Opportunity Education

Quest Forward Learning Research Brief

Goal Setting

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May 2018

Contents

Overview

One of the Quest Forward Essential Habits is "Manage Yourself." An important aspect of managing yourself has to do with goals—setting them, developing a plan, taking action, changing behaviors, and evaluating progress towards them. This habit, like all others, is developed through highly scaffolded practice. Students need tools, strategies, and feedback to help them develop and maintain this habit.

Students participating in Quest Forward Learning have a lot of flexibility. They often choose where to work, who to work with, and which quests or courses to complete. They can work at different paces and focus on different topics based on their personal interests. While this is one benefit of Quest Forward Learning, it also introduces many challenges for students and mentors. There are not standard expectations for completing quests or courses. There also are not deadlines provided by the mentors for every project, quest, task, or artifact that needs to be completed. Too much choice and flexibility can be paralyzing and demotivating for students if they do not have the proper strategies to manage themselves well within the Quest Forward Learning environment.

Problems to Solve

1. **Focus and motivation.** Some students struggle to stay motivated to work on quests and remain focused on the most important tasks at hand. Some find managing their time and pacing to be a challenge. Many lack the skills to self-regulate and manage themselves.

2. **Mastery goals vs. performance goals.** Students tend to focus on performance goals (e.g., completing the most quests) over mastery goals (e.g., getting better at solving problems), which does not promote long-term engagement, motivation, or learning. Performance goals may be essential, but they should be in service of accomplishing mastery goals.

Purpose

The purpose of this document is to summarize existing research on goal setting and goal management, to summarize current practices and tools used by educators and students in schools, and to provide recommendations for supporting more of this kind of work in Quest Forward schools. The following questions guided this project:

1. What makes a good goal and how can we help students achieve individualized goals with purpose and focus?

2. How have others supported students in setting, monitoring progress toward, and achieving goals?

3. Which skills, strategies, and tools do students need to successfully manage themselves while participating in Quest Forward Learning? How can we help students become self-regulated learners?

Review of Research, Interventions, and Existing Tools and Practices

One of the goals of Quest Forward Learning is to help students become self-regulating. Self-regulated students are proactive in their learning. They are self-directed and take initiative. They set goals and self-monitor, are resourceful, think strategically, and are confident in their abilities (Cleary & Zimmerman, 2004). There is a vast body of academic research on self-regulation and how to help students become more self-regulated, including three models of self-regulated learning that I draw upon throughout this document (e.g., Zimmerman & Schunk, 2011; Schunk and Zimmerman, 1998; Pintrich, 2000; Winne & Hadwin, 1998). Students develop important skills and habits related to self-regulation and have increased motivation when they set personal academic goals, take actions to meet those goals, and regularly reflect on their progress towards those goals (Burnette, O'Boyle, VanEpps, Pollack, & Finkel, 2013; Duckworth, 2015). Decades of work in this field show a relationship between self-regulation, learning strategies, and academic achievement (Panadero, 2017).

In order for students to become self-regulated learners, they need to be taught processes and strategies that support goal setting, planning, self-motivation, attention control, flexible use of learning strategies, self-monitoring, appropriate help seeking, and self-evaluation (Zumbrunn, Tadlock, & Roberts, 2011).

In this document, I focus on the following aspects of self-regulated learning, which are most relevant and urgent to this problem:

1. **Plan**. Define specific, measurable, attainable, relevant, and time-limited goals. Create a plan of action for achieving goals, including effective strategies, tasks, sequencing, timing, deadlines, barriers, etc.
2. **Take action and monitor progress**. Use effective strategies to reach goals, define criteria for judging performance, and monitor effectiveness of the strategies and motivation for completing tasks.
3. **Reflect**. Reflect on progress, reevaluate goals and modify them as needed, and manage emotional responses related to the outcomes.

In conducting this review, I found several gaps in the research:

1. There is a strong research-practice gap as it relates to self-regulation (Duckworth, 2015). There is a lot known about self-regulation, but no simple or well-defined solution to help students develop self-regulation skills. Supporting self-regulation in practice is incredibly complex.
2. Most of the research in education is focused on traditional academic goals, such as getting an A on a test. Few studies frame goal setting around gaining or improving specific skills or meeting course-specific competencies. Many studies did not feel particularly relevant to Quest Forward Learning because of the over-emphasis on tests and grades, so I only summarize general ideas and procedures from them in this document.
3. Most designed interventions are courses or programs that teach students how to set and manage goals through a single highly intensive training. I came across very little research on how to support goal management in ongoing ways in less than 15 minutes per day (for example) without complex tools or systems to help track progress. Granted, I did not examine research on use of daily planners, which may support some of this need.

Define Goals

People who set specific and challenging goals perform better than people who set vague, easy goals (Locke & Latham, 1990; Latham & Locke, 2007). There are two types of goals defined in the literature (Ames, 1992; Elliot & Dweck, 2005):

1. Mastery goals (also known as learning goals)
2. Performance goals (also known as ego goals)

These two types of goals represent different conceptions of what it means to be successful and what motivates a person to achieve. They also include different ways of thinking about oneself. With Quest Forward Learning, our goal should be to help students set and achieve mastery goals over performance goals, or at least in conjunction with performance goals. Mastery goals "promote long-term and high-quality involvement in learning" (Ames, 1992, p. 263).

