Effects of emotion control and task on Web searching behavior

1. Introduction

Since its introduction in the early 90’s, the Web has become one of the popular tools for information search and communication. It is often ranked as the most important source by many, and regarded as a good place to get everyday information by over 90% of Internet users (Fallows, 2004). As the Web rises in popularity, efforts have been made to understand how individuals search for information on the Web, and what factors influence the Web search behavior. Research shows that user and task differences account for over half of the key factors affecting user behavior on hypermedia systems (Nielsen, 1989). Recent studies have revealed that users’ affective aspects have significant impacts on information behavior (Bilal, 2000; Kurbanoglu, 2003; Nahl, 1998; Ren, 2000; Wang, Hawk, & Tenopir, 2000). How users’ affective characteristics interact with tasks and influence search behavior, however, has not been well understood.

The study aimed at investigating how experienced Web users navigate and search the Web. Effects of the user’s emotional control and tasks were examined in relation to the Web search behavior and performance. In addition, by using profile analyses, dominant patterns of search behaviors were identified and compared across tasks. Based on the findings, issues related to user-training and interface design are discussed and future studies are suggested.

2. Related studies

Although the Web is a popular source, searching the Web can be challenging. Users are not always efficient in navigating the Web and finding high quality resources. Depending on their preferences and styles, certain users might experience more difficulties than others when searching the Web (Wang et al., 2000). Research on key factors and their effects on the search behavior would help improve the design of information systems and user training programs. Previous research suggests that information seeking on the Web is affected by user characteristics (including cognitive and affective propensities) as well as tasks (Kim & Allen, 2002; Vakkari, 2001; Wang, Hawk, & Tenopir, 2000; Wilson, 1999). This section will introduce and review related studies on how users’ affective characteristics and search tasks influence the search behavior.

2.1. Users’ affective characteristics and search behavior

Information-seeking behavior is influenced by users’ affective characteristics. While seeking for information, users go through different stages of actions and may experience different emotions such as anxiety and frustration (Kuhlthau, 1991). How they manage their emotion during the search process seems to affect their search behavior and performance (Wang, Hawk, & Tenopir, 2000, Bilal 2001).

Recognizing the need for a more comprehensive model of humans’ information-seeking behavior, Wilson (1999) called for studies exploring users’ affective variables, such as self-efficacy and problem-solving/coping styles. Self-efficacy represents an individual’s “belief in one’s capabilities to organize and execute the course of action required to manage respective situations” (Bandura, 1977; 1986). Studies suggest that individuals with high self-efficacy tend to have a better search performance and use online resources more frequently (Nahl, 1996; Ren, 2000). Coping strategies is another useful construct that stems from the ‘stress and coping theory’ developed by Lazarus (1966). Two major forms of coping have been identified, namely emotion-focused and problem-focused coping. The former involves efforts to regulate the stressful emotions caused by an event, while the latter, efforts to control problems causing a stressful situation. It was found that emotion-focused users tend to navigate the Web rather linearly, and consecutively traversed a number of layers of nodes with little effort in the front-end-analysis (Kim, 1999).
2.2. Task characteristics and search behavior

Researchers are increasingly aware of the importance of contexts and tasks in understanding information behavior (e.g., Allen & Kim, 2001; Bystrom, 2000; Cool, 2001; Savolainen, 1995; Vakkari, 2003). Studies on Web searching have also begun to investigate the effect of task types. Research shows that users usually go through more search steps and spend more time in ill-defined subject search tasks than in specific, fact-finding tasks (Hsieh-Yee, 2001; Kim & Allen, 2002). Findings on search strategies are rather inconsistent. Hsieh-Yee and her colleagues found that users solved search problems in similar fashion regardless of search tasks (Hsieh-Yee, Davidson, & Ozgar, 1998). Others, however, found that search strategies vary depending on tasks (Schacter, Chung, & Dorr, 1998; Bilal, 2000, 2001). Differences in participant groups and tasks might have contributed to the varying results of the studies. Clearly, more research needs to be done to investigate the effect of tasks on search behavior.

2.3. Interaction between tasks and user characteristics

Recognizing that user characteristics might interact with task types and influence search behaviors, a few studies have tested this interaction effect. Navarro-Prieto, Scaife, and Mike (1999) found that different search strategies were used depending on task types (e.g., fact-finding vs. exploration task). The influence of tasks on Web strategies was stronger among experienced Web users than novices. Kim and Allen (2002) also found that task types interact with cognitive and problem solving styles. Although there exist studies on the interaction between users and tasks, only few of them focused on users’ affective characteristics and their interaction with tasks.

