

## Exploring the Level of Emotional Attachment to a Teacher Tool in Relation to Its Use, Perceived Effectiveness, and Level of Evangelism

*This study explores the underlying popularity of a free, Web-based teacher tool, RubiStar, for creating quality rubrics. In the past, Human Factors has focused on simply making things work. In today's world, simply working is not sufficient. Designers are striving to develop products that truly "delight" their users. As a proven success story, the RubiStar experience is examined to gain insight into how to develop better teacher tools.*

"Oooh, I loooove RubiStar!" This exuberant declaration is heard over and over again by ALTEC staff when they host a booth at conferences around the country. RubiStar is a free, Web-based tool designed to help teachers develop quality rubrics. It is one of several tools developed by ALTEC through the High Plains Regional Technology in Education Consortium (HPR\*TEC), a ten-year initiative funded by the U.S. Department of Education (U.S. Department of Education, 2005). Other tools developed by ALTEC through this initiative include TrackStar, QuizStar, NoteStar, and Web Worksheet Wizard. These tools are very popular and teachers really like them. The difference is that when teachers talk about RubiStar, they don't say they "really like" it. They say they "love" it.

The numbers associated with RubiStar only confirms its popularity. RubiStar is used by approximately 600,000 individuals a month. It is set up so teachers can access the site and very simply put together a rubric on a specific topic based upon proven exemplars. The teacher can then print the rubric or download it to their local computer. To save the rubric for later use, the teacher must register with the system. Currently there are 300,000 individuals registered and 220,000 rubrics have been saved.

What is it about RubiStar that has inspired such an ardent following of devotees?

Human Factors is the discipline of designing things so it is easier for people to use them. Historically, Human Factors primarily emerged during World War II. The emphasis at the time was on human operations. For example, fitting the machine to the size of the soldier and creating logical or understandable control buttons (Wickens et. al, 2004). The focus was on the physiology of the human being. Over the years, the discipline has evolved to consider psychological, social, and cultural factors as well as physiological ones. In the 1990's, the usability of objects became more important. The International Standards Organization (ISO) has defined usability to include three elements (ISO 9241-11, 1998):

- **Effectiveness:** The extent to which a goal, objective, or task, is achieved
- **Efficiency:** The level of effort required to accomplish a goal, objective or task

- **Satisfaction:** The level of comfort that the user feels when using a product and how acceptable the product is to users as a vehicle for achieving their goals, objectives or tasks

At this juncture, the user's subjective perceptions of the object have become more important. This idea has been further developed in what has become known as the "New Human Factors." One advocate for this new approach is Patrick Jordan who speaks about creating products that are actually pleasurable to use (Jordan, 2000). He discusses how pleasure can derive from four different sources: our sensory organs, our relationships with others, our cognitive and emotional reactions, and our values.

Instead of being a "nice to have", good human factors have become an expectation in today's world. The challenge today is to not just develop products that work, but to develop products that "delight" our users.

What is it about RubiStar that causes such "delight" in its users and can we use that knowledge to create better teacher tools?

This research will explore that question. It will further explore how RubiStar is used, how it is perceived by its users, the level of perceived effectiveness among its users, and the level of evangelism displayed by its users. It will also document the process that was used to develop the application. The research will incorporate both qualitative and quantitative features. The first phase will consist of a phenomenological qualitative study of a select group of RubiStar users. The results from that study will be used to develop a survey that can be used to quantitatively validate findings with a larger population. A phenomenological study is used to explore the lived meaning among several individuals about a particular concept or phenomenon (Creswell, 1998).

RubiStar was introduced at a time when project based learning was just being promoted as a teaching strategy. Traditional forms of assessment were not well suited for these projects and rubrics were adopted as a means of providing authentic assessment back to students. At the time, many teachers had limited or no experience developing rubrics. One of the questions to explore is how the teaching style of users has changed. Did having the ability to easily make rubrics make it easier to implement project based learning in their classrooms? When new teaching strategies or methods are introduced, how important is it to have tools and resources to make the transition easier?

From another perspective, teachers might just use the application as a productivity tool. Do having effective teacher tools make our teachers more effective in their jobs?

RubiStar was not developed by one person or even a small team of individuals. The essence of RubiStar is contained in the exemplar rubrics in different subject areas. These exemplars were developed over the years and were based on teacher input about what actually works. Do teachers learn from these exemplars? Does it change what they teach or how they teach? As a form of social collaboration, RubiStar has proven its effectiveness. How do teachers benefit from this collaboration? Do the users of RubiStar

tell others about it? Do they evangelize for it? Does their level of involvement affect their level of evangelism?

Teachers use a variety of tools. Why do they prefer RubiStar over other tools? How was RubiStar developed? Did this process factor into how RubiStar was perceived by its users?

To explore these questions, a group of RubiStar users will be asked to participate in the study. During the past three years, at the annual National Educational Computing Conference (NECC), a list of 961 individuals that were willing to be contacted about their use of ALTEC tools was compiled. Of this initial list, 51 individuals live within driving distance to Lawrence, KS. From this pared down list, eight to twelve individuals will be recruited for the study.

A variety of information will be collected for this study:

- Interviews with participants through e-mail, by phone, and in person
- In-class observations
- Journals written by the participants
- Blog participation
- Survey responses
- Rubrics developed
- Lesson plans that incorporate rubrics

From this base of information, key themes and variables will be identified. Information will be analyzed and summarized. Follow-up interviews with the participants will be used to verify the findings of the study.

The second phase of this overall study will involve creating a survey that can be used to validate the findings from the first phase with a larger audience. This second study can provide insight into what elements of RubiStar are essential to the universal experience.

Data collection for this study is anticipated to begin December, 2006.

## References

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