Mastery Goals

Mastery goals focus on effort, intrinsic motivation to learn, development of new skills, and improved competence. Success is based on personal, self-defined standards. This approach is more likely to result in high-quality work and learning and leads to positive behaviors, self-regulation, and goal achievement. Mastery goals correlate with risk-taking, preferences for challenging work, intrinsic interest, positive attitudes towards learning, and satisfaction and pride associated with effort. Mastery goals lead to more time spent on learning tasks and more persistence through challenges (e.g., Ames & Archer, 1988; Elliot & Dweck, 1988). Students focused on mastery goals are willing to try new things and view mistakes as learning opportunities. Students are more likely to take mastery goal-oriented approaches when they engage in tasks that 1) have value to them and 2) where they are likely to succeed with some effort (Svinicki, 2005).

Students taking this goal orientation ask questions such as: "Could you help me understand this better?" or "Could you help me get better at this?"

Performance Goals

Performance goals focus on self-worth and ability in comparison to other people. They are based on general standards and norms. Students who focus on performance goals believe that success can be attained with little effort. They desire public recognition and strive to be better than others (or at least not worse). This kind of thinking leads to the desire to avoid failure and thus challenging tasks. Students with performance goals assume not meeting goals means they lack ability, whether or not they put forth effort. This is also associated with strategies such as memorizing and rehearsing (not long-term learning strategies). Performance goals undermine long-term performance and learning. They are shallow and can be accomplished without learning or by cheating. Students focused on performance goals stick with tasks that are familiar. They tend to view mistakes as evidence of their own lack of competence, thus avoiding them by playing it safe.

Students choosing this goal orientation ask questions such as: "Will that be on the test?;" "Is there anything I can do for extra credit? I have to have an A in this class!;" or "Could you just tell me what you want?"

Examples:

1. Finish a specific quest tomorrow.
2. Complete 3 quests this week.
3. Complete more quests than anyone else.
4. Get a 4.0 GPA.
5. Get a 32 or higher on the ACT.

Ways to Support Mastery-Goal Orientation

What can help students take mastery approaches over performance approaches? The following recommendations come from Svinicki (2005, 2010), Ames (1992), and Schunk (1989). Many of these are already part of the Quest Forward Learning methodology, but there are some areas, particularly around assessment, where we could improve.

Task and activity design, and implementation

- Create tasks that involve variety and diversity.
- Create tasks and activities that are meaningful to students (e.g., personal relevance, gaining a new skill, etc.). Help students find relevance and make connections.
- Create tasks and activities that involve working with others.
- Create tasks that have specific and short-term goals.
- Encourage students to make choices and decisions, and provide opportunities for students to be independent and responsible.
- Help students develop self-management and monitoring skills.
- Choose knowledge and skills that are worth learning.

Mentoring

- Set tasks just beyond students' ability but well within their reach, and expect them to succeed.
- Create a safe place for taking risks. Emphasize that mistakes are part of the learning process and iteration leads to improvement.
- Build community by encouraging peer mentoring and support.
- Give students choices in what they learn and the way they learn.
- Model mastery-goal oriented learning and share your goals.

Assessment and feedback

- The ways in which students are evaluated contribute to whether or not they take a mastery or performance approach. Evaluation should support effort, skill-based improvements (not grades, social standing, or comparative information).
- Focus on individual improvement and progress. Give positive, diagnostic feedback that focuses on personal improvement.
- Provide private evaluations and assessments and recognize student effort. This should be emphasized more than products, winning, or public performance, which can lead to performance goals. Rewards like points can also lead to performance goals.
- Minimize comparisons with other students and emphasize comparisons with previous performance.

Frameworks for Setting Goals

There are three popular frameworks for setting goals: Management by Objectives (MBOs), SMART Goals, and Objectives and Key Results (OKRs). All stem from the corporate world, and were later introduced into educational settings. In schools, the SMART methodology appears to be most prevalent. Aspects of OKRs may have the most potential for helping students not only set goals, but achieve them and measure progress.

MBOs. MBOs or "Management by Objectives" are written by and focused on managers (Drucker, 1967). They are top-down, not adaptable, and not updated regularly, thus becoming stagnant and not that useful to individuals. This would be equivalent to curriculum designers and mentors setting all goals for students, and students having no say in their own goals. This approach is mostly outdated in the corporate world, although still commonplace in schools where the curriculum and teachers determine the goals.

SMART Goals. SMART goals focus on how to write goals that are 1) specific, 2) measurable, 3) attainable, 4) relevant, and 5) time-limited (Doran, 1981). SMART goals may be best for rote tasks, but ultimately may restrict creativity and innovation. Some businesses find "aspirational" goals to be more useful than "attainable" goals. SMART goals help students create goals, but not develop plans or strategies for achieving them or keeping track of their progress. The web is filled with goal-setting worksheets and templates created by teachers that draw on the SMART framework (Example 1, Example 2).

