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Quality or quantity?: Refining the definition of the means efficacy construct and its relationship to task specific self-efficacy

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QUALITY OR QUANTITY? REFINING THE DEFINITION OF THE MEANS EFFICACY CONSTRUCT AND ITS RELATIONSHIP TO TASK SPECIFIC SELF-EFFICACY

A Thesis

Presented to the

Faculty of

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ABSTRACT

The purpose of this study was to expand on the definition of the means efficacy construct and its relationship to task-specific self-efficacy. This research expanded on the means efficacy construct presented by Eden et al. (2010) that if participants felt as though they were given the highest quality resources available, their self-efficacy increased which also increased their performance. This researcher further expanded the means efficacy construct by introducing quantity means efficacy, under the premise that while the quality of resources is important, the amount of resources can also impact task-specific self-efficacy. Thus, the current research has three studies: study one assessing quality means efficacy from a self-report method, study two assessing quantity means efficacy from a self-report method, and study three comparing quality and quantity means efficacy to determine which would be a better predictor of confidence in various tasks. In each study, vignettes of household tasks were used to assess participants' task-specific self-efficacy when given low and high quality and quantity resources. Results from study one and study two displayed overall significant changes in means efficacy when participants were offered,

few or low resources, and then offered greater or high resources to complete a task. Results from study three indicated that quantity means was a stronger predictor of task-specific self-efficacy, which supports the researcher's notion that quantity means efficacy is another construct to consider within the current means efficacy literature. Implications and further research are also discussed.

ACKNOWLEDGMENTS

This project has been a very long and arduous process, with multiple roadblocks along the way. I would like to thank all those who assisted me in finally completing this life goal. To Dr. Peacock, it was you who sparked my interest in furthering my education. Without your encouragement as an undergraduate, I may not have had the confidence (self-efficacy!) to succeed, so thank you. To Dr. Agars, thank you for challenging me that day in class when I knew I was onto something! I wouldn't let it go, but in the end it became my thesis; thanks for your patience! To Dr. Kottke, my graduate advisor, thank you for never giving up on me. Completion of my thesis has been worth the frustration and I thank you so much for the hours of revision, guidance, and encouragement. It was an honor to have you as my advisor. Finally, I would like to thank my parents and my fiancé, without you I would not have been able to accomplish this. Thank you so much for your constant love and support of me, my education and my thesis.....even if it did seem to take an eternity!

DEDICATION

This paper is dedicated to my late grandmother, Evelyn Gavagan. Even though I knew her only a short time, she taught me everything, including the value of hard work and persistence. I hope you are proud of me and my accomplishments. I love you dearly and miss you even more.

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CHAPTER ONE

INTRODUCTION AND LITERATURE REVIEW

In the 1980s, an action packed television show captured the interest of millions of viewers. The hero, instead of using firearms and bombs to dissuade his pursuers, used brains instead of force and often escaped from sticky situations using a paper clip, a rubber band, and a Swiss army knife. The hero's name was Agnus MacGyver, and for those of you who remember, MacGyver could use typical household resource to disable a bomb or save the damsel in distress. Nowadays, the term "MacGyver" is used as a cliché, coined to label anyone who uses alternative resources in a creative way to solve problems. Maybe you've been a "MacGyver" at one point, using a butterknife as a screwdriver, a clothes hanger to open a car door, or some duct tape and tin foil as a television antennae. In each of these situations you may have faced a "make do with what you have" scenario, causing you to find other tools to solve the problem. If you had high confidence in performing the task at hand, you could "MacGyver" anything into the tool you need. However, if you were not aware of how to perform the task, you may not have been able to

identify which alternative resources would have gotten the job done. This alternative resource situation is a component of means efficacy, a developing construct spawned from research in self-efficacy. This paper addresses means efficacy components, in an effort to distinguish the elements that comprise this construct. We begin by examining self-efficacy from its initial representation as personal and task-specific, moving through its refinement in the literature to where we are today: elaborating the definition of the means efficacy construct.

Self-efficacy

The construct of self-efficacy was originally developed by Albert Bandura in the mid-1960s (Bandura & Walters, 1963; Bandura, 1977). The term self-efficacy has been linked to terms such as "self confidence", "optimism", and "self worth" (Judge, Erez, & Bono, 1998). Bandura (1997) has stated that having optimistic efficacy beliefs in one's abilities is necessary for performing at one's best. This notion stems from the more formal definition of self-efficacy, which is the belief in one's abilities to employ the motivation, cognitive resources, and courses of action necessary to fit any situational demand (Bandura,

1982). More commonly, self-efficacy is defined as "the belief in one's ability to perform a task" (McDonald & Siegall, 2001). According to Bandura's (1982) theory, those with higher self-efficacy will perform better than those with lower self-efficacy, based on the perception and confidence that they can succeed.

Bandura later refined this notion of self-efficacy to describe its formation by four major sources: *mastery experiences* (which refers to the individual's past accomplishments), *vicarious experience* (where an individual observes others similar to him or her succeeding in certain tasks), *social persuasion* (others convince the individual that he or she has the ability to perform the task), and *emotional state* (individuals' personal reflections of their abilities) (Bandura, 1997). When an individual has a past experience of accomplishment in a certain task, his or her self-efficacy for facing that task in the future will be higher than if the individual had failed. When observing others, individuals maintain an attitude of "if they can do that so can I", increasing their self-efficacy as long as the referent other is similar to themselves. Each of these experiences leads to greater belief in accomplishment, through increased self-efficacy (Klassen, 2004).

Motivational Processes

Cognitive

Bandura (1993) continued to refine self-efficacy and contended that an individual's perceived self-efficacy can influence development and functioning through motivational, cognitive, affective, and selection processes. The cognitive process is in place when individuals use their self-efficacy to set challenging goals and maintain an enhanced commitment to achieve those goals. Those high in self-efficacy use cognitive processes to visualize their success in achieving those goals, while those with low self-efficacy will dwell on failures that will inhibit their process. Bandura argues that two people with the same skills and knowledge will perform differently depending upon their perceived self-efficacy (1993). The motivation in accomplishing a goal is cognitively driven and self-efficacy plays a role in these motivational processes as well. According to Bandura (1993), those who have high self-efficacy attribute their failures to a lack of effort, whereas those with low self-efficacy attribute their failures to not having adequate ability. If individuals feel as though they are capable of accomplishment, they will be more motivated to succeed.

Self-efficacy guides motivation in several ways including: selecting individual goals, expending effort towards the goal, perseverance through challenges, and coping with failures.

Affective

The affective processes are considered the "emotional mediator of self-efficacy beliefs", according to Bandura (1993). Those with low self-efficacy are more likely to conjure worries and anxiety that can lead to stress and fear of failure. Those with high self-efficacy can control those fears of failure and quell anxiety by self-regulating and focusing positive energy on the task at hand. Bandura also proposed that an extremely low level of self-efficacy could lead to clinical anxiety and depression (1993).

Finally, Bandura has stated that self-efficacy guides selection processes such as what type of career an individual will pursue or the decision to continue his or her education. Each of these processes is affected by self-efficacy and in turn enhances the cognitive development and functioning of the individual.

