

## **An Instructional Approach to Writing SMART Goals**

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**Abstract:** Obtaining a degree is not the ultimate end goal; it is only one of many goals needed to ensure financial and professional success. Establishing a plan to success by writing specific, measurable, attainable, relevant and time-bound goals (SMART) should be utilized by both full-time graduate students and working professionals in graduate school. The purpose of this instructional design project was to create and evaluate a web-based module that provides participants with step-by-step instructions, examples and resources to writing short- and long-term goals, using the SMART method. Pre- and post-assessments were embedded into the module for participants to practice their writing skills and a rubric was also embedded to promote self-efficacy. Survey results from pre- and post-assessments indicate that the instructional module was simply designed and content was easily understood. However, the instructional module did not provide the instructional scaffolding needed for participants to write SMART goals proficiently, as reported by pre- and post-assessment rubric scores. Suggestions for improvement include definition of short- and long- term goals, development of content, integration of audio, instant response embedded activities and navigation tools throughout the web site.

### **Introduction**

Graduate students enrolled at the University of Hawaii, Educational Technology Master's program often begin their post-graduate studies with big dreams and broad goals. Students are required to take a minimum of two core classes, with the option of choosing electives during their first year as a graduate student. Although most graduate students have an intrinsic motivation for pursuing their degrees, not all students explicitly know "why." According to Cho and Shen (2013), achievement goal research have shown that students who have intrinsic goal orientations tend to persist with learning in challenging tasks and report high involvement in learning process by regulating their cognition and motivation. Even though graduate students who are intrinsically motivated look forward to the variety of challenges and opportunities of a specialized program, they will be encouraged to develop professional goals. Establishing professional goals that are then align with academic studies, increases individual professional success. Utilization of the specific, measurable, attainable, realistic and time bound (SMART) method provides the framework to creating meaningful professional goals. The purpose of this instructional

design project was to create and evaluate a web-based module that provides instruction on writing goals using the SMART model and then utilizing a rubric for self-evaluation.

## **Background**

The SMART model was originally developed in order to provide a model for goal setting used to guide project management goals (Doran, 1981). In the article titled *There is a SMART Way to Write Management Goals and Objectives* (Doran, 1981), the importance of specific criteria to writing objectives and the difficulties that arise when developing goals are defined. According to Doran (1981), developed goals should be specific, measurable, attainable, relevant and time-bound.

Goals should be meaningful and relevant in order to address the needs of the learner. Therefore, goals written using the SMART model should also meet the characteristic criteria outlined in Meyer's (2003) self-help book *Attitude is Everything: If You Want to Succeed Above and Beyond*. According to Meyer (2003), each SMART term can be further defined by asking and answering leading questions that elicit responses used in the writing of a SMART goal. The first term *Specific* requires that goals be clearly define by posing the 5 "W" questions: who is involved, what is the task to accomplish, where the task will happen, why this task is important and which constraints and requirements to consider. The second term *Measurable* requires a criteria be establish to measure progress towards achievement of the goal. Possible questions used to elicit measurable criteria include: how will it be accomplished and how to determine if successful. The third term *Attainable* requires the individual to assess if the goal is realistic. According to Meyer (2003), attainable goals are neither out of reach nor below standard performance. An attainable goal will ask the question how the goal will be accomplish. The term *Relevant* should drive purpose and instill the intrinsic value of creating and sustaining the goal. Questions that drive purpose include - is this worthwhile and for the right person. The final term *Time-bound* defines the goal as it relates to length of time allotted to accomplish the goal. Purposed questions include, how long will this goal take and how much of a time commit will be required to accomplish this goal.

Consequently, not everyone believes that SMART goals are the most beneficial model for writing goals. Using SMART goals circumvent innovations that could become breakthrough for your organization (Prather, 2005). According to Prather (2005), specific goals restrict thinking and works to keep "in the box" ideas. Measureable indicators are primarily for easy to reach short-term goals. Also, if goals are always achievable, then out of the box ideas will not be considered seriously. Relevant may inhibit happenstance occurrences that may lead to changing breakthroughs. Time limits may inhibit unexpected breakthroughs.

One way to provide meaningful learning using the SMART model, is to create an accessible web site that allows learners to work at their own pace and at a convenient time. According to Qing & Akins (2005), experience indicates that one attraction of online learning for students is the flexibility of time and place. Furthermore, using a host web site to teach the SMART model, allows participant to become self-directed learners,

engaging with the content as much or as little as they want. In addition, the web site will host resources and additional literature for future review.