OKRs. OKRs were introduced by John Doerr at Google in 1999 (Doerr, 2018). Goal Science is the foundation behind OKRs and the methodology used by Google and other businesses (To Create SMART Business Goals, n.d.). OKRs build upon SMART goals and academic research. This approach is best for company-wide alignment of goals, and can help develop a metrics-driven culture. One hundred percent achievement of goals is not expected. Sixty to seventy percent is successful, because OKRs focus on aspirational goals, not just attainable ones. Goal Science involves five pillars:

1. **Connected**. Goals are aligned vertically, cross-functionally, and with the company mission. Goals are created by individuals but about half of them connect to others.

2. **Supported**. Colleagues provide regular feedback to peers about their goals, including praise. The community supports one another in achieving goals. Goals are transparent.

3. **Adaptable**. Individual goals shift as priorities shift, and goals can be modified any time. This keeps things flexible. There are smaller steps to achieving aspirational goals.

4. **Progress-based**. Goals are updated frequently to capture small wins. Achieving small steps fuels momentum.

5. **Aspirational**. Goals are challenging, and may not always be immediately attainable, and are thus motivating (They seem just out of reach right now, but not so far out of reach that one loses motivation.). Aspirational, meaningful goals contribute to more engagement, higher performance, and more satisfaction.

Other strategies for setting effective goals include the following (The Executive's Guide to Goal Setting, 2015):

- Align team goals with organization goals (e.g., personal goals with course-wide skills and Quest Forward Essential Habits).
- Co-create goals with students and mentors. Mentors should help to define course goals and habit-focused goals, and then help students to align personal goals.
- Maintain focus on measuring these goals.
- Establish milestones to measure progress. These should be frequent—weekly or monthly.
- Motivate and reward success, while encouraging positive behaviors publicly.

Goal setting is only effective when the student has the resources and ability to attain the goal, when the student receives feedback on their goals, strategies, and progress towards goals, and the student is committed to attaining the goals (Mumford & Frese, 2015).

Plan: Create a Strategic Plan for Achieving Goals and Measuring Progress

Part of setting and managing goals involves strategic planning and identifying strategies and methods to reach goals (Zimmerman & Martinez-Pons, 1992; Zimmerman, 2000).

To be successful, students need:

1. To determine the amount of time and resources they need to achieve their goals (Schunk, 2001).
2. To consider what might impede the achievement of their goals. Inexperienced self-regulators do not realize all of the factors that influence their ability to achieve goals. Students need to understand why reaching a goal is hard and that there are many factors outside their abilities.
3. New knowledge of strategies, ability and motivation to use strategies, and new ways of working in order to achieve goals and take effective actions (Malmberg, 2014).
4. A deep understanding of the tasks they need to accomplish in order to reach their goals. This includes the task's purpose, structures, and components, such as activities (Malmberg, 2014; Winne & Perry, 2000).
5. A plan for measuring progress towards their goals ("How will I know when I have met my goal or made progress towards it?").

Positive self-reactions, self-efficacy, imagery, visualizing, and self-instruction (how to proceed) are strategies for positive forethought and performance (Zimmerman, 1998). These strategies can be modeled by mentors or through cognitive coaching and prompts (see next section for more on this.). In addition to the SMART goal-setting worksheets mentioned earlier, there are many resources available online that support strategic planning and taking actions to reach goals (Example 3, Example 4, Example 5).

Take Action and Measure Progress

Once a goal and plan are in place, students need to take action and continuously evaluate their progress. They also need to evaluate their performance with respect to the strategies they used to try and reach their goals (Zumbrunn, Tadlock, & Roberts, 2011). Mentors can encourage self-monitoring by having students record the number of times they worked on a task, amount of time spent on tasks, and the strategies used. Students should compare information and progress to standards or goals. They should answer questions such as, "What have I done and how does this fit with what I said the goal is?" (Zimmerman, 1998). Small daily wins are important because they create a sense of progress. They influence how people feel and perform (Amabile and Kramer, 2011).


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SMART Goal Setting Worksheet

Goal Statement:

Why is this goal important?

What is needed to accomplish this goal?

SMART Goal Checklist

Is my goal...

- Specific
- Measurable
- Achievable
- Relevant
- Time-Bound

Action Plan

Action	Owner	Due Date

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Goal Setting Worksheet Download Example, https://www.project-management-skills.com/

Goal Attainment Scale

One way to reflect and monitor is to use a Goal Attainment Scale (Kiresuk, Smith, & Cardillo, 1996; McDougall & King, 2007). This scale is often used with children with IEPs, therapies, and in mental health counseling, but has spread to education more broadly. Often the scale is defined in advance with families, with each designation serving as a specific benchmark. The scale ranges from -2 to +2, although any indicator could be used (e.g., icons, not numbers):

- –2: Much less than expected.
- –1: Somewhat less than expected.
- 0: Expected level of outcome.
- +1: Somewhat more than expected.
- +2: Much more than expected.