Self-Efficacy and Performance

The implications of self-efficacy as proposed by Bandura (1982, 1993, 1997) and the refinement of the construct has led to recognition of self-efficacy and its importance in the workplace (Stajkovic & Luthans, 1998). More specifically, an individual's level of self-efficacy can translate to greater motivation and performance on the job. In their examination of self-efficacy and performance, Judge, Erez and Bono (1998) contended that self-efficacy influences individuals' perceptions of the stability of events. Individuals with high self-efficacy believe in their ability to change adverse events, whereas those with low self-efficacy believe that adverse events are out of their control and thus they have no ability to change them. This more optimistic observation style translates to an increase in motivation and performance for highly efficacious people because they feel in control of the events occurring in their lives (Judge, Erez & Bono, 1998; Renn & Fedor, 2001). This optimistic style also leads to a greater occurrence of organizational citizenship behaviors, in that the highly efficacious individual is confident in his or her job knowledge and assists others more frequently (Todd & Kent, 2006).

In other research regarding self-efficacy in the workplace, Locke and Latham (1990) indicated that the relationship between self-efficacy and performance is mediated by effort, persistence, direction, and task strategies. Those individuals with high self-efficacy will expend the most effort, know where they are going with that effort, and will persist until the end. The researchers also suggest that this relationship is moderated by goal commitment, feedback, ability, task complexity, and situational constraints (Locke & Latham, 1990). Individuals with high self-efficacy will further perform well when they have adequate ability, positive feedback from superiors, and more commitment to the goal.

These relationships were further examined by Stajkovic and Luthans (1998) who conducted a meta-analysis on the relationship of self-efficacy and performance and found that the two constructs were positively and strongly related but moderated by task complexity and locus of control. When the task was easier and self-efficacy was higher, performance was high. In addition, those with a high locus of control who had high self-efficacy also exhibited greater performance. Stajkovic and Luthans also stated that self-efficacy is related to a number of other

work performance measures such as adaptability to advanced technology, coping with career related events, managerial idea generating, managerial performance, skill acquisition, and newcomer adjustment to an organizational setting (1998).

While the previous researchers have shown a positive relationship between self-efficacy and performance, relying on self-efficacy to *improve* performance may not produce similar results. For instance, Wolfe, Nordstrom, and Williams (1999) attempted to improve performance and decrease turnover intentions by enhancing the individual's self-efficacy prior to a training program in a telemarketing firm. One group received a pre-training self-efficacy manipulation but did not show any improvement in performance compared to the group that did not receive the manipulation. The manipulation group, however, did report less turnover intentions and remained on the job longer than those without the self-efficacy enhancement exercise. Wolfe et al. maintained that their negative results may stem from the validity of the performance assessment or to the nature of the telemarketing job in not allowing much room for employee discretion (1999). The managers of the telemarketing firm failed to provide enough variability between employees during the performance review

for fear of de-motivation, which may have produced the insignificant results in the relationship between self-efficacy and performance.

Task-Specific Self-Efficacy

While the previous research has focused mainly on personal self-efficacy, (i.e. the overall beliefs an individual has about his or her abilities), the construct has been further refined to include task-specific self-efficacy, which refers to the individual's confidence in one specific task (Eden, 1996). This form of self-efficacy has also been positively linked to performance, motivation, and organization commitment. In an example set forth by McDonald and Seigall (2001), task-specific self-efficacy was analyzed in a technological application using telecommunication employees. The telecommunications company implemented new hand-held computer systems for technicians to use to facilitate easier communication with the service coordinators. The technicians were then asked to complete a survey which assessed job perceptions and feelings after the computer system implementation. McDonald and Seigall found that those who felt more confident in using the new computer (i.e. those with higher

task-specific self-efficacy) displayed higher ratings in job satisfaction, organizational commitment, job focus, and quality of their work (2001). Negative relationships were found between technological task-specific self-efficacy and absenteeism and tardiness. Individuals who were more confident in using the new system exhibited fewer absences from work and were late to work less often. Individuals who were more confident in their telecommunications abilities were better able to adapt to the new computer system, and thus exhibited better performance.

Task-specific self-efficacy was also examined by Arenas, Tabernero and Briones (2006) in relation to goal orientation and performance. The researchers proposed that when an individual performs well, feelings of security, pride and satisfaction result which enhance self-efficacy for future tasks. When dissatisfaction in performance occurred, individuals increased efforts for the next task or changed their strategies. However, those with low efficacy who were dissatisfied with their performance felt as though they were failures and did not improve when the task was presented again (Arenas, Tabernero & Briones, 2006). Arenas, Tabernero and Briones (2006) also found that those with low task-specific self-efficacy will have

higher stress and anxiety in tasks in which there is a high chance of error or failure. The authors, therefore, suggested that when assigning tasks to workers, managers should contemplate the past successes and failures of the individual, as well as their current levels of efficacy for the task at hand.

Means Efficacy

Throughout the previous discussion, self-efficacy has evolved from personal efficacy to task-specific self-efficacy. More recently, the trend has been the development of more specific efficacy elements to further refine the efficacy construct. Subjective efficacy was first introduced by Eden (2001) and includes an individual's perceptions of the resources necessary to perform a task. These resources may include such things as knowledge, talent, willpower, endurance and other characteristics important for performance (Agars, Kottke, & Unckless, 2003; Eden, 2001). In addition, means can include tools, machinery, money, information, and time allotments. Eden (2001) states that most of these resources were included in Bandura's original work, but were not explicitly expressed. Subjective external

efficacy refers to the utility of these resources, which has since been termed means efficacy (Eden, Ganzach, Flumin-Granat, & Zigman 2010). Eden et al. (2010) hypothesized that means efficacy would be just as important as self-efficacy in performance and motivation. If the individual feels confident that he or she has the resources needed to perform the task, his or her self-efficacy in performing the task will be greater. If the resources are inadequate, confidence in success will be reduced. Eden et al. (2010) researched means efficacy by introducing a new computer system to participants and informing those participants that this particular system was the "top of the line" as far as quality. The researchers found that when the workers thought the system was of the highest quality, their efficacy levels for using the new system increased. In addition, performance and motivation was also increased when the workers believed that their system was of the highest quality. This research served as the first experimental evidence of means efficacy as an individual construct, suggesting that the highest motivation would occur when individuals have high self-efficacy in their ability to perform the job and high means efficacy in the utility of their resources.

Eden continued his work in means efficacy and postulated that high levels of internal efficacy (confidence in the ability to perform tasks) can be offset by low levels of external efficacy (confidence in resources outside the individual) (Eden & Sulimani, 2001). Therefore, an individual who believes he or she can perform the task well could lose some of that internal efficacy if the tools are inadequate. When the individual believes that the tools are modern, efficient, well maintained and appropriate for the job, efficacy levels (both internal and external) and performance are increased (Eden 2001). Eden and Sulimani (2001) tested task-specific means efficacy using Pygmalion Training and found that means efficacy successfully predicted performance, whereas personal self-efficacy did not. Employees were trained to use effectively their resources, thus their means efficacy had increased. The authors then suggested that in jobs that are dependent upon the use of tools, means efficacy should be closely examined in addition to self-efficacy to predict performance. Eden and Sulimani also proposed that means efficacy and self-efficacy are independent constructs and each type can be increased or decreased independently of the other.

