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Scaffolding for Artistic Success: Comparing Structured and Unstructured Art Activity for People with Dementia

Kitwood (1997) identified 6 key needs of people with dementia (PwD). These are attachment (reciprocal and meaningful relationships with others), comfort (physical touch or psychological reassurance), identity (positive perception of the individual by the self and others), occupation (meaningful activity), inclusion (to be a legitimate player in social groups, culture and wider society) and overall to love and be loved. While these were referred to as the needs of PwD, they are needs that we all have. Dementia impacts on the ability of individuals to fulfil these needs autonomously and people can become isolated, withdrawn and are at risk of developing low self-esteem and affective disorders. Person-centred care (PCC) asserts that non-pharmacological interventions are a vital part of dementia care. Such interventions should be built on the assumption that PwD are individuals with human needs rather than patients with symptoms to be treated.

Art interventions have been shown to be beneficial for PwD. Observational measures have shown improvements in task interest, sustained attention, self-esteem, sadness, pleasure and verbal expression of feeling normal compared to non-art interventions (Kinney & Rentz, 2005). Benefits can also be cumulative if participation is maintained over time (Rusted, Shepherd and Waller, 2006). Beard (2012) distinguishes art activity and art therapy for PwD. While both are beneficial, *therapy* seeks to create some measurable outcome in symptoms or behaviour (to benefit caregivers in addition to PwD). Previous literature tends to focus on art as a “therapy”, focusing on disease and behaviour related outcomes such as depression scores or reductions in undesirable behaviours, relying heavily on the reports of caregivers and observation rather than the opinions and feeling of the people participating in the activities. This focus violates the need for identity (positioning the art participants as patients or subjects) and inclusion (by excluding the voices of PwD from dementia research). On the other hand, anyone can participate and experience the benefits of art activity and they do so for improvements to wellbeing, emotional expression and creative occupation (Beard, 2012). If we consider art production in dementia as an *activity* rather than a *therapy*, then investigations can go beyond disease-based therapeutic outcomes and consider PCC based outcomes such as art quality and individual wellbeing.

As the art produced by people with dementia is often considered to be of low quality (Gretton & Ffytche, 2014; Kirk & Kertez, 1991; Seifert & Baker, 2003; Seifert, Drennon & Baker, 2001), engaging PwD in art activities has typically been focused on achieving a therapeutic outcome. However, we argue that this emphasis demonstrates a failure to recognise and facilitate retained art skills, rather than an absence of them. An activity such as drawing can be considered as a production line with the contribution of several skills required to achieve a desirable outcome (see fig.1). Despite many intact cognitive skills such as procedural memory and composition perception, impaired cognitive skills such as task sequencing, perceptual deficits and explicit memory can result in a reduced outcome (see fig. 2), (Gretton & Ffytche, 2013; Kirk & Kertez, 1991; Seifert & Baker, 2003; Seifert, Drennon & Baker, 2001). An observer perceives the reduced outcome as indicative of a lack of ability to complete the activity (as in previous research). However, we argue that art skills are retained in dementia and aim to demonstrate this using a technique known as “Scaffolding”.

