2006

Collaborative goal technology: theory & practice

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**Recommended Citation**
Clarke, Samantha; Oades, Lindsay G.; Crowe, Trevor P.; and Deane, Frank P.: Collaborative goal technology: theory & practice 2006, 129-136.
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Collaborative goal technology: theory & practice

Abstract
Goal striving promotes hope and enhances motivation, which is important for psychosocial rehabilitation and recovery. The Collaborative Goal Technology (CGT) is a new goal striving intervention that is used to support the autonomy and recovery processes of the person with a psychiatric disability. The CGT protocol and its utility are outlined. Theory and research from goal striving, motivation and mental health recovery domains that informed the development of CGT are described. A case example is also provided.

Keywords
practice, theory, technology, goal, collaborative

Disciplines
Arts and Humanities | Life Sciences | Medicine and Health Sciences | Social and Behavioral Sciences

Publication Details

This journal article is available at Research Online: https://ro.uow.edu.au/hbspapers/1021
Collaborative Goal Technology: Theory and Practice

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Goal striving promotes hope and enhances motivation, which is important for psychosocial rehabilitation and recovery. The Collaborative Goal Technology (CGT) is a new goal striving intervention that is used to support the autonomy and recovery processes of the person with a psychiatric disability. The CGT protocol and its utility are outlined. Theory and research from goal striving, motivation and mental health recovery domains that informed the development of CGT are described. A case example is also provided.

Keywords: goal striving, recovery, psychosocial rehabilitation, case management

This article describes the application of a new goal striving intervention, the Collaborative Goal Technology (CGT), within mental health psychosocial rehabilitation and case-management contexts. The CGT is an individualized goal striving intervention aimed at enhancing clinical practice and allowing clinicians and people in recovery to collaboratively monitor goal progress at an individual and group level. The overall objective of the CGT is to assist people with a psychiatric disability progress with their individual recovery processes. The CGT was designed to facilitate collaboration between a person in recovery and his/her mental health worker in relation to developing and monitoring individualized recovery goals and an overall “recovery vision.” Developing the person’s own “recovery vision” helps locate the CGT within the context of the main themes emerging from the mental health recovery literature (e.g., Andresen, Oades, & Caputi, 2003; Anthony, 1991, 1993; Anthony, Cohen, Farkas & Cohen, 2000). The CGT is also described in relation to the Collaborative Recovery Model (Oades, Deane, Crowe, Lambert, Lloyd, & Kavanagh, 2005) which emphasizes the principles of recovery, collaboration and support of autonomy, as well as other key clinical skills such as needs assessment and homework assignment.

Goal Setting within Mental Health Contexts
Goal setting is widely acknowledged to be an important part of psychosocial rehabilitation (Ades, 2003; Cohen, Farkas, Cohen, & Unger 1999; Lecomte, Wallace, Perreault, & Caron, 2005). A
recent review of the recovery literature clearly identified hope as being an important aspect of psychological recovery (Andresen et al., 2003). Establishing personally meaningful goals with people with psychiatric disability promotes hopefulness regarding one's recovery (Ades, 2004; Baumeister & Leary, 1995). Interviews conducted with individuals with psychiatric disabilities confirmed the importance of goals in assisting the recovery process (Marshall, Oades, Crowe, Turner & Huntriss, 2005).

When goals are clearly specified, individuals are more likely to achieve them (Locke & Latham, 1990). Several measures have been developed to assist with making psychosocial rehabilitation goals explicit. These include: the Client Assessment of Strengths, Interests and Goals (CASIG, Lecomte et al., 2005), the Training Technology on Setting an Overall Rehabilitation Goal (Cohen et al., 1990), and Goal Attainment Scaling (GAS, Kiresuk, Smith & Cardillo, 1994).

GAS is a widely utilized goal setting intervention (e.g., Burns, 2002; Leichsenring, Biskup, Kreische, & Staats, 2005; McLaren & Rodger, 2003; Malec & Moessner, 2000). GAS, originally developed in 1968 by Kiresuk and Sherman, aimed to evaluate and contrast the treatment impact of various mental health interventions on the basis of goal attainment. Typically, treatment effectiveness is evaluated using standardized outcome measures that focus on symptom severity. However, GAS represents an outcome measure based on the individual's progress toward idiosyncratic treatment goals. GAS requires goals to be identified, prioritized in terms of importance, and graded in terms of five levels of potential goal progress outcomes for each goal (best expected to worst expected goal progress outcomes). During goal progress reviews, goal attainment scores are generated by weighing the level of goal progress with the importance allocation for each goal. This score enables an individual's progress to be monitored, and if required, compared over time and with the progress of other individuals, as well as enabling evaluation at a service level (see Kiresuk et al., 1994 for more details).