CHAPTER TWO

STUDY ONE: ASSESSING QUALITY MEANS EFFICACY IN A SELF-REPORT METHOD

There is one important notion which must be discussed regarding the development of the means efficacy construct thus far. In Eden's (2000, 2001) previous work, means were assessed as the "quality" of the resources. In each of his experiments, the resources are regarded as being high caliber and of the latest technology. An individual with enormous self-efficacy for the task may be hindered if the quality of the resources is not up to par. These individuals may not perform to their highest ability if the resources cannot support those abilities. As in Eden's (2001) example, the individual may be a skilled sharpshooter but if the weapon is miscalibrated the shooter will have difficulty in hitting the target. Thus, the quality of the weapon is in question. In these studies conducted by Eden, quality means was assessed using field studies in the workplace. Participants were told the system was the best in the industry, which is considered a form of Pygmalion training. Participants who were told they had the best instruments to do the job exhibited

higher performance and easier facilitation of the new system.

Hypotheses

The first question that arises for this research is: Would the same results occur using a self-report method? I attempted to answer this question by designing a survey using vignettes to tap into the quality means efficacy construct. My general, overall expectation was that I would find, with a survey method, results similar to Dov Eden's work using field studies.

Further, I offer an additional examination of means efficacy beyond that done by Eden; I propose that an individual who is unfamiliar with the task at hand may not understand which tools or resources are fundamental in completing the task, or how to use them. If the individual does not feel confident in performing the task, the quality of resources provided will make little difference to him or her. Therefore, hypothesis 1 is as follows:

Hypothesis 1: Those with very low levels of task-specific self-efficacy will show little or no change in quality means efficacy.

Due to the lack of self-efficacy for the task, providing a low quality of resources or a high quality of resources is not expected to influence individuals in their performances on the task. I expect those who rate themselves low in task-specific self-efficacy to rate themselves low on both the high and low means examples. I do not expect to see significant trends as the individual progresses from low to high quality means.

Since the quality of resources are not hypothesized to elicit changes from low means to high means for those with low personal efficacy on the task, I propose that the largest discrepancies will be exhibited by those with moderate levels of task-specific self efficacy. These individuals understand the basic fundamentals of how to complete the task, and may increase their efficacy when given higher quality resources. Therefore, the second hypothesis of this study is as follows:

Hypothesis 2: Changes in quality means efficacy levels will occur only in those with moderate levels of task-specific self-efficacy.

Those individuals who have moderate levels of self-efficacy for the task will be most affected by changes from low to high quality means. These individuals will have

more efficacy in performing the task with higher quality tools than with lower quality. Thus, I expect a positive trend from low to high means.

I did not make any predictions regarding those individuals who rate themselves among the highest in self-efficacy on a task. While it is presumed that these individuals should remain highly efficacious regardless of the quality of tools they are given, it is difficult to defend this point. The highly efficacious individual may be aware that to perform the task fully, the resources presented in a given scenario may not fully be adequate. These highly efficacious individuals may consider themselves experts in the task and may require additional information or resources to perform the task at the level minimally acceptable to them. The "expert" may take into account that more time is necessary than what is provided for in the scenario, or that the task cannot be performed without the help of others. Thus, there is more awareness of the resources on the part of the highly efficacious individual as opposed to an individual with a moderate amount of knowledge on the task. This increased awareness may present confounds in responses of these "experts" in that they may respond differently due to their increased

knowledge of the task at hand. I will still examine how the provision of low relative to high means will affect the self-efficacy ratings of these individuals, but do not hypothesize the direction or pattern of their responses.

Method

Participants

In the study of quality means, there were 172 participants from a regional university in Southern California. These participants were all students of the university and received extra credit for their participation in the study. Participation in the study was voluntary with all participants receiving a consent form prior to the completion of the survey and a debriefing statement explaining the purpose of the study. Participant demographics were as follows: 19% male, 17% African American/Black, 6% Asian American/Pacific Islander, 33% Hispanic/Latino, and 40% White/European American. Age of participants ranged from 18 to 57, with a mean age of 24.3 (SD = 6.6).

Procedure

Participants were asked to complete a survey developed by the author that contained six vignettes of household

tasks. These tasks included cooking, auto repair, gardening, wood construction, building an electronic product, and sewing. The general procedure was as follows: participants were first to indicate their self-efficacy on the task in general, read the scenario presented, rate their efficacy given low means, and then re-rate their efficacy given high means (see Appendix A).

Beginning with the first vignette as the exemplar, participants were asked to rate their self-efficacy on cooking, using a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). High scores indicate high task self-efficacy. Participants then read a scenario for the low quality means vignette. The cooking vignette read as follows:

You have been asked to cook a meal for a large party. You have only two hours to prepare the meal. In the kitchen you find a few pots and pans. Some have missing handles and most of the Teflon coated pans have some of the Teflon scratched off the surface. The oven is a much older model than you are used to. One of the knobs is broken off the oven. You only find one knife in the butcher's block, which is dull. There is no sharpener in sight.

Participants were then asked to rate their confidence level in cooking a meal using these items on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). High scores indicate high quality means efficacy. A second vignette was then offered regarding high quality means: *The host of the party informs you that you are in the old service kitchen, which is no longer in use. She directs you to the main kitchen in the house. Here you find state-of-the-art double ovens, copper bottom pots and pans, and a full knife block with sharp Japanese knives.*

Participants were then asked to rate their quality means efficacy for cooking using these items on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). High scores indicate high quality means efficacy. Following these ratings, participants were asked for their level of experience with the task on a scale from 1 (zero times having performed the task) to 5 (having completed the task ten times or more). The same format was followed for all 6 vignettes. I included one vignette that would be very difficult in an effort to assess for floor effects: building a television as a highly specialized task that not many people in the population would know how to do.

Rationale and Exclusions

Tasks selected in this study were intended to cut across potential gender differences. I included tasks that were likely to be deemed socially feminine (sewing and gardening) and those that were seen as masculine (auto repair and construction). While gender was not a focus of this study, results are reported to determine if the tasks used in the study differentiated by gender.

Exclusions to the vignettes were also applied. Each of the vignettes gave the participants a very specific time limit into how long they were allowed to complete the task. By limiting the time allowed, we were excluding time as a resource. Each vignette also stated that the participants were alone to perform the task, eliminating other people as resources. Money as a resource was also completely left out of the vignettes, leaving the focus of the vignettes strictly on the amount of materials or tools on hand and the confidence of using just those tools as resources to complete the task.

Demographics

Participants were also asked several demographic variables including age, ethnicity, and gender. We also asked the participants for their overall self-efficacy using a Likert-type scale from 1 (strongly disagree) to 5

(strongly agree). High scores indicated high overall self-efficacy.

Results

To create discreet groups, initial task efficacy scores were recoded to form three groups: those who rated themselves the lowest efficacy (i.e. 1) were coded 1 for a low efficacy group, ratings of 2, 3, or 4, were recoded 3 for a moderate efficacy group, and ratings of 5 were coded 5 for high efficacy. Because this *a priori* categorization created unequal groups, a tri-sample split was used to create groups of relatively equal size in an effort to increase power (see Table 1). This tri-sample split, in effect, alters the meaning of the scale, for example: a participant who rated herself a 3 which, rationally, would be moderate efficacy, may be thought of as low efficacy in the tri-sample split. Nevertheless, because the vastly unequal sample sizes created by the rational splits would have led to statistical power concerns, the results presented here are based on the tri-sample splits within the sample of the population. For rational split results, please see Appendix D.