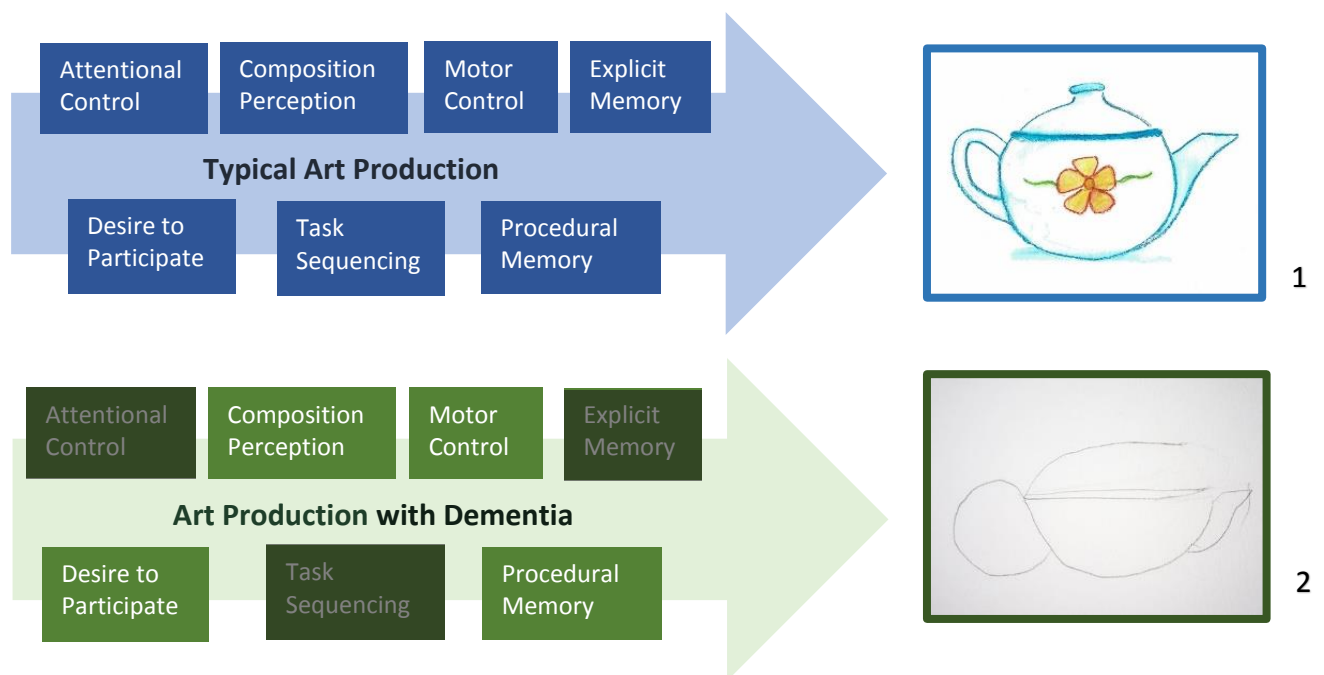


Figure 1. Typical Art Production Line vs Art Production Line with Dementia: Without deficits, a person can successfully recruit all the skills required to carry out art task. However, when key skills are lost or damaged, participation in even simple tasks are inhibited. While many skills remain, the deficits obscure these, leading to poor quality art outcomes.

1. Drawing by a person without dementia. 2. Unscaffolded drawing by a person with dementia.

Scaffolding Art for Dementia

Originally an early-years educational theory, scaffolding is a naturally occurring process between PwD and their carers by which an individual who lacks some cognitive, physical or linguistic ability is guided to participate in an activity that they would struggle with on their own (Cavanaugh, 1989; Cicourel, 2012; Hyden, 2011; 2014, Vygotsky, 1987). “The Zone of Proximal Development” (ZPD) refers to the gap between that which can be achieved without support and that which cannot be achieved even with support (Vygotsky, 1987). It represents the potential area of improvement to task performance that can be achieved with assistance (Cavanaugh, 1989). For PwD, scaffolding provides an opportunity to utilise retained skills to maximise the success of an activity. This facilitation can cultivate a sense of identity for PwD and demonstrate that their deficits do not define them (Anbäcken, Minemoto and Fujii, 2015).

The present investigation is the first to propose the use of dementia-tailored scaffolding for art activity sessions to mitigate the effect of common deficits thereby allowing people to use their retained skills in visual art production (painting and drawing). It has been suggested that the most accurate assessment of the skill set of a PwD can be gained through observing them in collaboration with other people. These partnerships highlight the fact that PwD can and do demonstrate their retained skills when given the opportunity (Kindell, Keady, Sage, & Wilkinson, 2016). As such, observing drawings by PwD under scaffolded conditions may provide a more accurate representation of their artistic skills than has been demonstrated in previous research. Scaffolding techniques may also improve wellbeing and visuospatial skills in participants, thereby maximising the positive effects of art intervention seen in previous research. Finally, facilitating the use of retained skills in visual art production may help to tackle negative perceptions of PwD through the display of scaffolded art.

The Little Art School

The Little Art School Trust (LAST) is a registered Scottish charity offering art classes to people with dementia in Ayrshire and East Renfrewshire through their “Art in a Suitcase” project. The project demonstrates a real-world example of naturally developed scaffolding in which structured (but flexible) art classes helps PwD to maximise their drawing performance and be proud of the work they produce. Scaffolding different tasks is complex, as techniques for one activity may not be appropriate for another and so the LAST

programme offers a new modality of scaffolding yet to be investigated. While their methods were not explicitly referred to in terms of scaffolding, the LAST aims of maximising benefits to their clients by supporting an engaging activity bear close resemblance to its principles. The programme considers an understanding of its clients and integrates this into drawing and painting activities.