Graduate students enrolled in the Educational Technology Master's program are introduced to the SMART model of goal writing during ETEC 600 Theory & Practice of Educational Technology course. Students are presented with the model, provided examples and given an opportunity to practice writing a fictional goal for a Front-End Analysis. Graduate students are also encouraged to incorporate the SMART model into their personal and professional lives. This module was intended to support the retention of the SMART model, encourage writing goals to promote self-efficacy and provide web-based supports and resources

For the purpose of this instructional design project, the SMART model was utilized as the scaffold to writing goals. A web site was used to provide participants with easy access to the module and the ability to complete the pre- and post- assessment and the evaluation at their leisure.

## **Methods**

### *Instructional Strategies*

Graduate students in the Educational technology Master's program generally possess functional knowledge and skills of computing, including but not limited to accessing the Internet, using a Web-interface, navigation within a web page and abilities to complete online surveys and evaluations. "Quality education through online learning depends on clarity of goals, sound e-pedagogy, committed and dedicated learners and instructors, excellent support from administrators and staff and opportunities to practice application of new knowledge and skills" (Qing & Akins, 2005, p.60). This instructional module was designed to engage participants using direct instructions, utilizing video presentations and opportunities to practice writing skills, including identifying components and rating example problems using the embedded rubric (see Figure 1). Participants were also encouraged to provide feedback to improve the quality of the module. Resources were provided for further inquiry of the model, applicable uses and most current uses of the SMART model in research.

**Example 1 : Personal**

Within the first semester of graduate school, I will learn how to download, use and apply a minimum of 2 new emerging software on the market.

**Example 2: Professional**

Within one calendar year of graduate school, I will seek employment in the field of Educational Technology by applying for graduate assistant positions with the university and volunteering at technology conference and workshops.

**Example 3: Academic**

In my first year as an Educational Technology graduate student, I will complete all of my course requirements with a minimal average of B or better by reading the required materials and asking my professor and peers questions that increase my understanding.



Specific
* Required
Using example 1: Identify the indicator. *
<input type="text"/>
Using example 2: Identify the who. *
<input type="text"/>
Using example 3: Identify the what. *
<input type="text"/>

**Figure 1.** Example of SMART goal

*Content Development*

This instructional module was created following the Gagne’s Nine Events of Instruction (Gagne, Wager, Golas & Keller, 2005). The nine events include gaining attention, informing the learner of objectives, stimulating recall, presenting stimulus, providing learning guidance, eliciting performance, providing feedback, assessing performance and enhancing retention and transfer. To gain attention, this instructional module use a YouTube video by Richard Duszczak, entitled *One-Step-at-a-Time-Goal Achieving* cartoon doodle to highlight the importance of setting goals (Gagne Event #1). Participants were then pre-assessed on this goal writing skill (Gagne Event #2) and asked to use a rubric to evaluate their goal writing skills (Gagne Event #7). The subsequent web pages were design to introduce SMART goal terms and characteristics (Gagne Event # 4) as well as embedded assessments to gauge participants understanding of terms and characteristics (Gagne Event #6).

*Rubrics to Promote Self-Efficacy*

An attribute of this instructional design module was the application and integration of a rubric for self-evaluation of writing goals to promote self-efficacy. A rubric was provided for the pre- and post-assessments that required participants to self-assess their abilities after writing SMART goals. According to Andrade, Wang and Akawai (2009), rubrics reference prior and during a specific writing task increases the writing quality of the work. This instructional design module provided a specific rubric for each of the

characteristic for writing SMART goals. This was intended to engage intrinsic ownership of the participants' learning as well as to promote self-efficacy.

### *Technologies*

This instructional design module was created and hosted on a free Weebly web site. The Weebly pages were designed to present the module in a linear, step-by-step method, using 12 sequential pages. Web pages included a letter for participation, demographic survey, pre and post assessment, introduction, an overview of the SMART goal writing technique, individual pages for each characteristic and an evaluation. Google surveys were created and embedded to collect qualitative and quantitative data. Skitch was used to capture screen shots of the SMART goal rubric and used in the pre and post-assessment evaluations. The use of YouTube videos and PowerPoint presentations were also utilized to present the information.