Table 1. *Participants' Self-Efficacy Ratings by Task for Initial Coding and Tri-Sample Split Recoding in Quality Means Study*

Task	Code	Initial Code	N	Recode	N
Cooking	1	1	6	1,2,3	50
	3	2,3,4	96	4	52
	5	5	70	5	70
Auto Repair	1	1	89	1	89
	3	2,3,4	71	2,3	50
	5	5	8	4,5	29
Building a Deck	1	1	70	1	70
	3	2,3,4	89	2,3	59
	5	5	11	4,5	41
Growing a Garden	1	1	17	1,2	45
	3	2,3,4	134	3	41
	5	5	21	4,5	86
Building a Television	1	1	122	1	122
	3	2,3,4	43	2,3	37
	5	5	2	4,5	8
Sewing	1	1	34	1,2	61
	3	2,3,4	121	3	37
	5	5	16	4,5	73

Within an ANOVA framework, a repeated measures analysis was used to assess the differences between the participant ratings ascribed to the poor quality vignettes relative to the better quality vignettes. These comparisons were made at each level of *a priori* task self efficacy (splits described above). Thus, my analysis focused on the

within subjects effects. Every participant responded to each vignette. Specifically, I used pairwise comparisons to identify the individuals' reported change in task-specific self-efficacy from the low means scenario to the high means scenario. These comparisons will be presented next.

Cooking. In the cooking vignette, significant change was reported for the low efficacy group from low to high means (mean difference -.620, $F(1,169) = 13.49$, $p < .001$), in the moderate efficacy group (mean difference -1.25, $F(1, 169) = 57.02$, $p < .001$), and in the high efficacy group (mean difference -.843, $F(1,169) = 34.90$, $p < .001$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 2.06; moderate efficacy (3) reported a mean of 2.79; high efficacy (5) reported a mean of 3.76. In the high means example, those who rated themselves with low efficacy reported a mean of 2.68; moderate efficacy reported a mean of 4.04; high efficacy reported a mean of 4.60 (see Appendix E).

Auto Repair. In the auto repair vignette, significant change was reported for the low efficacy group from low to high means (mean difference -.292, $F(1,165) = 9.542$, $p < .05$), in the moderate efficacy group (mean difference -

.740, $F(1,165) = 34.40$, $p < .001$), and in the high efficacy group (mean difference -1.24, $F(1,165) = 56.15$, $p < .001$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 1.16; moderate efficacy (3) reported a mean of 1.96; high efficacy (5) reported a mean of 2.35. In the high efficacy means example, those who rated themselves with low efficacy reported a mean of 1.45; moderate efficacy reported a mean of 2.70; high efficacy reported a mean of 3.59 (see Appendix F).

Building a Deck. In the building a deck vignette, significant change was reported for the low efficacy group from low to high means (mean difference -.286, $F(1,167) = 4.154$, $p < .05$), in the moderate efficacy group (mean difference -.915, $F(1,167) = 35.93$, $p < .001$), and in the high efficacy group (mean difference -1.68, $F(1,167) = 84.41$, $p < .001$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 1.13; moderate efficacy (3) reported a mean of 1.86; high efficacy (5) reported a mean of 2.42. In the high efficacy means example, those who rated themselves with low efficacy reported a mean of 1.41; moderate efficacy reported a mean of 2.78; high efficacy reported a mean of 4.10 (see Appendix G).

Growing a Garden. In the growing a garden vignette, significant change was reported for the low efficacy group from low to high means (mean difference -.356, $F(1,169) = 6.081$, $p < .05$), and in the high efficacy group (mean difference -.721, $F(1,169) = 47.78$, $p < .001$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 2.02; moderate efficacy (3) reported a mean of 3.02; high efficacy (5) reported a mean of 3.71. In the high means example, those who rated themselves with low efficacy reported a mean of 2.38; moderate efficacy reported a mean of 3.32; high efficacy reported a mean of 4.43. While change occurred for low to high means in the growing a garden vignette for those reporting moderate efficacy, significance was not achieved (mean difference -.293, $F(1,169) = 3.754$, $p = .054$), although was in the direction hypothesized (see Appendix H).

Building a Television. In the building a television vignette, significant change was reported for the moderate efficacy group from low to high means (mean difference -.432, $F(1,164) = 8.772$, $p < .05$), and in the high efficacy group (mean difference -1.63, $F(1,164) = 26.78$, $p < .001$). In the low means example, those who rated themselves low efficacy (1) reported a mean of 1.07; moderate efficacy (3)

reported a mean of 2.00; high efficacy (5) reported a mean of 1.88. In the high means example, those who rated themselves low efficacy reported a mean of 1.19; moderate efficacy reported a mean of 2.43; high efficacy reported a mean of 3.50. No significant change was reported from low to high means in the building a television vignette for those who rated themselves with low efficacy (mean difference -.115, $F(1,164) = 2.037$, $p = .155$) (see Appendix I).

Sewing. In the sewing vignette, significant change was reported for the low efficacy group from low to high means (mean difference -.377, $F(1,168) = 9.61$, $p < .05$), in the moderate efficacy group (mean difference -.486, $F(1,168) = 9.70$, $p < .05$), and in the high efficacy group (mean difference -1.26, $F(1,168) = 128.5$, $p < .001$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 1.34; moderate efficacy (3) reported a mean of 2.46; high efficacy (5) reported a mean of 2.73. In the high efficacy means group, those who rated themselves with low efficacy reported a mean of 1.72; moderate efficacy reported a mean of 2.95; high efficacy reported a mean of 3.99 (see Appendix J).

Summary of Paired Comparison Results.

In summary of the tests of hypotheses, significant change was reported from low to high means for those who rated themselves low efficacy in all tasks except in the vignette of building a television; in addition, significant changes were found for moderate efficacy in all tasks except in the vignette of growing a garden. Significant changes were also found for high efficacy in all tasks in each vignette (see Table 2).