For example, once a student sets a goal they would define what this looks like if they achieve it (0), what it looks like if they don't (-2). This scale is useful for measuring individualized goals and it promotes cooperative goal setting. It has been proven to be a reliable and valid way of assessing goal achievement and progress.

Self-Recording: Prompts and Graphing

Students should self-record during this process and keep track of progress and outcomes. This increases awareness and can help students recognize how strategies and performances are linked (Cleary & Zimmerman, 2004). This can be empowering for students. For example, students can record areas where they struggled (determined by feedback and moments when they felt stuck or points lost on an assignment) and specific actions they can take to improve their performance. Another technique is graphing. Students can graph strategies used or actions employed with grades on a test. The resulting graph illustrates the relationship between strategies and grades. Guided practice and cognitive coaching are beneficial for helping students employ useful strategies.

For example, if a student's goal is to become more curious, they should receive hints and tips for how to actually do that. Cleary and Zimmerman (2004) offer several prompts to help scaffold this process:

- My goal is ___ and will be attained by ___.
- I have earned grades of ___ and used the following strategies ___.
- On my last test I did not reach my goal because ___.
- The strategy I used was ineffective because ___.
- To improve, I need to change___.

While these prompts are overly focused on grades and test scores, they could be modified to focus on attaining specific skills or habits or to reach specific performance milestones.

Tools and specific feedback to students can help develop self-efficacy and the belief that failed attempts are not fixed or the result of ability. For example, the following prompt was provided to students participating in the Self-Regulation Empowerment Program studied by Cleary and Zimmerman (2004): "You are using strategies, which is fantastic…but it is possible that the strategies you're using are not working or helping you get good test grades. Your failing grades have more to do with the strategies that you used to prepare for the tests than how smart you are or how hard the teacher is."

During this phase, students should reflect on causal meanings. For example, students should answer questions such as:

- "Why haven't I reached this goal yet?"
- "What is holding me up or making this challenging?"
- "What can I do differently to adjust for this?"

These will keep students from connecting their lack of progress with a lack of ability.

The Role of Formative Assessment

Formative assessment is an important part of helping students set, monitor, and achieve their goals. The following are critical for formative assessment, and thus supporting goal achievement (Panadaro, Andrade, & Brookhart, 2018):

1. Learning goals and criteria for success should be clearly identified and communicated to students.
2. Learning progressions should clearly articulate the subgoals of the ultimate learning goal.
3. Evidence of learning is elicited during instruction.
4. Students should be provided with evidence-based feedback that is linked to the intended outcomes and criteria for success.
5. Both self- and peer assessments are important for providing students opportunities to think metacognitively about their learning.
6. Collaboration: Establish a classroom culture in which teachers and students are partners in learning.

Feedback from mentors should focus on the strategies used to reach goals, not just the progress made. Peers and mentors should provide feedback on what needs to be improved and steps they can take to improve (Hattie & Timperley, 2007).

Modeling, Guided and Independent Practice, and Direct Instruction

Most students will not know which strategies to use, how to use them, or when they will be most effective. Mentors need to model this for students, make their thinking and cognitive strategies transparent, and will need to provide direct instruction on how to use strategies at times. Guided practice involves mentors observing and monitoring as students practice a new strategy. Guided practice can also help students become more self-regulated.

Help Seeking and Peer Support

Students should be encouraged to seek help. Social support from teachers and peers can help students become more self-regulated. One strategy for supporting progress is to discuss goals and progress with peers. Students write down goals, share them with a friend, and have weekly check-ins to share updates with that friend. One study found that on average these people were 33% more successful in achieving their goals than those who just wrote down their goals (Matthews, 2015).

Reflection

It is during a final reflection phase where students need to manage their emotions, learn from setbacks, and begin thinking about future planning and goals prior to starting the cycle again. Many of the strategies already mentioned can support students in reflecting about their goals, progress, and strategies used. This phase should shift their thinking toward the future, for example: “Why did or didn’t I meet this goal and what do I need to do differently in the future?” or “How should I modify my goals to be more relevant and realistic, or more challenging?”

Quest Forward Academy Santa Rosa, www.opportunityeducation.org, November 2018: Students working independently.

Interventions

Instruction on goal setting has been shown to improve academic performance (e.g., Bruhn, McDaniel, Fernando, & Troughton, 2016). There is additional support for embedding goal-setting instruction into academic courses and content (Bruhn et al., 2016). Below are two examples of goal-setting interventions that were successful in supporting student achievement or behavior change.

A goal-setting course, consisting of three lessons, created for a study by Rowe, Mazzotti, Ingram, & Lee (2017), was designed "to help students develop: (a) SMART goals, (b) an action plan to achieve those goals, and (c) a GAS (goal attainment scale, Kiresuk et al, 1996) to evaluate progress toward goals to improve students' academic engagement." These lessons may be relevant for Quest Forward Learning:

- **Lesson 1**: Learn about SMART goals, analyze goals to determine whether or not they meet SMART criteria, and develop two SMART goals.
- **Lesson 2**: Outline steps to achieve the goal, identify barriers to reaching the goal, and create deadlines for achieving the goal.
- **Lesson 3**: Determine how to evaluate progress towards the goal.
  - Determine what it looks like to achieve the goal.
  - Determine what it looks like to not reach the goal. This will help determine the extent to which the goal was met.
  - Use the goal attainment scale (+2 +1 0 -1 -2) to measure growth towards the goal. 0 = What is expected from implementing all the action steps. Each positive point represents greater than expected change in the outcome. Each negative represents a less-than-expected change. Define what each of these numbers means based on the goal.