### *Population*

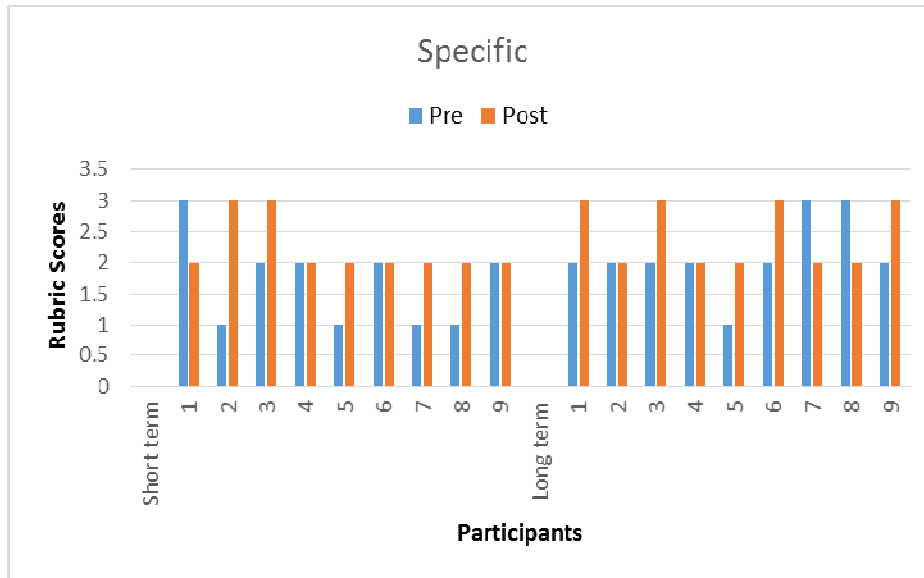
Solicitation for participation for the instructional module was disseminated through email from the mailing list of the Educational Technology Master's program. For the purpose of this instructional module, participation criteria requested only first year graduate students. The population of participants comprised of seven females and four males, with careers primarily in the education and technology sector. Of the 11 participants, only nine completed the pre- and post-assessments short and long term goals. Therefore, scores from only nine participants were used in the data analysis and evaluation of the instructional design module.

### *Data Collection*

All data from this instructional module was collected using Google surveys and forms. Data was collected to determine the effectiveness of the instructional module. Qualitative data collected consisted of the pre- and post-assessment of short and long terms goals and open-end questions in the evaluation of the module to identify strengths and weakness of the module. Quantitative data included rubric scoring of pre- and post-assessment and the Likert-scale to gauge the effectiveness of the instructional module.

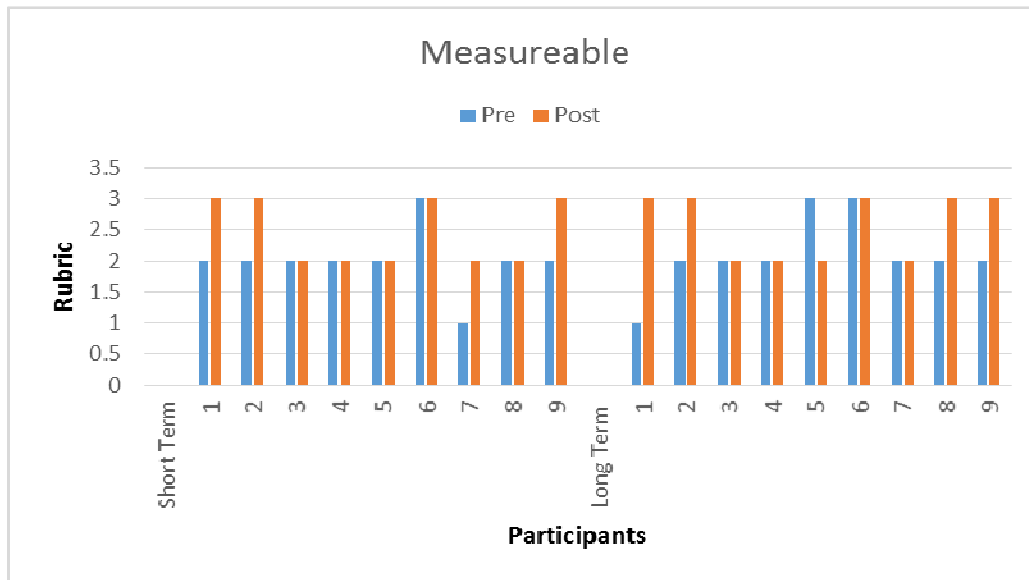
## **Results**

For the *Specific* indicator, two participants recorded growth in identifying *Specific* indicators for the short and long terms goals. Two participants recorded a decreased rubric scores when compared to pre-assessment scores. Of the five remaining participants, rubric scores ranged from no growth for pre- and post-assessment to only growth in short and long term goals (see Figure 2).