Ancillary Analyses

Though gender differences were not the focus of this study, analyses were conducted to determine if gender had an effect. Two sets of analyses were conducted to assess the impact of gender within the data. The first set of analyses compared task-specific self-efficacy by gender and task experience by gender. Task self-efficacy for the tasks did differ by gender for four of the tasks: auto repair, building a deck, building a television, and sewing. With the exception of sewing, males rated their self-efficacy higher (see Appendices K and L). Further, as noted earlier, participants were asked for their experience levels in performing each task. A t-test was conducted to assess for gender differences in experience. There were

Table 2. *Study One Reported Means of Task-Specific Self-Efficacy From Low to High Means Efficacy Across All Vignettes*

Task	Task Self-Efficacy	Low Means Efficacy	High Means Efficacy	Mean Diff.	F	Sig
Cooking	Low (1)	2.06	2.68	-.620	13.49	<.001
	Mod (3)	2.79	4.04	-1.25	57.02	<.001
	High (5)	3.76	4.60	-.843	34.90	<.001
Auto Repair	Low (1)	1.16	1.45	-.292	9.54	.002
	Mod (3)	1.96	2.70	-.740	34.40	<.001
	High (5)	2.35	3.59	-1.24	56.15	<.001
Building a Deck	Low (1)	1.13	1.41	-.286	4.15	.043
	Mod (3)	1.86	2.78	-.915	35.93	<.001
	High (5)	2.42	4.10	-1.68	84.41	<.001
Growing a Garden	Low (1)	2.02	2.38	-.356	6.08	.015
	Mod (3)	3.02	3.32	-.293	3.75	.054
	High (5)	3.71	4.43	-.721	47.78	<.001
Building a Television	Low (1)	1.07	1.19	-.115	2.04	.155
	Mod (3)	2.00	2.43	-.432	8.77	.004
	High (5)	1.88	3.50	-1.63	26.78	<.001
Sewing	Low (1)	1.34	1.72	-.377	9.61	.002
	Mod (3)	2.46	2.95	-.486	9.70	.002
	High (5)	2.73	3.99	-1.26	128.50	<.001

significant differences in self-reported experiences for three of the six tasks: auto repair, building a deck, and sewing with men reporting more experience with tasks on all but one (sewing). No gender differences in experience were found for cooking, growing a garden, or building a television. The results of these analyses can be found in Tables 3,4 & 5.

Table 3. *Study One Task-Specific Self-Efficacy Means for Task by Gender*

Task	Gender	Mean
Cooking	1 - Male	3.434
	2 - Female	3.449
*Auto Repair	1 - Male	2.434
	2 - Female	1.742
*Building a Deck	1 - Male	2.724
	2 - Female	1.945
Growing a Garden	1 - Male	3.526
	2 - Female	3.316
*Building a Television	1 - Male	1.671
	2 - Female	1.383
*Sewing	1 - Male	2.066
	2 - Female	2.734

**Differences statistically significant*

The second set of analyses that were conducted included gender as an independent variable in the analyses of variance to assess for gender differences in the means efficacy ratings after accounting for experience. Of particular interest were the effects of gender on those tasks for which there were significant gender effects in task experiences. Using the auto repair task as an example, results indicated a between subjects interaction for task and gender; otherwise gender was not a significant between

Table 4. *Study One Task-Specific Self-Efficacy Means for Task by Resource by Gender*

Task	Resource	Gender	Mean
Cooking	Low	Male	3.079
		Female	2.977
	High	Male	3.789
		Female	3.922
Auto Repair	Low	Male	2.053
		Female	1.477
	High	Male	2.816
		Female	2.008
Building a Deck	Low	Male	2.158
		Female	1.570
	High	Male	3.289
		Female	2.320
Growing a Garden	Low	Male	3.395
		Female	3.000
	High	Male	3.658
		Female	3.633
Building a Television	Low	Male	1.474
		Female	1.273
	High	Male	1.868
		Female	1.492
Sewing	Low	Male	1.789
		Female	2.305
	High	Male	2.342
		Female	3.164

or within factor. The complete listings of these results are in Table 6.

Table 5. *Study One T-Test for the Effects of Gender on Experience Levels*

Task	Gender	Mean	F	Sig.	Mean Diff.
Cooking	Male	3.13	1.475	.226	.106
	Female	3.02			
Auto Repair	Male	1.95	17.266	<.001	.749
	Female	1.20			
Building a Deck	Male	2.23	77.051	<.001	.950
	Female	1.28			
Growing a Garden	Male	2.31	1.167	.281	.459
	Female	1.85			
Building a Television	Male	1.13	3.934	.049	.074
	Female	1.05			
Sewing	Male	1.45	.198	.657	-.424
	Female	1.87			

Discussion

Results from Study 1 do not support the first hypothesis for the low task self-efficacy situation. I predicted that the low efficacy group would exhibit little or no change from low to high means. However, significant change was achieved for the low efficacy group from low to high means in all vignettes except the building a television vignette. Individuals who rated themselves low on their self-efficacy for the task exhibited a higher confidence when given greater quality resources. However,

Table 6. *Study One Between Subjects Interaction for Task Self-Efficacy and Gender*

Task	Mean Square	F	Sig.	Partial Eta Squared
Cooking	1.895	1.523	.489	.003
Auto Repair	3.364	3.282	.040	.039
Building a Deck	.594	.609	.545	.007
Growing a Garden	.341	.249	.780	.003
Building a Television	.196	.352	.704	.004
Sewing	2.865	2.182	.116	.026

results from this study do support the second hypothesis for the moderate efficacy group. I predicted that the moderate efficacy group would experience change from low to high means and significance was achieved for all vignettes except growing a garden. Those who rated themselves moderate in their efficacy for the tasks reported increased confidence when given a higher quality of items. The trends in these results (both in low efficacy and moderate efficacy) display that the quality of resources given to an individual does make a difference in the performance of the task, even in the self-report method.

CHAPTER THREE

STUDY TWO: ASSESSING QUANTITY MEANS EFFICACY IN A SELF-REPORT METHOD

Should quality be the only focus of means efficacy? What if the individual is a skilled sharpshooter with a decent weapon but he does not have enough bullets to eliminate the target? While the quality of the resources has already proven to be important, something must be said for the quantity of resources. An individual could have the highest quality of resources; however, if the individual does not have a sufficient *quantity* of resources to perform the task, means efficacy may be reduced. In this second study, I will address this discrepancy by examining means efficacy from a quantitative perspective to define more fully the construct of means efficacy.

Although the total efficacy construct has evolved in the past few decades, the means efficacy construct is still in its developing stages. Past research of means efficacy using quality examples has shown to be independent of the self-efficacy construct in that it does not alter the effects of self-efficacy (Eden, Ganzach, Flumin-Granat, & Zigman, 2010; Eden & Sulimani, 2001); however, the same may

not be possible for quantity means efficacy. Here is an example of how this discrepancy might operate: a top rated chef who is working for a five star restaurant may have high self-efficacy in his performance and have high quality means efficacy for his restaurant. However, if he does not have enough ingredients to complete a six-course meal, his quantity means efficacy may be reduced. His personal self-efficacy has not been altered because the chef regards himself as a master of his craft; however, his task-specific means efficacy may be reduced due to the lack of available resources for this particular cooking venture. The chef is confident of his cooking skills, but may have reduced confidence if he does not have all the necessary ingredients to perform to his fullest potential. Yet the chef may maintain a "make do with what you have" attitude and still cook a good meal - better than an average cook - for fewer diners or courses.

Conversely, if an individual with very little self-efficacy of cooking is given an abundance of resources, there is no assurance that this individual would be better able to perform the task. If the individual does not know how to perform the fundamentals of the task, we cannot be certain he or she would even be able to identify the

necessary tools, let alone be able to use them successfully. These high and low levels of task specific self-efficacy could alter the effects of means efficacy, especially when it comes to quantity versus quality. Using these notions, it is not a far reach to say that quantity means efficacy may make a difference only when original levels of task-specific self-efficacy are in the moderate ranges, as in the previous study.

