 Ability to Relax	Articulation of Body Parts - Lower: (Legs, Knees, Ankles, Feet)													
4 Initiative, Decision Making and Leadership Skills	Use of Kinesphere (near, mid, far reach space)													
5 Emotional Expression and Regulation	Access to Effort Qualities: Flow													
6 Connection and Communication with Others	Access to Effort Qualities: Space													
7 Connection with the Here and Now: Being Fully Present in the Moment	Access to Effort Qualities: Weight													
8 Connection Between Thoughts, Feelings, Imagination and Body	Access to Effort Qualities: Time													
9 A Sense of Fun and Enjoyment														

Interest is also being shown by other professionals who lack technological solutions for assessment. It is possible that the app could be useful for other therapists and teachers, with the therapeutic goals and measures adaptable within the basic structure. It seems particularly significant that this initiative arose at the same time as PACFA (the Psychotherapy and Counselling Federation of Australia) has initiated a strong push for practitioner-collected data.

Kim Dunphy and Sue Mullane

More information about the app *Marking the Moves*: www.makingdancematter.com.au.

Kim and Sue thank HEMF for their support, as well as PACFA, who provided a small research grant to support the trial of the app.

The trial of the app has been written up in a full article and will be published in a future edition of *Moving On*.