Following this five-day microcourse, the teacher provided review and practice weekly.

A second intervention (Shilts & Townsend, 2012) focused on improving dietary and physical activity through instruction on this topic and support on goal setting and management. This intervention included the following:

1. **Diet and physical activity self-monitoring**. Creating a food journal.
2. **Guided goal setting**. As part of this intervention, students focus on two areas they needed to work on (defined through the journaling activity). Students review related major goals and select one to focus on. They select 1 of 3 minor goals, as well.
3. **A behavioral contract**. Students sign a contract to commit to their goals.
4. **Goal tracking and feedback**. Students track their progress (effort and attainment) during each session.
5. **Behavioral skills instructions**. Students are taught new skills and strategies to help them achieve their goals.
6. **Modeling**. Students interview parents about their goal-setting processes.
7. **Barrier identification and cues**. Students predict and reflect on barriers that keep them from reaching their goals.
8. **Social support**. Parents and a peer sign a contract committing to help the student stay focused on their goals. Students working on the same goals work in groups to compare progress and support one another.
9. **Rewards**. When students track progress they are entered into a raffle to win a prize.
10. **Cognitive restructuring**. Students review their goals after four weeks and have an opportunity to revise them and make them more challenging.
11. **Relapse prevention**.

Summary of Current Practices and Tools at the Quest Forward Academies

I gathered the following information from talking to one mentor at each academy. This does not reflect everything being done to support self-regulation and goal setting, but it captures some of their work.

Quest Forward Academy Omaha

Goal: "Complete this quest."

This image shows a checklist provided to students explaining what they need to do at the end of the quest "Under Pressure." For some students, mentors print out every quest activity, adding in more details and instructions, leaving space to answer questions, creating tables, highlighting what students need to do, etc. This results in a 5—11 page document printed out for each quest. Some students turn in this packet as part of completing a quest. This is done because some students get lost, lose their place in the app, or cannot identify what needs to be done. Part of what they are doing is scaffolding a quest, and part of that process is making it clear to students what specific tasks need to be done.

Goal: "Complete this level."

Similarly, mentors provide a to-do list for an entire level. This includes what should be completed and submitted, with instructions for submitting work.

Goal: "Plan for completing the next few levels of this course."

Mentors also provide a template for having students set deadlines to complete core quests, choice quests, and important artifacts. Here are two examples from students in their Social Sciences course: Example 1, Example 2.

Quest Forward Academy Santa Rosa

Goal: "Plan for what you will complete this week and during each class."

Students fill out a Google Doc each Monday to help them plan for which levels and quests they are going to work on and complete that week and what they will finish by the end of each class period.

Goal: "Reflect on what you accomplished in this level and what skills you are gaining."

In some courses, students complete an end of level reflection that asks them to reflect on progress they have made towards course skills, understanding, and learning, as well as engagement and effort. These are loosely tied to skill-based goals provided by curriculum designers.

Future Considerations

From the information and data we have gathered (which may not provide a full picture), it appears that goal setting is primarily focused on performance tasks, i.e., getting things done. Students do not appear to be setting mastery goals focused on skills and learning. While performance/task, goals are necessary, they may be more effective and motivating if tied to mastery/learning goals. Mentors also agree that students could benefit from more scaffolding, deadlines, and consequences for not reaching deadlines.