Hypothesis

In the quality means study, I hypothesized that an individual who is unfamiliar with the task at hand may not understand which tools or resources are fundamental in completing the task, or how to use them; thus, I predicted that those with low levels of task-specific self-efficacy would show little or no change in quality means efficacy. The current body of literature on means efficacy (i.e., Eden's work) has found that those with low self-efficacy exhibit no change in performance as an effect of a means efficacy manipulation. Yet, in study 1, there were significant changes for the low efficacy group from low to high means in five out of six vignettes in the quality means study. The study 1 result could be a unique function

of this type of efficacy research in a self-report method, or of the type of tasks used to assess for quality means efficacy in this study. I also did not offer a hypothesis for the high self-efficacy group under the assumption highly efficacious individuals may have varied responses when given low and high quality means. Despite that expectation, the first study demonstrated significant changes in the high efficacy group across all vignettes. Therefore, based on the results from Study 1, I propose that the same trend will follow for quantity means efficacy; thus, the hypothesis for this study is as follows:

Hypothesis 1: Changes in quantity means efficacy levels will occur in those with low, moderate, and high levels of task-specific self-efficacy.

Method

Participants

In the study of quantity means, there were 117 participants from a regional university in Southern California. These participants were all students of the university and received extra credit for their participation in the study. Participation in the study was voluntary with all participants receiving a consent form

prior to the completion of the survey and a debriefing statement explaining the purpose of the study. Participant demographics were as follows: 53.8% female, 35.9% Latin American/Hispanic, 30.8% White/European American, 12.8% African American/Black, 13.7% Asian American/Pacific Islander, 5.1% Middle Eastern, and 1.7% Multi-racial/Other. Age of participants ranged from 19 to 53, with a mean age of 25.7, (*SD* = 7.2).

Procedure

As was conducted in the first study, participants were asked to complete a survey developed by the author that contained seven vignettes of household tasks. These tasks included cooking, auto repair, gardening, construction from wood, building with electronics, and sewing[1]. Participants were first to indicate their self-efficacy on the task, their efficacy with low means, and then their efficacy given high means.

Beginning with the first vignette, participants were asked to rate their self-efficacy on cooking, using a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). High scores indicate high task self-efficacy. Participants then read a scenario for the low quantity means vignette.

The cooking vignette is as follows:

You have been selected to cook a meal for a large party. You only have two hours to prepare the meal. In the kitchen you have the following items:

A large pot A wooden spoon A skillet

A wisk A bunch of tomatoes

5 pounds of ground beef Basil Fettucini noodles

Participants were then asked to rate their confidence level in cooking a meal using *only* these items on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). High scores indicated high means efficacy. A second vignette was then offered regarding high quantity means:

The host of the party tells you there are more supplies in the pantry. In addition to the items you already have, you find:

Garlic Ten loaves of bread Three pounds of mushrooms

A bunch of onions Mozzarella cheese Salt and Pepper

Oregano Two dozen eggs 15 chicken breasts

Two gallons of milk Olive Oil Green Peppers

A pound of butter Two lemons Parsley bunch

A saucepan A baking sheet A toaster oven

An electric mixer A colander A mixing bowl

Participants were then asked to rate their quantity means efficacy for cooking with *the addition* of these items on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). High scores indicate high quantity means efficacy. Following these ratings, participants were asked for their level of experience with the task on a scale from 1 (zero times having performed the task) to 5 (having completed the task ten times or more). The same format then followed for all six vignettes. These household tasks were the same as used in the quality study. As in the first study, we included one vignette to assess for floor effects: building a television was selected as a highly specialized task that not many people in the population would be expected to know how to do (see Appendix M).

Rationale and Exclusions

As in Study 1, each of the vignettes gave the

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1 - I designed a non-existent task, assembling a horseblat, to assess for careless and erroneous responses but found that participants exhibited confusion in responding. Participants either responded "1" for not having confidence in the task at all, or "3" for indifference. I feel this was due to the fact that since the task did not actually exist, participants were unaware how to respond. In fact, some respondents did not mark any response and wrote comments such as, "I do not know what this is", or "I have never heard of this before". Therefore the data obtained from this vignette have been eliminated from the analyses.

participants a very specific time limit into how long they would be allowed to complete the task. By limiting the time allowed, I am excluding time as a resource. Each vignette also stated that the participants would perform the tasks alone, eliminating other people as resources. Money as a resource was also completely left out of the vignettes, again leaving the focus of the vignettes strictly on the quantity of materials or tools on hand and the confidence of using just those tools as resources to complete the task.

Demographics

Participants were also asked several demographic variables including age, ethnicity, and gender. I also asked the participants for their overall self-efficacy using a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). High scores indicate high overall self-efficacy.

Results

As before, to create discreet groups, the initial task efficacy scores were recoded to form three groups; those who rated themselves the lowest efficacy (i.e. 1) were coded 1 for a low efficacy group, those who rated

themselves 2, 3, or 4, were recoded 3 for a moderate efficacy group, and those who rated themselves 5 were coded 5 for a high efficacy group. Again, because this *a priori* categorization created vastly unequal groups, a tri-sample split was used to create groups of relatively equal size (see Table 7); graphical results of the tri-sample split are shown in the appendices. For Rational split tables, see Appendix P.

As in study one, all participants responded to all vignettes to create a within subjects repeated measures design. Specifically, I was looking for the individuals' self-reported change in task-specific self-efficacy from the low means vignette to the high means vignette. These changes are presented next.

Cooking. In the cooking vignette, significant change was reported for the low efficacy means group from low to high means (mean difference -.500, $F(1,114) = 4.26$, $p < .05$), in the moderate efficacy group (mean difference -.628, $F(1,114) = 13.12$, $p < .001$), and in the high efficacy group (mean difference -.654, $F(1,114) = 17.20$, $p < .001$). In the low means example, those who rated themselves with

Table 7. *Participants Self-Efficacy Ratings by Task for Initial Coding and Tri-Sample Split Recoding in Quantity Means Study*

Task	Code	Initial Code	N	Recode	N
Cooking	1	1	6	1,2,3	22
	3	2,3,4	59	4	43
	5	5	52	5	52
Auto Repair	1	1	54	1	54
	3	2,3,4	56	2	25
	5	5	9	3,4,5	40
Building a Deck	1	1	27	1,2	56
	3	2,3,4	78	3	23
	5	5	13	4,5	39
Growing a Garden	1	1	6	1,2,3	46
	3	2,3,4	86	4	46
	5	5	26	5	26
Building a Television	1	1	86	1	86
	3	2,3,4	32	2,3	27
	5	5	0	4,5	5
Sewing	1	1	34	1,2	34
	3	2,3,4	76	3	25
	5	5	9	4,5	35

low efficacy (1) reported a mean of 2.50; moderate efficacy (3) reported a mean of 3.65; high efficacy (5) reported a mean of 4.12. In the high means example, those who rated themselves low efficacy reported a mean of 3.00; moderate efficacy reported a mean of 4.28; high efficacy reported a mean of 4.77 (see Appendix Q).