3. Methods

3.1. Research questions and hypotheses

The study has two research questions: Among experienced Web users, (1) do users’ perceived ability of controlling emotion (hereafter, it will be called ‘emotion control’) and search tasks influence the search performance? and (2) do the two variables affect the search behavior? Six hypotheses are established for the research questions: (1) Individuals with different levels of emotion control (i.e., high vs. low) will yield different levels of search performance; (2) Individuals working on different search tasks (i.e., specific vs. general) will yield different levels of search performance; (3) Depending on the search task they are working on, the effect of individuals’ emotion control on search performance will vary; (4) Individuals with different levels of emotion control will search the Web differently; (5) Individuals working on different search tasks will search the Web differently; and (6) Depending on the search task they are working on, the effect of individuals’ emotion control on search behavior will vary.

3.2. Participants

Sixty-seven undergraduate students participated in the study. Twenty (30%) of them were male while the others were female students. All of them were experienced Web users: Over 80% of them used the Web several times a day and the rest several times a week for more than three years. Regarding their background, twenty-nine (43%) of them were from hard sciences and thirty-four (51%) from soft sciences. The participants consisted of freshmen (24%), sophomore (24%), junior (15%), and senior (37%) students.

3.3. Instruments

Two questionnaires were used in the study. One of them was Problem-Solving Inventory (PSI: Heppner, 1988), a standardized test consisting of 35 items rated on a 6-point scale. It measures general expectancies, rather than the actual abilities, of problem solving. One of the aspects measured by PSI is ‘personal control’ (PC). The PC score reflects the extent to which individuals believe that they are in control of their emotions and behavior while solving problems (Heppner, 1988). In addition to the PSI, a questionnaire was used to collect information on user demographics.
3.4. Procedure

The participant was asked to complete the PSI, followed by a questionnaire on users’ demographic information. When the participant was ready, two search tasks were assigned: one to find a piece of specific information (specific task), and the other a few pieces of information for a rather general and broad question (general task). For the specific task, the participant was asked to find a Web page containing the target information and to continue the search until the information was found. For the general task, the participant was asked to find Web pages that he or she considered relevant to the given task, and bookmark them. Finding and bookmarking three or more relevant Web pages was required. While the participant was working on the given tasks, all the screen displays were video taped.

3.5. Independent variables

There were two independent variables in this experiment: emotion control and type of search tasks. Emotion control, measured by the PC score from PSI, reflects the perceived ability to control one’s emotion (MacNair & Elliott, 1992). Based on median split, participants were divided into two groups. As low PC scores indicate positive assessments of emotion control ability, those with lower PC scores were assigned to the High Emotion Control (H-EC) group, while those with higher PC scores to the Low Emotion Control (L-EC) group. For the task variable, two types of tasks were used: specific vs. general search tasks. The specific search task required participants to locate one specific piece of information that was known to exist on the Web. In the study, it was the admission requirement information for a graduate school. The general task, on the other hand, required finding a few pieces of information on a broad topic. In the study, the general search task required information on human cloning. Participants were allowed to choose different focus areas (e.g., issues related to bio-engineering, ethics, genetics, legal systems, sociology, etc.) and to select what they judged relevant among the Web pages they retrieved.

3.6. Dependent variables

Two different groups of dependent variables were used in the study: one for search performance and the other for search behavior. For the search performance analysis, task completion time (for the specific task) and precision (for the general task) were used. The task completion time is the length of time a searcher spent for the completion of a task, measured in seconds. Precision is defined as the ratio of the number of relevant documents retrieved to the total number of documents retrieved. In the study, the precision ratio was calculated as follows: the number of relevant Web pages retrieved by the participant divided by the total number of Web pages retrieved by him or her. Here, relevant Web pages were operationally defined as pages bookmarked by at least three of the participants. Recall - the ratio of the number of relevant documents retrieved to the total number of relevant documents existing in the database - is another way of measuring search performance. However, it has been found impractical in the Web environment, as the total amount of information on the Web is constantly changing (Gwizdka & Chignell, 1999). Hence, recall was not used as a measure of search performance in the study. For measuring search behavior, the number of times that a navigation/search tool was used was counted. Here, navigation/search tools include embedded links, back, forward, home, jump tools (e.g., jump by using Go, History, typing URL), and keyword search features.