The CGT places greater emphasis on collaboration and goal ownership by the person in recovery and involves four major adaptations of GAS. 1) The inclusion of a goal progress review protocol that requires the consumer to explore, discuss and problem solve a range of difficulties experienced when pursuing his/her goals. This permits both social reinforcement and facilitation of problem solving to address barriers to goal progress. 2) Incorporation of an overall recovery vision aimed at clarifying the person's life dreams or key values which are linked to the consumer's shorter-term goals. 3) The CGT reduces the number of goal progress levels from 5 to 3 and removes the negative ratings of goal progress. 4) Motivation enhancement practices are further incorporated into the goal setting and monitoring process by including a quantitative rating of the consumer's confidence regarding his/her ability to attain the desired level of goal progress over the review period.

Collaboration and Supporting Autonomy

Consumer and clinician agreement regarding treatment goals is associated with increased satisfaction, decreased distress, reduced symptomatology and improved treatment outcome (Michalak, Klapheck, & Kosfelder, 2004). Better treatment outcomes are associated with the degree to which the person in recovery is an active participant in treatment and goal setting (Tyron & Winograd, 2001). Consequently, the CGT has been designed to emphasise the individual's freedom to determine her/his own life plan and the pathways to get there. Furthermore, using the CGT to promote self-determination should increase the likelihood that the individual will adopt and maintain specific health behaviors (Sheldon, Williams & Joiner, 2003; Anthony, 1993; Anthony et al., 2000; Richards, 2002).

The following example demonstrates collaboration and supporting the person's autonomy. The person indicated he wanted to become a doctor, yet had not completed high school. Rather than immediately dismissing this goal as unrealistic, the support worker assisted the individual to identify manageable steps (shorter-term goals) with which to progress towards his longer-term vision. The worker supported the individual's autonomy by providing options through which he could complete high school (e.g., attending adult learning institutions or supported education on a full or part-time basis). Furthermore, the worker helped the person explore what it was about being a doctor that was important to him. Subsequent short-term goals and related tasks consistent with this vision were set. Although the recovery vision may change over time, the reasons for wanting to be a doctor remain relatively stable and provide ongoing motivation. In this way, autonomy was
supported and both the meaning and manageability of specific goals were maintained.

**Components of the CGT**

The CGT incorporates several procedures. These include: 1) orienting the person to the concept of recovery and recovery prospects and helping him/her shape his/her personal recovery vision; 2) developing time-framed goals with three levels of goal progress; 3) prioritizing goals in terms of relative importance; 4) negotiating goal progress indicators in relation to goal attainment confidence; 5) reviewing goal progress systematically; and 6. upon review generating an overall goal attainment index. These procedures are briefly described in Table 1, and an example of a completed CGT form is displayed in Figure 1.

**Personal Recovery Vision**

The association between personal meaning in one’s life and psychological health has long been noted (Frankl, 1963; Jung, 1966; Yalom, 1980). Meaning and purpose in life have consistently been identified by people in recovery as important for psychological recovery (Andresen et al., 2003; Spaniol & Koehler, 1994). Anthony (1992) discussed the “recovery vision” as a way of tying together the principles of self-determination, adjustment to disability, empowerment and self-esteem into existing conceptions of recovery from mental illness. The personal “recovery vision” incorporated into the CGT aims to articulate the individual’s hopes and dreams for the future and/or personally meaningful life principles/values that can be activated as the person practices being the person she/he wants to be. The recovery vision aims to make the direction that an individual hopes to pursue explicit before using this as a guide when developing more concrete goals and tasks. However, often the relationship between goals and vision is reciprocal in terms of one facilitating clarification of the other.