Auto Repair. In the auto repair vignette, significant change was reported for the moderate efficacy means group from low to high means (mean difference -.390, $F(1,116) = 9.76$, $p < .05$ and in the high efficacy means group from low to high means (mean difference -.625, $F(1,116) = 14.65$, $p < .001$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 1.57; moderate efficacy (3) reported a mean of 2.37; high efficacy (5) reported a mean of 3.63. In the high means example, those who rated themselves with low efficacy reported a mean of 1.63; moderate efficacy reported a mean of 2.76; high efficacy reported a mean of 4.25. No significant change was reported for the low efficacy means group from high to low means (mean difference -.056, $F(1,116) = .261$, $p = .611$)(see Appendix R).

Building a Deck. In the building a deck vignette, significant change was reported for the moderate efficacy group from low to high means (mean difference -.269, $F(1,115) = 8.83$, $p < .05$), and in the high efficacy group (mean difference -.282, $F(1,115) = 7.268$, $p < .05$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 1.44; moderate efficacy (3) reported a mean of 2.54; high efficacy (5) reported a mean

on 4.05. In the high means example, those who rated themselves with low efficacy reported a mean of 1.48; moderate efficacy reported a mean of 2.81; high efficacy reported a mean of 4.33. No significant change was reported in the low efficacy group from low to high means (mean difference -.037, $F(1,115) = .087$, $P = .769$) (see Appendix S).

Growing a Garden. In the growing a garden vignette, significant change was reported for the high efficacy group from low to high means (mean difference -.333, $F(1,115) = 12.05$, $p < .05$). In the low means example, those who rated themselves low efficacy (1) reported a mean of 2.53; moderate efficacy (3) reported a mean of 3.38; high efficacy (5) reported a mean of 4.22. In the high means example, those who rated themselves low efficacy reported a mean of 2.77; moderate efficacy reported a mean of 3.62; high efficacy reported a mean of 4.56. No significant change was reported for the low efficacy group from low to high means (mean difference -.235, $F(1,115) = 1.417$, $p = .236$) and in the moderate efficacy group (mean difference -.241, $F(1,115) = 2.54$, $p = .113$ (see Appendix T).

Building a Television. In the building a television vignette, significant change was reported for the low

efficacy group (mean difference -.128, $F(1,115) = 4.84$, $p < .05$), in the moderate efficacy group (mean difference -..222, $F(1,115) = 4.58$, $p < .05$), and in the high efficacy group (mean difference -.400, $F(1,115) = 2.75$, $p < .10$). In the low means example, those who rated themselves with low efficacy (1) reported a mean of 1.15; moderate efficacy (3) reported a mean of 2.33; high efficacy (5) reported a mean of 3.20. In the high means example, those who reported themselves with low efficacy reported a mean of 1.28; moderate efficacy reported a mean of 2.56; high efficacy reported a mean of 3.60 (see Appendix U).

Sewing. In the sewing vignette, significant change was reported for the low efficacy group from low to high means (mean difference -.305, $F(1,115) = 10.65$, $p < .05$), and in the high efficacy group (mean difference -.353, $F(1,115) = 8.212$, $p < .05$). In the low means example, those who rated themselves with a low efficacy (1) reported a mean of 1.51; moderate efficacy (3) reported a mean of 2.64; high efficacy (5) reported a mean of 3.71. In the high means example, those who rated themselves with low efficacy reported a mean of 1.81; moderate efficacy reported a mean of 2.92; high efficacy reported a mean of 4.06. No significant change was reported in the moderate

efficacy group from low to high means (mean difference -.280 $F(1,115) = 3.80$, $p = .054$ (see Table 8, see Appendix V).

Summary of Paired Comparison Results.

In summary of the test of the hypotheses, significant change was reported from low to high means for those who rated themselves low efficacy in the vignettes of cooking, building a television and sewing. Significant change was reported for those who rated themselves moderate efficacy in all tasks except growing a garden and sewing, while those who rated themselves high efficacy reported significant change in all tasks (see Table 8).

Ancillary Analyses.

As in Study One, gender differences were not the focus of this study but were conducted to determine if gender had an effect. Two sets of analyses were conducted to assess the impact of gender within the data. The first set of analyses compared task-specific self-efficacy by gender and task experience by gender. Self-efficacy for the tasks did differ on four of the tasks, cooking, auto repair, building a deck, and

Table 8. *Study Two Reported Means of Task-Specific Self-Efficacy From Low to High Means Efficacy Across All Vignettes*

Task	Task Self-Efficacy	Low Means Efficacy	High Means Efficacy	F	Sig	Mean Diff
Cooking	Low (1)	2.50	3.00	4.26	.041	-.500
	Mod (3)	3.65	4.28	13.12	<.001	-.628
	High (5)	4.12	4.77	17.20	<.001	-.654
Auto Repair	Low (1)	1.57	1.63	.26	.611	-.056
	Mod (3)	2.37	2.76	9.76	.002	-.390
	High (5)	3.63	4.25	14.65	<.001	-.625
Building a Deck	Low (1)	1.44	1.48	.09	.769	-.037
	Mod (3)	2.54	2.81	8.83	.004	-.269
	High (5)	4.05	4.33	7.27	.008	-.282
Growing a Garden	Low (1)	2.53	2.77	1.42	.236	-.235
	Mod (3)	3.38	3.62	2.54	.113	-.241
	High (5)	4.22	4.56	12.05	.001	-.333
Building a Television	Low (1)	1.15	1.28	4.84	.030	-.128
	Mod (3)	2.33	2.56	4.58	.034	-.222
	High (5)	3.20	3.60	2.75	.100	-.400
Sewing	Low (1)	1.51	1.81	10.65	.001	-.305
	Mod (3)	2.64	2.92	3.80	.054	-.280
	High (5)	3.71	4.06	8.21	.005	-.353

sewing. With the exception of sewing and cooking, men rated their self-efficacy higher than females (see Appendix W and X). Further, as noted earlier, participants were asked for their experience levels in performing each task. A t-test was conducted to assess for gender differences in experience. There were significant differences in self-reported experiences for four out of the six tasks: auto

repair, growing a garden, building a deck, and building a television, with men reporting more experience with all tasks but sewing. No gender differences in experience were found for cooking or sewing (see Tables 9, 10, and 11).

The second set of analyses that were conducted included gender as an independent variable in the analysis of variance to assess for gender differences in the means efficacy ratings after accounting for experience. Of particular interest were the effects of gender on those

Table 9. *Study Two Task-Specific Self-Efficacy Means for Task by Gender*

Task	Gender	Mean
Cooking	1 - Male	3.923
	2 - Female	4.107
Auto Repair	1 - Male	2.986
	2 - Female	1.794
Building a Deck	1 - Male	3.465
	2 - Female	3.768
Growing a Garden	1 - Male	3.944
	2 - Female	3.768
Building a Television	1 - Male	1.796
	2 - Female	1.379
Sewing	1 - Male	2.268
	2 - Female	3.033

Table 10. *Study Two Task-Specific Self-Efficacy Means for Task by Resource by Gender*