Apps and Tools that Support Goal and Habit Management

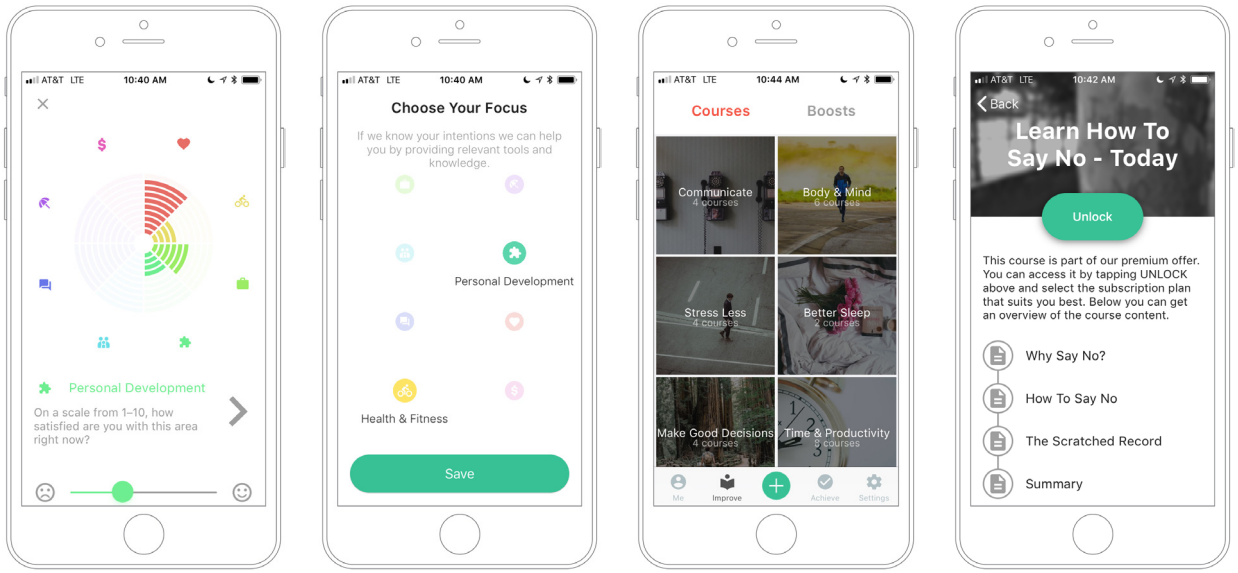
Remente

"Remente helps you understand where in life you should focus. We help you set goals and teach you ways to feel good, be productive, and keep motivated (Remente, n.d.)."

In Remente, you start by reflecting on satisfaction in certain areas of your life (e.g., personal development, family, finances, health and fitness, etc.). Then you choose a focus area(s) to work on in the near future.

Based on the categories you select, you are given recommendations for courses, preset goals/plans, and strategies to help you improve in those areas. You regularly reflect on feelings and progress towards goals.

> **Pros**: Provides tools and information and strategies to help you achieve goals (through courses and goal templates), beautiful design.
>
> **Cons**: Limited to their categories and courses, although potentially serves as a great model for Quest Forward Learning.



Goals Wizard

Goals Wizard is an "online coaching program and goals tracking app" (Goals Wizard, 2017). It asks users to think about dreams and desires, and works backwards to set goals, milestones, and activities to achieve those goals. There is a satisfaction survey, similar to the one in Remente. The app includes daily planners (including morning and evening rituals), key activities and tasks, a journal, and an area for setting and reflecting on goals. When setting an initial goal you can write your own or select from examples.

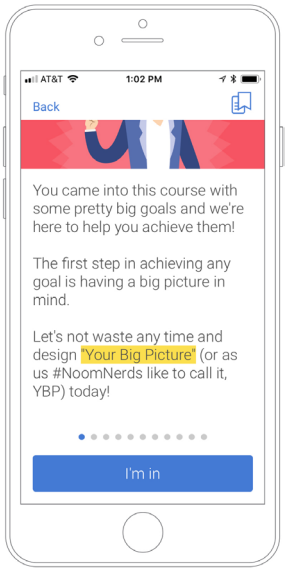
Once you define a goal, the app scaffolds the goal-setting process with questions and prompts, including:

- Target value, starting value, unit, target date, starting date.
- Dig deeper: Why is this goal so important/significant to you? What would you gain by achieving this goal? What is the price you are willing to pay to achieve this goal? What risks would you take while pursuing this goal? What are possible obstacles? Why did you not achieve this goal already? What is stopping you? What can you do differently now?
- Set milestones to achieving the goal, which include target values and dates.
- Create an action plan and schedule-related routines.

Pros: Very detailed and focused on the complete process—setting goals, breaking them down into tasks, management of progress, building routines, etc.

Cons: Complicated, likely not easy to use on a daily basis.

Here is an example from the 'health and fitness' category:

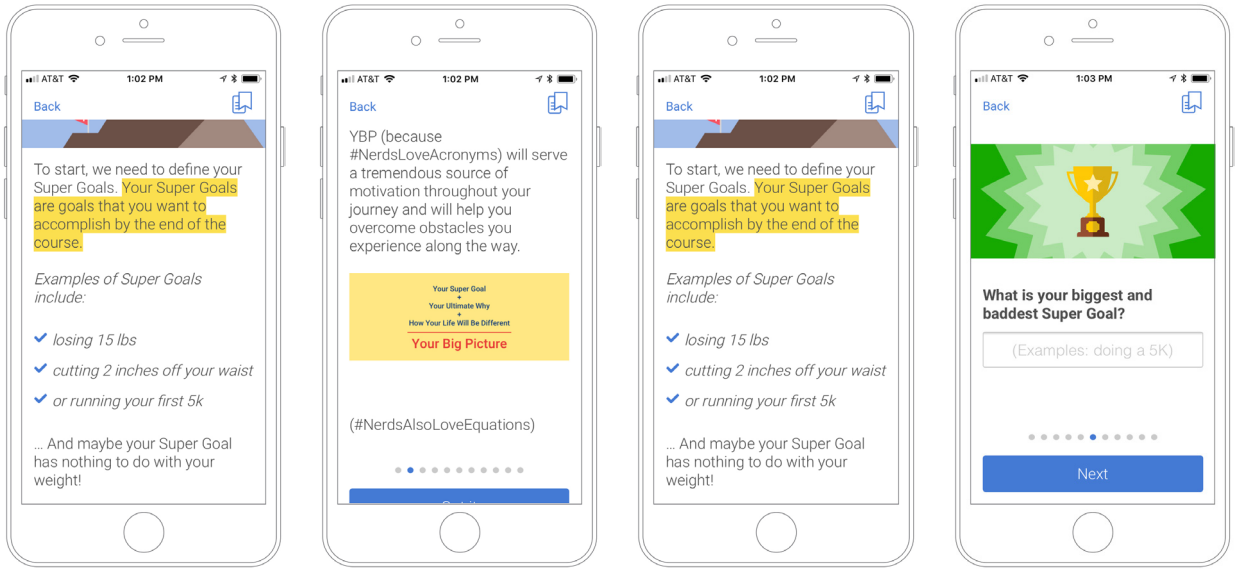


Noom

Noom is specifically focused on weight loss and health goals, but its goal-setting approach is relevant. When you first start, the app has a tutorial on how and why to set goals.

Pros: Focused on setting goals for a specific course. Rationale for doing the goal-setting work. After setting a Super Goal it scaffolds setting smaller goals by asking a series of "why" questions.

Cons: Sloppy execution, weird messaging.



LifeTick

"Lifetick is web-based software that helps you set, track, and achieve your goals in life" (Lifetick, 2018). There is a version designed specifically for schools. Unlike other apps, users can define the "core values" for students to focus on. These could be Essential Habits, skills, or other values. Students set SMART goals with deadlines and related tasks. Tasks and subtasks have reminders and are compiled into checklists. There is a journal for reflecting on goals, visualizations reflecting progress, and the ability to create shared goals with peers or entire classes or schools. Tutorials are available that provide a good overview of how LifeTick works.

Habit Tracker Apps

Many apps are designed to support goal setting and management specific to daily habits (e.g., exercising daily, drinking 64 oz of water per day, calling your mom every day, etc.). These feel less relevant to the mission of Quest Forward Learning and are ultimately a different kind of habit than our six Essential Habits. Some interesting apps that may provide design inspiration for our work include Productive and Done. These tracking tools are also built into the Apple Watch and iPhones.

Full Focus Planner

The Full Focus Planner is easy to use, and it appears to align with much of the research summarized here. The Full Focus Planner supports users in creating SMART goals and emphasizes planning and reflecting. Goals are hierarchical, and you focus on no more than three goals per week. The creator, Michael Hyatt, claims the planner is based on research, but there is no specific evidence to support this. He also draws on research to support this being paper-based too, as opposed to digital. Some research has shown that students who take notes on paper retain and therefore learn more than students who take digital notes (Mueller & Oppenheimer, 2014).

Recommendations

Recommendations for R&E Team

1. **Create a course to help students develop goal setting skills and habits.** This will provide more clarity on how to support habit development and measure students growth on habits, such as Manage Yourself. The benchmarks will help students and mentors know what it means to Manage Yourself and their goals and they can guide the design of habit microcourses.

2. **More research.** This research brief scratches the surface of self-regulation topics, setting goals, and goal management. It reflects a starting point for supporting goal setting, but more research is needed in the future, particularly around cognitive coaching and modeling, as well as scaffolding the development of cognitive and learning strategies during quest activities. There is research on software that is designed specifically to help guide and direct self-regulated learning, which is a potentially rich area for Quest Forward Learning.

Recommendations for Curriculum Design Team

1. **Create a course, or a level within a broader Manage Yourself microcourse.** This course can teach students how to set SMART goals, strategize, plan and set deadlines, and evaluate progress, as well as cover additional goals for the Manage Yourself habit. Every Quest Forward student should complete this course early in their participation at a Quest Forward school.

Recommendations for Schools and Academies

1. **Support goal setting through the design of the school day and the school schedule.** Students and mentors need time to plan and reflect every day. Since goal setting is a core value (i.e., Manage Yourself Essential Habit) there should be specific times dedicated to it. Time should be set aside for this during the day schedule and the goal-setting course should be built into the school schedule during first quarter.

2. **Develop a mentor-advising and -coaching plan, and provide time in the school day for this work.** Mentors need to help students set individualized goals and measure progress frequently. They need to help students learn about and use new strategies, evaluate effort, provide feedback, and help students modify goals as needed. To do this, they need time and specific strategies for supporting students during academic coaching meetings.

3. **Create more boundaries around what it means to be "self-paced" and provide some deadlines for students.** Students need deadlines, and there is a benefit to having students be generally working at the same pace. Create deadlines for completing courses, mini-courses, project milestones, specific artifacts, and whole-class activities. Provide flexibility in between these deadlines. Support students in sticking to deadlines by providing a shared calendar and notifications for upcoming deadlines. Some deadlines (completion of project milestones or mini-courses) should be high-stakes, involving presentations to and feedback from community members or experts. All missed deadlines should have consequences.

4. **Incorporate peer collaboration and peer review.** Creating a collaborative environment can minimize competition and unnecessary performance goals.