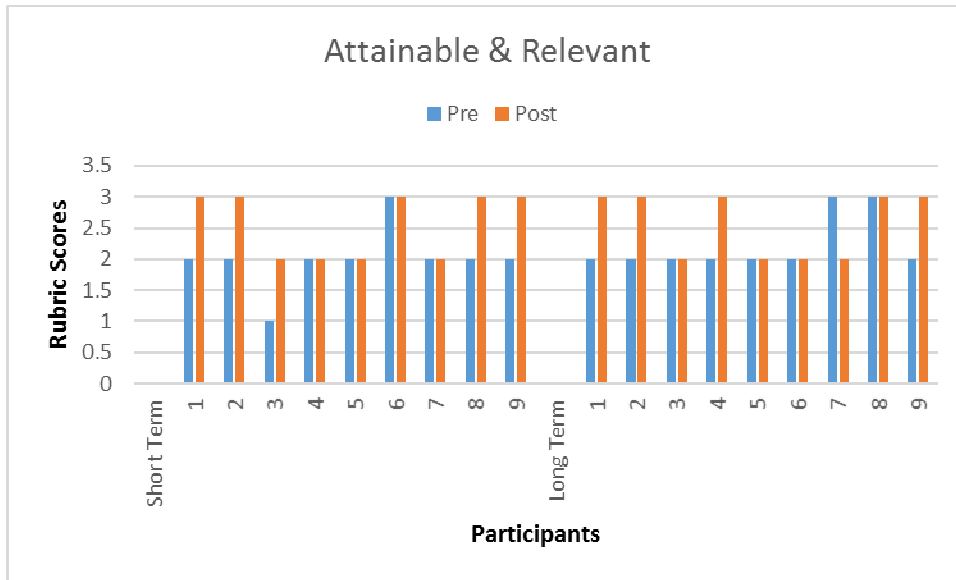
**Figure 2.** Pre- and post-assessment rubrics scores for the term Specific

Although a majority of the participants experienced some growth identifying *Measurable* indicators, no participants' experiences growth in both short and long term goals (see Figure 3). Three participants recorded no growth in both short and long terms goals.



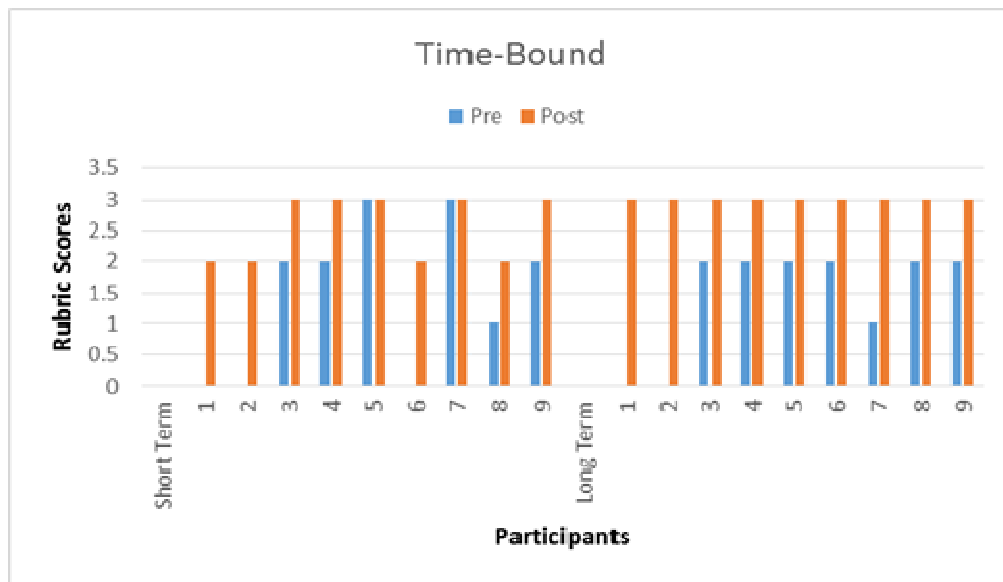
**Figure 3.** Pre- and post-assessment rubric scores for the term Measureable

Three participants experienced growth identifying *Attainable* and *Relevant* indicators for short and long-term goals. Three participants evaluated both pre- and post-assessment goals equally (see Figure 4).