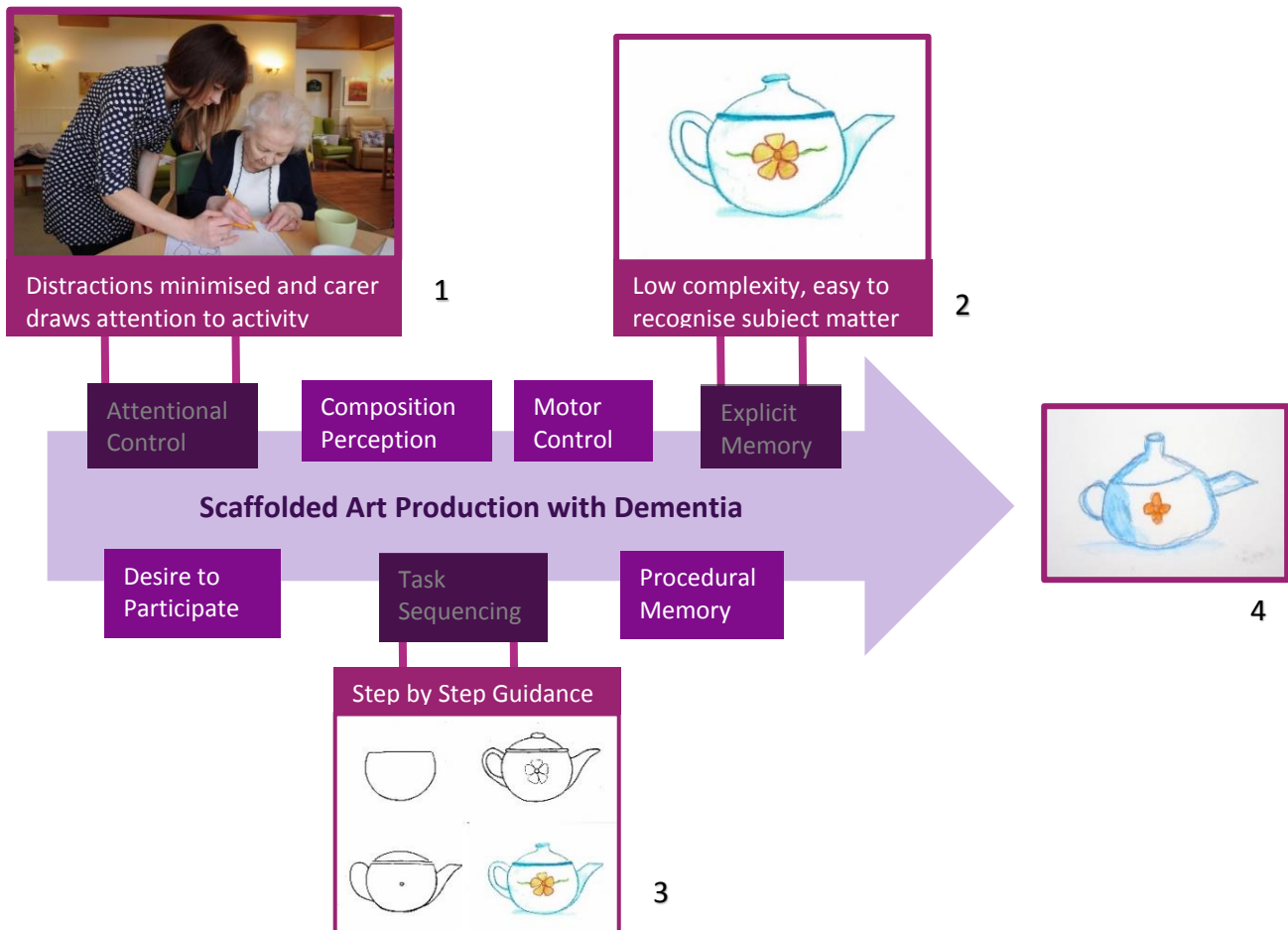


Figure 2. Scaffolds Art Production: Scaffolds can be targeted to deficits to allow retained skills to be revealed and increase task success in dementia.