3.7. Data analysis

The data collected were coded and analyzed statistically. To examine how users’ emotion control and search task affect their search performance (Research question 1), a repeated measures ANOVA (Analysis of Variance) was conducted. Two types of dependent variables were used for the ANOVA: task completion time was used for the specific search task, whereas precision was used for the general search task. As each of the dependent variables was measured in a different scale, standardized Z-scores were used for the analysis. To investigate how users’ emotion control and search task influence their search behavior (Research question 2), a repeated measures MANOVA (Multivariate Analysis of Variance) was used with five dependent variables (including back, forward,
link, jump and keyword search). As none of the participants used the home button, the frequency of using the home was not included in the analysis. In addition to the ANOVA and MANOVA, the Profile Analysis via Multidimensional Scaling (PAMS: Davison, 1996; Kim, Frisby, & Davison, 2004) was conducted to examine patterns of the most commonly occurring search behavior across tasks.

4. Results

4.1. Research question 1: Effects of emotion control and task on search performance

To find out whether users’ emotion control and search task affect their search performance, a repeated measures ANOVA was carried out. The ANOVA result showed that none of the main effects was significant (Table 1). A comparison of mean scores revealed an interesting interaction between emotion control and task, although the interaction was not significant at $p < .05$ ($p = .056$). Participants with low emotion control (L-EC) struggled in the general task, but not in the specific task. While showing the performance level comparable to their counterpart’s in the specific task, the L-ECs performed poorly in the general task ($\text{Mean}_{L-EC} = -2.65$; $\text{Mean}_{H-EC} = 2.73$). That is, the level of search performance among the L-ECs was more than two standard deviations below average whereas the performance level among the H-ECs was more than two standard deviations above average.

4.2. Research question 2: Effects of emotion control and task on navigation/search behavior

To find out whether users’ emotion control and search task affect their way of navigating and searching the Web, a repeated measures MANOVA was carried out with five dependent variables: the use of back, forward, embedded link, jump tools and keyword search. The result revealed that the overall main effects for emotion control and search task were significant (Table 2). Users with different levels of emotion control tended to search the Web differently; and users working on different tasks searched the Web differently. In addition, the overall interaction between emotion control and task was significant, which means that the effect of users’ emotion control on the search behavior varied depending on search tasks they were working on.

As the MANOVA result showed that all the main and interaction effects were significant, follow-up ANOVAs were conducted to find out which search activities were significant and how they were affected by emotion control and task variables. The repeated measures ANOVA results are presented in Table 3.

4.2.1. Main effect for emotion control

The main effect for emotion control was found significant at $p < .05$. The follow-up ANOVA indicated that the use of two tools contributed to this difference: forward ($F = 4.588, p = .036$); and keyword search ($F = 4.157, p = .046$) (See Table 3). Participants rarely used the forward button, only ten doing so. When the frequency of using it was compared between the two groups of participants
with different levels of emotion control, the L-ECs used the forward button relatively more often than the H-ECs: Mean $L_E = .15$; Mean $H_E = .03$. The L-ECs also used keyword searches more frequently than the H-ECs: Mean $L_E = 1.15$; Mean $H_E = .79$.

### 4.2.2. Main effect for search task

The main effect for task was significant at $p < .01$. The follow-up ANOVA revealed that the use of four tools was significantly affected: back ($F = 50.778, p = .000$); link ($F = 9.098, p = .004$); jump ($F = 128.56, p = .000$); and keyword search ($F = 73.441, p = .000$) (See Table 3). A comparison of mean scores revealed that participants used all of the four tools more frequently in the general task than in the specific task. (Back button: Mean $Gen = 6.47$, Mean $Spec = 1.54$; Embedded links: Mean $Gen = 9.19$, Mean $Spec = 6.75$; Jump tools: Mean $Gen = 1.43$, Mean $Spec = .09$; Keyword search: Mean $Gen = 1.71$, Mean $Spec = 0.22$). It is interesting to note that in the specific task, jump tools and keyword searches were rarely used.