Recommendations for Prototyping and Product Development

The following are specific recommendations relevant for the design of prototypes and eventually the apps:

1. **Use the SMART framework** to help students define specific, measurable, attainable, and time-bound goals. Scaffold this process with prompts, a wizard, or a worksheet (in the prototyping phase) to help.

2. **Draw on OKR framework pillars, but do not model the OKR process explicitly.** It is too complex for 9th graders. OKRs as a framework are relevant because our skills and habits are essentially company-wide goals for students. We want them to meet these goals, but in ways that are individually meaningful and relevant.

   - The goals students set should align with habits and course skills.
   - Students should get regular feedback and praise. Goals should be transparent and the community should support one another.
   - Goals should be flexible and modifiable as needed, and should include small steps to achieving them.
   - Small wins should be documented regularly and celebrated. Goals should be updated frequently as progress is made.
   - Goals should be aspirational (within reason—students will find it incredibly unmotivating if goals are not attainable).

3. **Have students focus on 1-3 long-term goals at a time and work in cycles.** In Foundation phase students start with just one habit goal and build up to three goals in Expansion phase. Given the structure of the curriculum in Expansion phase, it could work well for students to have one habit goal, one math/science goal, and one humanities goal at all times. Long-term goals could be set per mini-course or for a 4-8 week period. Think of these as 4-8 week cycles with ongoing coaching, feedback, measuring, evaluating, and planning.

4. **Goals should be hierarchical.** Daily or weekly goals are not useful unless they are helping students reach a larger, more long-term goal. Without the long-term goal they lose interest and motivation for the daily goals or the goals just become about tasks and competing with others.

5. **Focus on mastery goals over performance goals.** If performance goals are necessary (which they often are in school) they should exist along with and in support of mastery goals. Students can define quests, artifacts, etc. that should be completed during a time frame in order to help them achieve a mastery goal.

6. **Provide prompts and questions to help students set goals, develop a plan with deadlines and tasks, reflect on strategies they use and their effectiveness, and become aware of barriers and challenges.** For example, students need to plan how they will reach their goals. This is key for achieving them and probably where students struggle the most. This might include a daily or weekly plan, selecting quests that will be completed in order to reach a time-bound goal, and responses to prompts such as:

   - My goal for this cycle is to ___.
   - By the end of this month, I will ___.
   - To help me reach this goal, I will do ___ by the end of this week.
   - To help me reach this goal, I will do ___ today.
   - Today my goal is ___, because ___.
   - What will I do to ensure I meet my goals today?

7. **Help students experience and appreciate the journey of achieving goals.** It is not just the end result that matters. We want students to embrace and appreciate the process. Design should help convey this and praise students for being good at consistently planning and executing. Apps and mentors can model positive thoughts with statements such as, "Keep up the good work. Effort is key to reaching your goals." Visualization can help students stay motivated during the process as well: "Imagine yourself in the future after you have achieved your goal. What do you see?"

8. **Students should be able to review their goals and progress at any time, and should be reminded to do so.** Goal management is an ongoing, constant process, not something you do only during designated "goal-setting" time blocks during the day. Students should be able to view their goals, plans, and progress any time they want. They should be reminded to reflect on goals and plan regularly (otherwise they will forget about them). Setting goals is not enough. Help students see progress reflected visually. It will motivate them and make them feel good.

9. **Provide examples of goals students can adopt or modify.**

   - Goals related to each habit.
   - Goals related to course skills.

The following recommendations are more general, and can be implemented after we support students in setting their goals, or as a way to further help students plan and reach other kinds of goals.

10. **Quest Checklist**. Help scaffold quests, making it clear what each quests' goals and tasks are and how they will help students complete the quest and artifact. Include a checklist for each quest that can be viewed and checked at any time. Start Foundation year by providing these checklists to students, and gradually roll back the scaffolding so students create these task lists themselves over time.

11. **Clear artifact expectations**. Prior to starting the quest, students should know what the expectations are for the artifact and what needs to be accomplished in order to meet specific expectations for that work and the quest.

12 **The Quest! app should emphasize the skills that need to be demonstrated and major project/course milestones.** Milestones should be framed as they relate to skills and concepts, NOT the number of quests to be completed. We can begin to show mentors the 6-8 most important course skills per level, but we still need a few other things:

- Student-friendly versions of the skills to help them understand what they need to demonstrate within the context of each level. These skills or skill-based goals should be clear and measurable by students.
- A way to identify course/project milestones.

13 **Improve assessment**. Assessment should focus on effort, quality of work, personal improvement and progress toward individual goals. It should be primarily formative and for the purpose of improvement. We need to approach assessment differently (and through new collaborative processes) to achieve this. Having clearly defined individual goals is a step in the right direction.

Quest Forward Academy Omaha, www.opportunityeducation.org, October 2018: Student working with guidance from their mentor.

Conclusion

While setting, monitoring, and achieving learning goals may come naturally to some, it is not a natural process for most high school students. They need support and scaffolding to become self-regulated learners. The Quest Forward Learning products, mentors, and schools all play an important role in supporting students in becoming self-regulated and in developing the Manage Yourself habit.

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