Although the recovery vision ensures that personal meaning is central to the recovery process, the CGT also emphasizes the “manageability” of more concrete goals. Little (1989) noted that goal attainment is enhanced by ensuring that both meaning and manageability are optimized in the goal setting and striving process. Goal attainment and motivation can be enhanced by linking the person’s abstract meaning-laden vision to more concrete goals and tasks. Questions that elicit the purpose or meaning behind “why” the individual has selected certain goals can assist the person in clarifying his/her recovery vision. For example, “Why would you like to get a job?” “What would it mean for you to be employed?” The example provided in Figure 1 in response to these questions is, “to be able to stand on my own two feet,” which reflects the importance of feeling independent to the person.

Recovery visions can also be explored by asking the individual to think about a “role-model,” someone he/she admires. By exploring what it is he/she admires about their role-model can help clarify the values and principles that are important to the individual. For example, one person selected Kate Winslet (the actor), because she was perceived as confident, a great mother and fun loving. Alternatively, making collages with people in recovery by using magazines to identify pictures or words can help people articulate what they find personally meaningful.

The discussion of meaning, values and vision is quite personal and for some individuals thinking about the future can be frightening or appear pointless. Consequently, it is important that a strong therapeutic relationship is nut-

### TABLE 1—CGT CONCEPT NAMES AND DEFINITIONS

<table>
<thead>
<tr>
<th>Concept Name</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovery Vision</td>
<td>Larger more abstract directions that infuse the person’s life with more meaning and hope. Potentially including a representation of the person’s preferred identity, personal principles and values.</td>
</tr>
<tr>
<td>Three Monthly Goals</td>
<td>More specific, concrete goals that are larger steps to be worked towards over the following 3 months. Should reflect the recovery vision. The CGT stipulates a maximum of 3 goals to be identified collaboratively between the clinician and individual.</td>
</tr>
<tr>
<td>Relative Importance</td>
<td>10 points allocation between the goals that are selected by the person in recovery. This provides awareness about motivation and goals relative priority.</td>
</tr>
<tr>
<td>Goal Levels</td>
<td>3 levels of goal progress for each of the goals selected. Levels of progress as specifically described and range from high to low.</td>
</tr>
<tr>
<td>Overall Goal Progress Index</td>
<td>An objective index can be calculated by multiplying the importance rating with level of attainment from each goal. A percentage of current goal attainment can be calculated. This allows the individual’s progress to be compared at different times and with other individuals’ progress.</td>
</tr>
</tbody>
</table>
**FIGURE 1—SAMPLE COLLABORATIVE GOAL IDENTIFICATION (STAGES 1 & 2) & REVIEW (STAGE 3)**

My personal recovery vision is: *To stand on my own two feet*

<table>
<thead>
<tr>
<th>Stage 1: Meaningful Vision and Goals</th>
<th>ATTAIN</th>
<th>GOAL 1</th>
<th>GOAL 2</th>
<th>GOAL 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Point allocation must total 10</td>
<td><em>To do my own shopping</em></td>
<td><em>To find a job</em></td>
<td><em>Improve medication taking</em></td>
</tr>
<tr>
<td></td>
<td>Perceived Importance points = 5</td>
<td></td>
<td>Perceived Importance points = 3</td>
<td>Perceived Importance points = 2</td>
</tr>
<tr>
<td><strong>Awesome</strong></td>
<td>To do my shopping at least once by myself</td>
<td>Go to the return to work program</td>
<td>Complete a medication diary more than 3 times per week</td>
<td></td>
</tr>
<tr>
<td><strong>Success</strong></td>
<td>To do my shopping at least once with a friend</td>
<td>Go to first appointment with employment assistance service</td>
<td>Complete a medication diary up to 3 times per week</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt;70% confident</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Keep Going</td>
<td>To do my shopping with my case worker</td>
<td>Continue discussing employment goal with case-manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Remember to take medication</td>
</tr>
</tbody>
</table>

**Stage 3 Goal Attainment Review**

When people are trying to work toward their goals they often come up against issues which affect their ability to achieve their goals. Below is a list of some of these difficulties:

<table>
<thead>
<tr>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I found a better goal</td>
<td>Not enough support</td>
<td>I felt frustrated, bored or unhappy</td>
<td>I was not motivated generally</td>
<td>Goal was too difficult</td>
<td>I was arguing with people close to me</td>
<td>I forgot about my goals</td>
<td>I don't really set goals</td>
</tr>
<tr>
<td>Poor Physical health</td>
<td>Poor Mental Health</td>
<td>I was not confident I could achieve the goal</td>
<td>Homework tasks were not appropriate</td>
<td>Goal was too easy</td>
<td>People criticised me for having this goal</td>
<td>There were no difficulties</td>
<td>Other</td>
</tr>
</tbody>
</table>

For each goal please write which of the above 16 issues listed above impacted the most on your ability to achieve your goals. If you select item 16 "other" please give details.