1. LAS teacher working with a PWD. 2. An example of subject matter used for drawings. 3. Step by step guide from LAS classes. 4. Scaffolds drawing by a PWD.

Using a set of targeted scaffolds to those cognitive deficits identified as inhibitory to art production, LAST aim to bridge the ZPD (see fig.2). While explicit memory does not interfere with basic drawing activity, it could cause distress or confusion if individuals do not know where they are or why they are there. This is tackled by starting each class with “warm ups”

where participants have a chance to freely doodle. The “warm up” allows individuals to engage the motor skills they require for the art task and ground themselves in the present activity before they are asked to engage with the step by step scaffolds in the lesson. In addition, easily recognisable subject matter are used to help clients to recognise what they are drawing. The templates show bold, recognisable subjects such as a teapot and are on display throughout the lesson (see fig.3). This aims to ensure participants recognise and be reminded what they are drawing for the duration of the task.

Impaired task sequencing commonly interferes with planning and carrying out activities in dementia (Baum & Edwards, 1993). In response to this, step-by-step templates have been created by LAST to break drawing down into manageable steps and provide reference for individuals to assess their skills. It was also noted that clients with Dementia were struggling to engage with art materials in the correct order (picking up a paintbrush when they intended a pencil) and so art facilitators now present each person with the tools they need as and when they need them, clearing away un-needed debris to avoid confusion.

Attentional deficits also interfere with task success and therefore materials are provided in such a way that attention is not distracted from the task at hand (Parasuraman et al, 1992). Throughout the lesson excessive noise is minimised and if participants become distracted from their art their attention is gently brought back to drawing. The step by step provision of art materials also helps to alleviate attentional deficits by ensuring attention is not drawn away from the art task by clutter. Providing print outs of drawing compositions is another example aiming to prevent urges to interact with objects rather than drawing them (eating an apple intended as still life).

To maintain motivation, art facilitators ensure that clients are encouraged and praised for their drawings whilst avoiding boredom and frustration by offering more complex drawing options to more skilled clients. This variation demonstrates the programme’s flexibility to the requirements of individual clients. All drawings are then framed and often can be found on display in the residences. Clients are encouraged to sign their work so that they can identify their own art work for visitors.

The LAST was keen to investigate the impact of their structured sessions in terms of improvements in the visuospatial skills used in drawing. Previous research has not

investigated whether scaffolding in art activities can facilitate cognitive improvement in PwD.

The Investigation: Part One

The first stage of the investigation aimed to test whether the scaffolded LAST art activity would result in improvements to and visuo-spatial ability compared to an un-scaffolded art activity. This was done by organising two art activity sessions. The first following the normal structure of the LAST sessions and the second a completely unstructured session (completed at least a week later). Participants were asked to do their own drawing using the final template stage (see no.4 in fig. 3). Art facilitators were instructed to provide minimal facilitation of the drawing task. Both conditions followed administration of wellbeing and visuo-spatial measures.

Wellbeing was tested using the dementia quality of life scale (DemQOL), a self-report measure, because we did not want to exclude the voices of PwD by using carer reports or observational measures (Banerjee, 2012). Higher levels of wellbeing following the structured session compared to the unstructured would demonstrate that scaffolding