### 4.2.3. Interaction between emotion control and search task

An interaction effect was significant at $p < .05$. Follow-up analysis showed that the use of forward was the major contributor ($p < .05$): $F = 6.809, p = .011$ (See Table 3). As the interaction between emotion control and task was significant, the main effect for the emotion control, which was found significant with the use of forward, needed to be interpreted in light of the interaction. When mean scores were compared, it was discovered that participants with different levels of emotion control used the forward button differently depending on the task they were working on. In the general task, the L-ECs used the forward button relatively often while the H-ECs did not use it at all: Mean $L_E = 0.265$; Mean $H_E = 0.00$.

### 4.3. Further analysis of navigation/search behavior

#### 4.3.1. Search tasks and individual search activities

To further examine the impact of search tasks on the navigation/search behavior, the use of different navigation/search tools in two different tasks was compared. For the use of each tool, mean scores were calculated and presented in Figure 1. In the general task, users were more involved in keyword searches and also self-initiated jumps through jump tools and the back button. In the specific task, on the other hand, users utilized embedded links frequently. Although the embedded links were frequently used in the general task as well, the use of links was disproportionately higher in the specific task. That is, in the specific task, the use of links constituted 83.8% of the overall tool usage, while it was only 48.7% in the general task.

[Insert Fig 1. Navigation/Search activities in different tasks: Frequency of tool usage]

#### 4.3.2. Search tasks and overall search behavior

Profiles based on mean scores of individual tool usage showed how frequently different tools were used. Because the use of an individual tool was treated as an independent activity, however, such profiles could not help us identify the dominant patterns of search activities as a whole. To find out the most common patterns of search activities, another approach – PAMS – was employed.

PAMS (Profile Analysis via Multidimensional Scaling) is one of the methods that can help identify “major” or “prototypical” profiles, which represent a smaller number of normative profile types that reflect the most commonly occurring profiles in a given data set. It is a method of profile analysis that extends the use of simple multidimensional scaling (MDS) methods, and is often used for identifying latent profiles in a multi-component test (Davison, Kuang, & Kim, 1999; Kim, Frisby & Davison, 2004). To identify the predominant profile pattern of search behavior, the PAMS method was adopted in the study. Appendix A shows the equation of this model.
A PAMS analysis involves two parts: (1) estimation of major profiles in a group of individuals, and (2) estimation of a personal profile index. Frequencies of using five different tools served as input variables in the initial stages of the PAMS analysis. The first step in a PAMS procedure is to conduct a simple multidimensional scaling (MDS) analysis on proximity data. In the current study, proximity data used were squared Euclidian distances between every possible pair of navigation/search activities. In the first stage, PAMS uses a nonmetric scaling procedure - alternating least squares scaling (ALSCAL) (Takane, Young, & de Leeuw, 1977) - which estimates scale-values (or dimension coordinates). The original person x component score (67 persons x 5 observed variables) matrix was analyzed in the first stage of the PAMS procedure using the ALSCAL program (Takane, et al., 1977). ALSCAL performs a simple MDS on this matrix, and scale-values (dimension coordinates) for all observed variables (for all participants) were computed on all extracted latent dimensions. Here, each of the five tool usage variables would have a corresponding coordinate for each extracted latent dimension from the MDS analysis. Major profiles were extracted, and an index of model fit was calculated.

Based on the fit result, the optimal number of major profiles for the given data was determined. The index of model fit (Stress value) reflects the extent to which the MDS dimension coordinates for each search activity (i.e., tool usage) fit the original proximity data. The lower the Stress value, the better the model fits the data. Another important statistic is R\(^2\), which indicates the extent to which the model can explain the variance in the scaled data. The higher the R\(^2\) value, the better the model is. Conventionally, the Stress value lower than .05, and the R\(^2\) value higher than .95 are recommended for a model to be a good fit. Based on the criteria, the number of major profiles was determined. For example, a one-profile solution was selected for the specific search task, as it yielded R\(^2\) = .99 and Stress = .04.

The last step is to represent individual differences in profile patterns, using estimates of person parameters (i.e., personal profile index). Each person parameter quantifies the degree of correspondence between the observed profile of that individual (i.e., an array of that individual's actual scores) and the prototypical profile (Ding, 2001; Kim et al., 2004). To estimate person parameters in the PAMS model, the original five observed component scores of a person (observed scores for the use of back, forward, link, jump, and keyword search, serving as dependent variables) were regressed onto the major profile coordinate values from the MDS analysis (serving as independent variables). The current study will present the result of the first but not the second step, as its interest is in examining the predominant profile pattern of search behavior.