Goal 1: _______ 15 _______ Goal 2: _______ 10 _______ Goal 3: _______ 11 _______
tured so that individuals feel sufficiently safe and supported enough to discuss their wishes and to explore some of their fears and concerns.

It should also be noted that some individuals diagnosed with a mental health disorder like schizophrenia may experience problems with executive cognitive functioning. This may make it difficult to elicit an abstract vision (Buchanan & Carpenter, 2000; Cancro & Lehmann, 2000). Therefore clinicians need to be patient yet persistent when linking specific tasks to goals while ensuring they align with the person's recovery vision. Although abstraction may be difficulty it should not be assumed that the individual does not or can not have a recovery vision. People who experience difficulties with executive functioning have been shown to be capable of identifying their needs (Buhler, Oades, Liecster, Bensley, & Fox, 2001). Thus, the clinician's role is to help with the articulation of these needs and to elaborate strategies to meet these needs. Furthermore, Hogg (1995) asserted that selecting goals that are in line with personal interests can promote motivation and help counteract the negative symptoms of schizophrenia.

Three-monthly goals
Ades (2004) describes goals as “a concrete road map that mediates between where the person is and where he or she desires to go” (p. 15). The CGT allows a maximum of three goals to be pursued over a 3-month review period. Limiting the number of goals allows adequate attentional and motivational resources to be devoted to each of the goals. The 3-month review period is purposely selected to maximize the degree of motivation and commitment from the individual. Where resources allow and where positive progress supports it, shorter review periods may be appropriate. Disengagement may be experienced if specific tasks cannot be tied to goals that are set too far in the future (Bandura & Simon, 1977). The 3-month period allows meaningful steps to be taken that lead to progress, while remaining close enough to the present to engage the individual and maintain motivation. Homework tasks aligned with the person's goals are set and reviewed over shorter periods (e.g., at one or two week intervals). Therefore, smaller concrete biweekly steps are linked to larger 3 monthly steps, which in turn are tied to the more abstract recovery vision.

It is important for the clinician to work collaboratively with the person by asking questions that assist with goal identification and development. Questions such as “what could you do in the next 3 months that will help you move towards… (Recovery Vision)’” can be helpful. This practice increases the likelihood that the selected goals align with the person's values, interests and preferred identity, which assists with maintaining motivation and goal attainment (Sheldon & Elliot, 1998, 1999; Sheldon & Houser-Marko, 2001; Sheldon & Kasser, 1995). The three goals identified in the example (Figure 1) were: 1) to do my own shopping, 2) to find a job, and 3) to improve medication taking. These were three goals that the individual believed he could work on over the next three months to assist him in working toward his recovery vision, “to stand on my own two feet.”

Relative Importance System
To assist both parties in determining how best to spend their time and resources, the individual is asked how she/he would distribute 10 points across the maximum 3 goals selected. Hollenbeck and Williams (1987) found that the more important a goal is seen to be, the more an individual will commit and strive toward it. Corrigan, McCracken and Holmes (2001) also note that unless a person is focused on goals that they are motivated towards achieving, engagement in strategies to change will have limited impact. Therefore, identifying the person's goal priorities can be vital to ensure sustained motivation. As seen in the example (Figure 1) the individual allotted five points to goal one, three points to goal two, and two points to goal three. This indicates that the person's motivation is more likely to be directed toward doing his own shopping (goal one).

Levels of Goal Progress
For each goal, three levels (low to high) of measurable goal progress are identified and clearly defined. Making goals explicit with indicators of goal progress increases the likelihood of goal attainment (Locke & Latham, 1990). Furthermore, commitment to pursuing a goal is increased if there is a sufficient degree of difficulty in attaining the goal (Locke, Shaw, Saari & Latham, 1981). Therefore, to enhance goal attainment, the level of difficulty, indicated by the degree of goal progress targeted, should reflect the relative importance of goals.