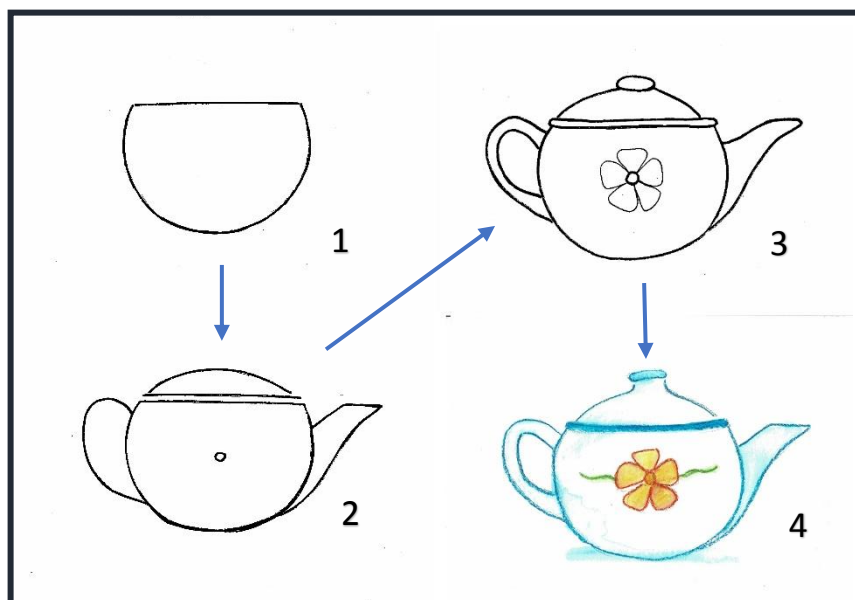


Figure 3. Dementia Tailored Templates: Four step templates for scaffolding of task sequencing designed by The Little Art School and used in structured art sessions. Step four of templates was used in isolation for unstructured tasks.

provided greater positive effects on wellbeing. Visuo-spatial ability was measured using an extract of the Addenbrooks cognitive Examination (ACE III) (clock drawing, letter identification and infinity pattern) (Hodges, 2012). If scaffolded sessions yielded higher visuo-spatial scores than the un-scaffolded this would demonstrate that the session facilitated improvement to cognitive skills.

Eight people with diagnoses of dementia or cognitive impairment living in three residential care homes in Ayrshire were recruited on an opportunity basis to participate in the present investigation (see table 1). All participants completed the scaffolded session and following measures however two did not attend the un-scaffolded. A further three did not wish to complete the measures after the session but still completed drawings.

Table 1

Participant demographic information: Gender, Age, Residence and Diagnosis.*

Participant	Gender	Age	Diagnosis
1	Female	87	Probable Alzheimer's Disease
2	Female	92	Probable Alzheimer's Disease
3	Female	81	Vascular Dementia
4	Male	83	Mixed (Probable AD and Vascular)
5	Female	94	Mild Cognitive Impairment
6	Female	76	Probable Alzheimer's Disease
7	Female	85	Probable Alzheimer's Disease
8	Female	85	Stroke

Results

The mean DemQOL score was higher in the structured condition than the unstructured however this difference was not found to be statistically significant thereby indicating that scaffolded art activity does not increase wellbeing in PwD in comparison to unstructured. It should be noted, however, that three out of the eight participants in the unstructured session did not wish to complete the measures after the session. The structured sessions were bright and full of chatter and this mood appeared to last in the hours following the activity. But the unstructured activity was quiet, and some participants appeared to become strained and confused as to the aims of the drawing task. They appeared withdrawn and declined to participate in testing. It may be the case that the scaffolded task did yield

benefits to wellbeing, although these could not be properly compared to the unstructured task as without the mood improvement from the structured session participants were not in the best frame of mind to participate in the measure. The same effect may have been at work when we found no significance difference in visuospatial ability improvement between the two tasks.