### 4.3.2.1. Major profile pattern of search activities in specific search task

The PAMS result showed that the one-profile solution was suitable to explain the search behavior in the specific task: Stress = .04; R\(^2\) = .99. The one-profile solution was a good fit to the data (Stress < .05) and explains 99% of the variance in the scaled data (R\(^2\) = .99). The identified major profile is presented in Figure 2.

![Insert Fig 2. Major profile for specific search task]

The major profile is illustrated by a line graph, which reflects the coordinates obtained from an MDS analysis of the five component scores from the use of tools. The size of the peaks and valleys defines the relative "saliency" of particular components relative to all components in the total data set. The profile peaks and valleys do not reflect the direction of the frequency within the salient components. For example, a high peak on "jump" does not indicate whether the major profile reflects "frequent" or "infrequent" use of the jump tools. This frequency information can be obtained by analyzing the search activities of participants with high weights on the major profile.

The extracted profile suggests that the usage pattern of most tools, except jump and keyword search, is quite similar across participants. As indicated by a peak and a valley, the use of jump tools
and the use of keyword search are the salient activities that substantially varied among participants. It was found that participants who used jump tools did not use keyword searches and vice versa.

### 4.3.2.2. Major profile pattern of search activities in general search task

For the general search task, the extraction of two profiles yielded the Stress value .001, while the extraction of one profile resulted in the Stress value .056. As the Stress value for the one-profile solution did not meet the recommended criteria (i.e., Stress <.05), the two-profile solution, explaining 99% of the variance in the scaled data ($R^2=.99$), was adopted. The two major profiles are displayed in Figure 3.

[Insert Fig 3. Major profiles for general search task]

Profile 1, the most dominant profile, shows that the profile pattern of search activities is similar across participants, except the use of three tools, including forward, jump and keyword search. Participants who rarely used the forward button tended to use jump tools and keyword searches more often, and vice versa. Profile 2 revealed a somewhat different profile pattern: only two activities - the use of forward and keyword search - are the salient ones. Participants who used the forward button relatively more often also used the keyword search. This pattern coincides with the L-ECs’ search behavior (See 4.2.1.).

### 5. Discussion and conclusion

The study findings show that both emotion control (EC) and tasks have an impact on users’ search behavior. Findings on task effect are supported by other studies: users tend to get engaged in more search cycles and use more search/navigation tools in a general, subject search task than in a specific, known-item search task (Hsieh-Yee, et al., 1998; Kim & Allen, 2002).

Findings also indicate that users’ emotion control (EC) interacts with search tasks and influences the search behavior. In the general task, for example, the L-ECs tended to use the forward button more often than the H-ECs. Previous research shows that people rarely use forward while navigating the Web (Tauscher & Greenberg, 1997; Kari, 2004). The back-and-forth movement between already visited pages seems to be redundant and inefficient. Compared to such linear navigations, using jump tools is regarded as a more efficient way of revisiting pages (Bilal, 2000). However, jump tools were the only tools that the L-ECs used less frequently than the H-ECs. The L-ECs’ frequent use of keyword searches in the general task is also noteworthy. Keyword searches are usually viewed as active and analytical search activities (Qiu, 1993). However, keyword searches by the L-ECs could not be considered as analytical searches, because additional analyses revealed that the L-ECs simply repeated the same keyword searches without modifying their queries.

Overall, the L-ECs tended to make frequent and quick search moves. Such activities seemed to intensify when the task was loosely defined. In the specific task, the L-ECs achieved a level of performance comparable to the H-EC’s. In the general task, the L-ECs did not fare as well as the H-ECs, despite their seemingly active search behavior. Although it was not quite significant ($p = .056$), the interaction effect on search performances deserves further investigation with a larger sample.

A profile analysis of search behavior via PAMS offered interesting insights on dominant behavior patterns as well as unique search activities distinguishing users with different search patterns. Treating search activities as a whole, such a method can help us triangulate and complement the findings based on mean comparisons of individual activities.