**Figure 4.** Pre- and post-assessment rubric scores for the terms Attainable & Measurable

Pre-assessment goals, suggest that two participants did not understand the meaning of time- bound short- and long- term goals. However, rubric scores demonstrate that all participants’ experienced were able to identify time-bound indicators of post-assessment goals (see Figure 5).



**Figure 5.** Pre- and post-assessment rubric scores for the term Time-bound

*Evaluation*

An evaluation of the instructional module was conducted after the post-assessment using the Likert scale with 1 meaning strongly disagree, 3 indicating neutral and 5 meaning strongly agree, participants rated the effectiveness of the module. Responses were generally favorable, with a minimum of 55% agreeing that they now possess a better

understanding of the SMART model and they would be able to write meaningful SMART goals (see Table 1). However, a majority of responses were neutral when asked about the positive impact of the module (44%), participant's confidence learning the model (33%) and if the expectation of the module were met (44%). This can be attributed to the fact that participants had prior knowledge of the content and may have been expecting an in-depth instructional module.

**Table 1.** Instructional module evaluation

<b>Instructional module evaluation results</b>					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I have a better understanding of the SMART goal model.	0% (0)	0% (0)	33% (3)	55% (5)	11% (1)
I will be able to write meaningful professional goals using the SMART model.	0% (0)	0% (0)	33% (3)	55% (5)	11% (1)
The ideas and methods learning from this web-based module will have a positive impact in setting goals.	0% (0)	0% (0)	44% (4)	44% (4)	11% (1)
As I went through the web-based module, I was confident that I could learn the content.	0% (0)	11% (1)	33% (3)	44% (4)	11% (1)
The way the information is arranged on the web-based module was easy to understand and logical.	0% (0)	33% (3)	44% (4)	22% (2)	0% (0)
Did the web-based module meet your expectation in regards to the usefulness and relevance?	11% (1)	11% (1)	44% (4)	33% (3)	0% (0)

## Discussion

### *Pre- and Post-Assessment*

Pre-assessment results indicate that participants possessed the ability to evaluate their short and long-term goals using the SMART goal rubric. Rubric scores indicate that participants were able to identify the terms and characteristics of the SMART model. Participants rated their pre-assessment short and long terms with scores of 1 and 2. This indicates that participants were able to retain much of what was learned in ETEC 600 and may have been actively using the SMART model to write pre-assessment goals. However of the nine participants, two participants were not able to identify indicators of *Time-bound* in their pre-assessment short and long-term goals (see Figure 5). One factor that



could have attributed to a lapse in pre-assessment indicator for *Time-bound* could be the definition of short and long-term goals.

Post-assessment results indicate that all participants were able to write short and long term goals identifying indicators of the SMART model. However there was minimal to no growth for several participants for terms *Specific, Measurable, Attainable* and *Relevant*. In general, participants evaluated their post-assessment scores only slightly higher than their pre-assessment scores. Factors that may contribute to the commonality of participants can be attributed to the vagueness of the rubric scales and language used to define terms.

### *Suggestion for Improvement*

During the evaluation process of the instructional design module, participants were asked open-ended questions. When asked what aspects of the module were liked, participants responses included, "YouTube videos, the simplicity of the module and the familiar use of a Weebly website." Participants were then asked to identify what they liked least about the module. Comments ranged from "Too much reading required, not enough examples and content was choppy." Participants were also asked to provide suggestions for improvements.

Suggestions to improve the content of the module, include further definition of short and long term goals and development of the content. Since short and long term goal writing, is not specifically tied to the SMART model, this module could focus the goal writing to either short or long term goals or provide definitions for short and long term goal writing. To improve the quality of the module, a further elaboration of the SMART model terms could be done to enhance the depth of the instructions.

Other suggestions to improve the quality of the module include integration of audios, embedded activities with instant responses and navigational icons. Audio integration could include a reading of the context or a VoiceThread presentation of the SMART terms. Throughout the module, interactive activities could be embedded to provide participants with practice opportunities in which they receive immediate feedback or results. Another improvement to the module would be to add navigational icons near the end of each web page.

### **Conclusion**

This module was designed with the intention of providing an instructional guide to writing goals using the SMART model. There is evidence to suggest that the target population already possessed the basic knowledge and skills to write goals that met the criteria of the SMART goal rubric. This study could have made a better effort in analyzing and understanding the depth of prior knowledge of first year graduate students. Furthermore, suggestion and comments indicate that this module could be improved by further elaboration and development of the SMART terms and the addition of an interactive platform.

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