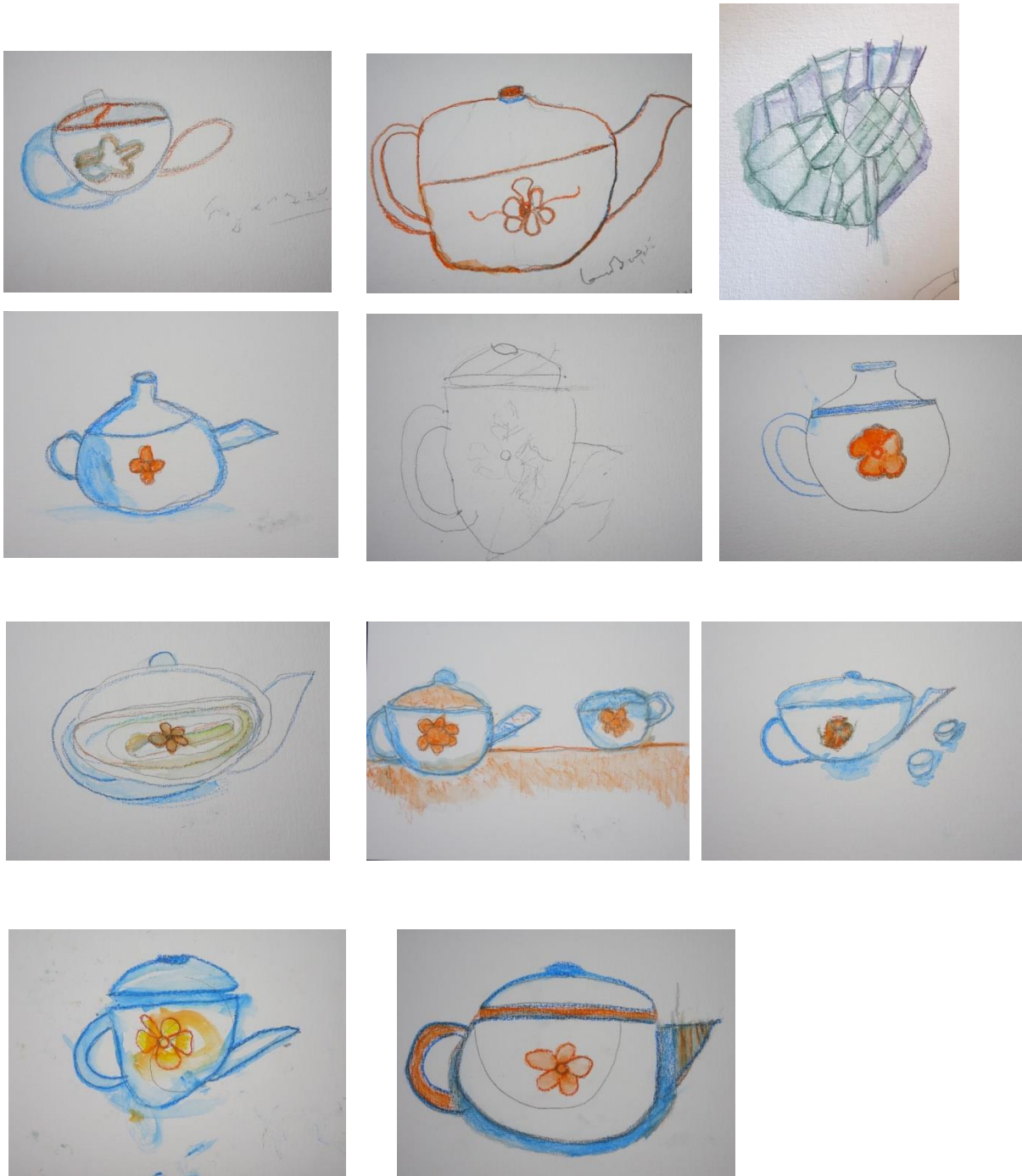


Figure 4. Scaffolded drawings completed with participants with dementia (signatures blurred to maintain anonymity) appear on the whole to show more success in drawing than the unstructured (see fig. 5)

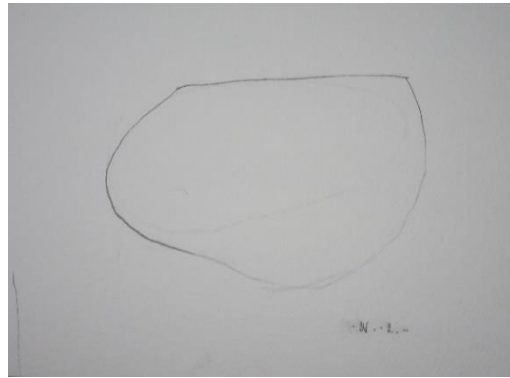
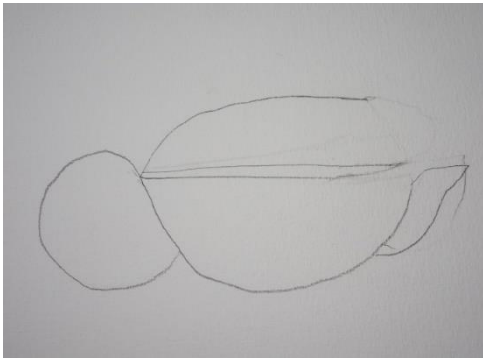


Figure 5. Unscaffolded drawings completed by participants with dementia (signatures blurred to maintain anonymity) as a whole did not appear to be as successful as scaffolded (see fig. 5).