The study findings point to some implications for information literacy (IL) education. Participants demonstrated a certain level of flexibility in their behavior depending on search tasks, which implies the importance of experience and training. However, some individuals, such as the L-ECs, could still benefit from IL training. When problems are not well defined, searchers have to play an active role in problem solving, including defining the target information, making plans for searching,
formulating queries, etc. Such complex, ill-defined tasks might put more strain on the users’ emotion. The L-ECs are less likely to handle pressure well, which might make them more distracted, therefore making more frequent, hasty and inefficient search moves. Well-designed IL programs can nurture users’ confidence in information searching as well as develop their upper-level skills, including the planning of an effective search. Previous studies show that confidence can be enhanced through positive feedback and successful experience, which could be incorporated in IL programs (Gist & Mitchell, 1992; Larkin & Pines, 2005). If the L-ECs are allowed a series of guided hands-on training sessions at their own pace - beginning with easier tasks and moving through more complex tasks, it would help them build confidence. As users tend to perform better in domains they are familiar with (Holscher & Strube, 2000), IL programs embedded in the users’ knowledge domain might also help users become more successful and confident (Bruce, 1995; 2002).

In the emerging area of users’ affective domain and Web search behavior, previous studies shed light on users’ emotional states during and after the search (Bilal & Kirby, 2002; Wang et al, 2000). Findings of this study suggest that certain affective propensity, such as emotion control, also plays an important role in Web search. Further research is called for in order to investigate the interaction between users’ affective propensity and tasks. Such research will help identify areas of improvement in IL programs and also improve the interface of systems designed for certain types of tasks.
Appendix A.

The PAMS model began with the following equation (adapted for current example):

\[ m_{pv} = c_p + \sum_{k=1}^{K} \omega_{pk} \cdot x_{vk} + \epsilon_{pv}, \]

where

- \( m_{pv} = \) The person's (p) score, on tool v. In a profile data matrix, each row represents a person (p) and each column represents a frequency of using a tool (v).
- \( c_p = \) The level parameter which indexes the overall height of person p's observed profile. It is obtained by calculating the unweighted average of all tool usage frequencies for a person (p), \[ c_p = \frac{1}{V} \sum_{v=1}^{V} m_{pv}. \]
- \( \omega_{pk} = \) A weight for person p on latent profile k. This “person weight” indexes the degree of correspondence between the actual profile of person p and the tools' coordinates on a latent profile k. For each profile, a person's weight (or the correspondence index) \( \omega_{pk} \), is estimated by regressing the person's observed tool scores \( m_{pv} \) onto the scale-values \( x_{vk} \) for the latent profile in a simple MDS. Here, the weight equals the unweighted least-squared regression coefficient. In order to enhance the interpretability of person weights, they were then standardized on a Z-score metric to reflect a mean of 0 and a standard deviation of 1.
- \( x_{vk} = \) The tool usage parameter, which equals the scale-value (coordinate) of tool v on latent profile k.
- \( \epsilon_{pv} = \) Error term, representing measurement error and deviations from the model.
References


Abstract
The study investigated how users’ emotion control and search tasks interact and influence the Web search behavior and performance among experienced Web users. Sixty-seven undergraduate students with substantial Web experience participated in the study. Effects of emotion control and tasks were found significant on the search behavior but not on the search performance. The interaction effect between emotion control and tasks on the search behavior was also significant: effects of users’ emotion control on the search behavior varied depending on search tasks. Profile analyses of search behaviors identified and contrasted the most commonly occurring profiles of search activities in different search tasks. Suggestions were made to improve information literacy programs, and implications for future research were discussed.
Fig 1. Navigation/Search activities in different tasks: Frequency of tool usage
Fig 2. Major profile for specific search task

Fig 3. Major profiles for general search task
Table 1. Repeated measures ANOVA result: Effects of emotion control and task on search performance

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Table 2. Repeated measures MANOVA result:  
Effects of emotion control and tasks on navigation/search behavior

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* p< .05; ** p< .01

Table 3. Follow-up repeated measures ANOVA result:  
Effects of emotion control and task on navigation/search behavior

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<td></td>
</tr>
<tr>
<td>Task</td>
<td>50.778**</td>
<td>2.373</td>
<td>9.098**</td>
<td>128.56**</td>
<td>73.441**</td>
</tr>
<tr>
<td>(5,61)</td>
<td>(.000)</td>
<td>(.128)</td>
<td>(.004)</td>
<td>(.000)</td>
<td>(.000)</td>
</tr>
<tr>
<td>E x T</td>
<td>0.988</td>
<td>6.809*</td>
<td>1.055</td>
<td>0.007</td>
<td>3.747</td>
</tr>
<tr>
<td>(5,61)</td>
<td>(.324)</td>
<td>(.011)</td>
<td>(.308)</td>
<td>(.934)</td>
<td>(.057)</td>
</tr>
</tbody>
</table>

* p<.05; ** p< .01