Self-efficacy related to completing the tasks required to attain a goal is associated with motivation during the goal striving process (Locke & Latham, 1990). Therefore, acknowledgement and support for any progress that has been achieved by the person can enhance self-efficacy. This can also help to increase the person's future goal striving efforts whilst bolstering the belief that he/she has control over his/her life (Ades 2004; Locke, 1996).

The descriptors “Awesome,” “Success” and “Keep going” were chosen to represent different levels of goal progress. The “Success” level represents what the person believes would be an indicator of successful progress towards
the goal over the nominated period, and that he/she is adequately confident that he/she could achieve it. Clinicians are advised to clarify the “Success” level first in order to provide an anchor for the other indicators of goal progress. Sometimes people achieve more than expected, so the “Awesome” level allows review and reinforcement of exceptional progress. The “Keep going” level represents little or no relative progress towards attainment of the goal. The “Keep going” level is a necessary inclusion to allow minimal progress to be tracked without deflating the person’s motivation while encouraging further effort. The labels of these different levels of goal progress can be amended to reflect language that is meaningful for the person.

Confidence Rating
Individuals have to have sufficient belief that they are able to attain or progress toward goals (Snyder, 2000). The adoption of preferred health behaviors is influenced by the individual’s belief regarding his/her ability to achieve specific goals (Borelli & Mermelstein, 1994; Winkleby, Flora & Kraemer, 1994). When establishing the “success” level of goal progress for each goal, the individual is asked, “On a scale of 1 to 100 how confident are you that you will achieve this level of goal progress?” If the individual reported being less than 70% confident then that particular level of goal progress is adjusted until the person feels at least 70% confident. This is to ensure that goals are tailored to the individual and commitment to goals is enhanced by considering level of importance, difficulty and confidence. If confidence is high and the individual views the goal as important she/he is more likely to maintain motivation and achieve the set goal (Bandura & Simon, 1977; Locke et al., 1981).

Feedback and Monitoring
Feedback and monitoring of performance has also been shown to enhance goal progress (Frost & Mahoney, 1976; Locke, 1996). Feedback enables an individual to consider what they hoped to achieve in comparison with what they actually achieved (Locke et al., 1981). Enhancing awareness of the potential discrepancy between actual and ideal performance can motivate people to reduce this gap (Bandura, 1990).

Upon review an index of goal progress across the three goals can be calculated, by multiplying the level of attainment (Awesome 2, Success 1, Keep going 0) by the number of points allocated for importance for each goal selected. These three scores are then summed and divided by the maximum possible score of 20. This score is then multiplied by 100, to yield the percentage of goal attainment. CGT = Σ (Attainment x Importance)/20 x 100. In the example provided, the CGT index score would be (5x2 + 3x1 + 2x0) = 13/20 x 100 = 65%. Similar to GAS, the index indicates the level of attainment, but in this case takes into account the importance of the goal for which the tasks were performed. Very high scores or very low scores may indicate that the tasks that were set were either too easy or too difficult respectively. The index score not only enables comparison of an individual’s goal progress over time, but also provides information about goal progress across consumer groups.

Monitoring goal and task achievement promotes awareness of obstacles that have arisen, so problem solving can take place. Monitoring ensures that problems associated with goal progress are identified and routinely managed (Buchanan & Carpenter, 2000; Cancro & Lehmann, 2000). The CGT provides fifteen common difficulties (and an “other” option) to prompt identification and discussion regarding common issues that may have impacted on goal attainment (e.g., not enough support).

Conclusion
The CGT aims to facilitate the goal setting and striving process. It draws on important principles from goal setting, motivation research and the recovery literature. The CGT aims to balance the personal meaningfulness and manageability of goals to ensure progress with individual recovery processes can occur. The CGT recognizes the importance of reviewing goal progress. The relationship between the person in recovery and the clinician is vital to promote safe exploration of interests, goals and problems. If used correctly the CGT can be an effective tool in assisting people with psychiatric disability in finding hope, meaning, identity and responsibility for their own recovery processes. Future research regarding the CGT will aim to investigate whether using this approach leads to a better range of outcomes, particularly recovery based outcomes. Further research will explore whether this approach improves the experience of goal setting within mental health contexts from the perspectives of individuals with a psychiatric illness as well as leading to improved goal attainment. Whilst our anecdotal evidence to date indicates both positive experiences and improved goal attainment for these individuals, more structured program evaluation results will be reported as sufficient data becomes available.
References