The Investigation: Part Two

In the first part of the experiment 11 structured and 9 unstructured drawings were collected. A cursory look suggested to the researchers that the art completed under scaffolded conditions was of higher quality than the unscaffolded (see fig. 4 & 5). To discover whether this observation was significant (and if scaffolding facilitated the use of retained drawing skills) we asked people (blind to the purpose of the study) to rate them and compared the ratings of scaffolded and un-scaffolded drawings. 20 participants without professional art expertise rated the success of drawings at achieving the likeness to the subject matter (the image PWD were drawing from) on a simple 0-10 scale. Each drawing was presented beside the target image (see fig. 6). All ratings were split by condition (structured (n=218) vs. unstructured (n=162) drawings) and compared.

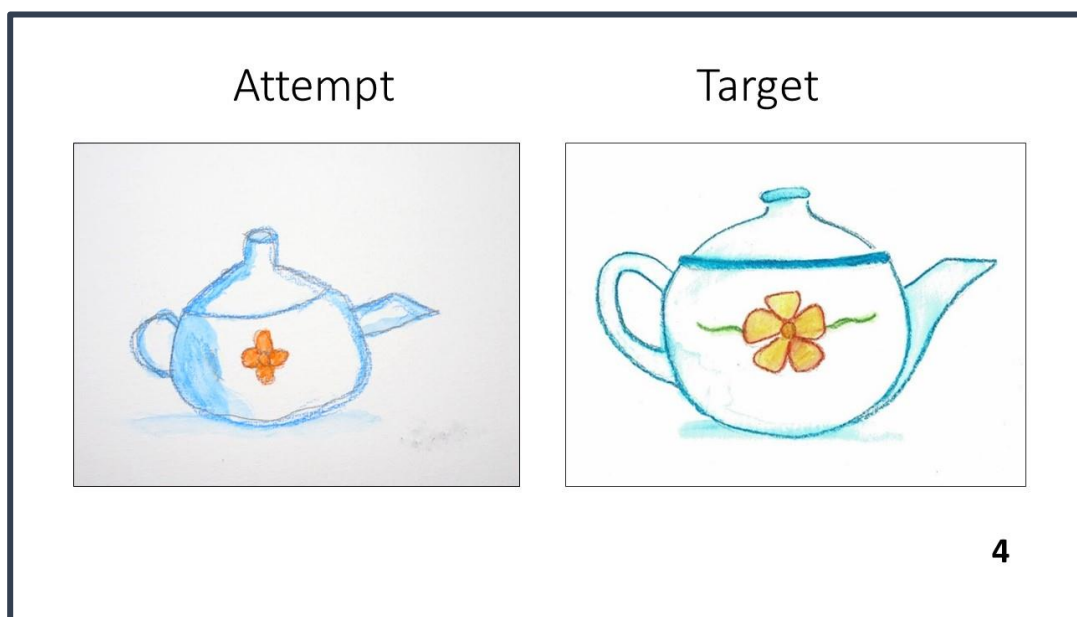


Figure 6. Rating Slide Example: Dementia drawings (left) and target drawing (right) from step 4 of the LAS template (see fig. 3).

Results

The mean rating for structured drawings (5 out of 10) was found to be significantly higher than unstructured (2.12 out of 10). This provides evidence to suggest that there was a

recognisable effect (to non-art experts blind to the study) of scaffolding in art production with dementia compared to the unstructured format.

The data suggests that the scaffolding programme designed by the LAST, increased drawing success. This shows that the alleviation of the damaging effects of dementia deficits (such as explicit memory, task sequencing and attentional control) with scaffolding revealed a retained ability to create art (achieving a likeness to the subject matter). It demonstrates that there is an art specific ZPD in dementia that can be accessed through sensitive scaffolding. By bridging this gap, participants in the study could create more competent drawings than they could on their own.

Discussion

While the present research did not replicate the wellbeing improvement of structured art activity from previous studies, it has provided support for the practice of scaffolding in art activity for PwD. The present findings contradict previous research suggesting that dementia art is of poor quality and the only reason to facilitate art activity for PwD would be for therapeutic benefits (such as reduced depression or anxiety) (Gretton & ffytche, 2014; Kirk & Kertez, 1991; Seifert & Baker, 2003). In contrast, we have shown that drawing a likeness of subject matter is possible with the retained skills of PwD. Therefore, we propose that the application of structured scaffolding is an important factor in optimising the success of art activities in dementia and drawing in dementia can be an activity for personal fulfilment and artistic expression, rather than a therapy (Beard, 2012). The study also provided support for the use of scaffolding for dementia. The technique could be applied many activities such as cooking or personal care.

The effects of scaffolding in maximising the utilisation of retained skills was recognisable to lay-raters in this study. The scaffolded drawings by people with dementia may be an opportunity to demonstrate that even though we cannot see retained skills in dementia under normal conditions, it does not mean that people with dementia have no skills left. Attitudes toward dementia still focus on deficits and what people *cannot do*. Scaffolded art presents a visual example of successful scaffolding which could be used to engage people of

different levels of expertise, education, age and language with the concepts of the retained skill model of dementia and show what PwD *can do* (See fig 7).

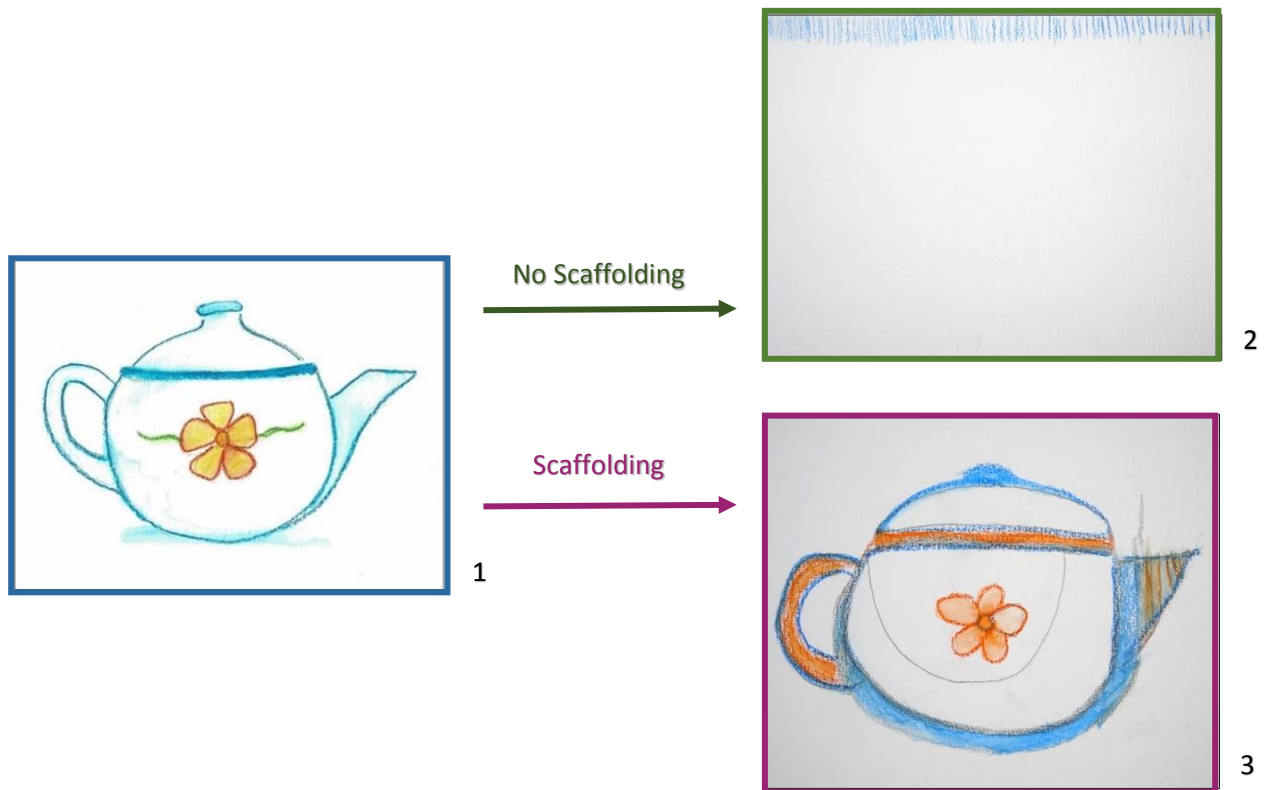


Figure 7. Drawings completed in experiment one by Participant Six (AD) with and without scaffolding. See appendices G and H for drawings by all participants.

1. Subject matter drawn from. 2. Unstructured drawing. 3. Structured drawing

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