Task	Resource	Gender	Mean
Cooking	Low	Male	3.676
		Female	3.750
	High	Male	4.169
		Female	4.463
Auto Repair	Low	Male	2.789
		Female	1.728
	High	Male	3.183
		Female	1.860
Building a Deck	Low	Male	3.324
		Female	2.316
	High	Male	3.606
		Female	2.537
Growing a Garden	Low	Male	3.775
		Female	3.662
	High	Male	4.113
		Female	3.875
Building a Television	Low	Male	1.648
		Female	1.368
	High	Male	1.944
		Female	1.390
Sewing	Low	Male	2.113
		Female	2.860
	High	Male	2.423
		Female	3.206

tasks for which there were significant gender effects in task experiences. There were no between subjects interactions; gender was not a significant between or

Table 11. *Study Two T-Test for the Effects of Gender on Experience Levels*

Task	Gender	Mean	F	Sig.	Mean Diff.
Cooking	Male	4.08	.28	.598	-.054
	Female	4.13			
Auto Repair	Male	2.80	24.88	<.001	1.209
	Female	1.59			
Building a Deck	Male	3.33	4.54	.035	1.108
	Female	2.23			
Growing a Garden	Male	3.66	.17	.678	.057
	Female	3.60			
Building a Television	Male	1.61	5.03	.027	.208
	Female	1.40			
Sewing	Male	2.07	6.40	.013	-.958
	Female	3.03			

within subjects factor (see Table 12).

Discussion

Results from this study supported the hypothesis across all efficacy levels. Significance was achieved for the low efficacy group from low to high means in the cooking, building a television and sewing vignettes. The moderate efficacy group achieved significant change from low to high means in all vignettes except the growing a garden and building a television vignette. The high

Table 12. *Study Two Between Subjects Interaction for Task Self-Efficacy and Gender*

Task	Mean Square	F	Sig.	Partial Eta Squared
Cooking	.744	.710	.494	.013
Auto Repair	.570	.324	.570	.003
Building a Deck	2.439	1.455	.230	.013
Growing a Garden	.591	.591	.444	.005
Building a Television	.001	.001	.971	.000
Sewing	1.360	1.149	.321	.021

efficacy group also achieved significant change in all vignettes.

Those who rated themselves high in their efficacy for the tasks reported increased confidence when given a higher quantity of items. The trends in these results across all levels of task-specific self-efficacy display that the quantity of resources provided to an individual also makes a difference in the performance of the task, in a self-report method.

CHAPTER FOUR

QUALITY MEANS EFFICACY VERSUS QUANTITY MEANS EFFICACY

The previous two studies have shown significant changes in task efficacy in both high and low quality and quantity means. Comparing the results from quality and quantity means, the cooking vignette and the sewing vignette displayed significance in both quality and quantity for low, moderate and high efficacy groups. Slight differences between quality and quantity means were seen in the building a deck vignette and the building a television vignette. In the building a deck vignette, significance was achieved in all quality means vignettes and in the moderate and high quantity vignettes, but was not achieved in the low efficacy group in the quantity means vignette. In the building a television vignette, significance was achieved in all groups of the quantity means vignette and in the moderate and high groups of the quality means vignette, but was not achieved in the low efficacy group in the quality means vignette. The growing a garden vignette displays some interesting comparisons between quality and quantity as well; significance was

achieved for both in the low efficacy groups, but moderate efficacy groups only showed significance in the quantity vignette, while high efficacy groups showed significance only in the quality vignette. Finally, the auto repair vignette was significant for all levels of efficacy in the quality vignette, but only was significant in the high efficacy group in the quantity vignette. Overall, quality means efficacy achieved significance in 16 out of 18 scenarios while quantity means efficacy achieved significance in 13 out of 18 scenarios. These comparisons indicate that efficacy levels not only changed from low to high means, but may also change as a function of quality *and* quantity.

Thus, in looking at the practical application of this construct in business, which type of means efficacy can have the greatest impact on performance in the workplace? If a business is going to spend money on tools and resources for the staff, should it purchase a higher quality resource but less of the resource, or purchase a higher quantity of a lesser quality resource? Study 3 will attempt to answer that question by essentially pitting quality means and quantity means against each other to

determine which has the highest effects on confidence in ability to perform a task.

Hypothesis

Using the results from the previous two studies, one could argue that quality means would achieve greater significance than quantity, based on the significance achieved in more vignettes with quality than quantity. However, these differences in significance are not strong enough to hypothesize that one type of means efficacy would prevail over the other: While quantity achieved significance in only 13 out of 18 scenarios versus 16 of 18 with quality means efficacy, the trends for the non-significant results were still in the direction hypothesized. Also, there is no previous research on quantity means efficacy to support a hypothesis of quality versus quantity thus, the researcher will offer no hypotheses for this final study in which means quality will be compared to means quantity.

Method

Participants

In the study of quality versus quantity means, there were 157 participants from a regional university in Southern California. These participants were all students of the university and received extra credit for their participation in the study. Participation in the study was voluntary with all participants receiving a consent form prior to the completion of the survey and a debriefing statement explaining the purpose of the study. Participant demographics were as follows: 81% female, 17% African American/Black, 6% Asian American/Pacific Islander, 33% Hispanic/Latino, and 40% White/European American. Age of participants ranged from 18 to 57, with a mean age of 24.3 (SD = 6.1).

Procedure

Based on the results of the first two studies, I selected three tasks from the previous six based on a two part criterion: their effect sizes in each study and the comparability of outcome (i.e. significance was found) in both quality and quantity studies. The tasks selected were as follows: Cooking (Quality η^2 = .364, Quantity η^2 = .237), Building a deck (Quality η^2 = .394, Quantity η^2 = .124), and Sewing (Quality η^2 = .342, Quantity η^2 = .132). These three vignettes were chosen because they displayed the closest

results between quality and quantity across all three efficacy groups. For example, in the low means cooking vignette, those who rated themselves with low efficacy (1) reported a mean of 2.06 in the quality means study and 2.50 in the quantity means study; moderate efficacy (3) reported a mean of 2.79 in quality and 3.65 in quantity; high efficacy (5) reported a mean of 3.76 in quality and 4.12 in quantity. In the high means example, those who rated themselves with low efficacy reported a mean of 2.68 in quality and 3.00 in quantity; moderate efficacy reported a mean of 4.04 in quality and 4.28 in quantity; high efficacy reported a mean of 4.60 in quality and 4.77 in quantity (see Table 13).

For this third study, a policy capturing approach was employed. As before, the participants were asked to rate their overall self-efficacy on each task prior to reading a vignette, and again, a 5-point scale was used (strongly agree to strongly disagree). As before, high scores indicate high self-efficacy. Each task had four scenarios to assess for quality and quantity: high quality/high quantity, high quality/low quantity, low quality/high quantity, and low quality/low quantity (see Table 14).

Table 13. *Comparison of Task-Specific Self-Efficacy Means in Study One and Study Two Across All Vignettes*

Task	Task Self-Efficacy	Low Means Quality	Low Means Quantity	High Means Quality	High Means Quantity
Selected Vignettes:					
Cooking	Low (1)	2.06	2.50	2.68*	3.00*
	Mod (3)	2.79	3.65	4.04*	4.28*
	High (5)	3.76	4.12	4.60*	4.77*
Building A Deck	Low (1)	1.13	1.44	1.41*	1.48
	Mod (3)	1.86	2.54	2.78*	2.81*
	High (5)	2.42	4.05	4.10*	4.33*
Sewing	Low (1)	1.34	1.51	1.72*	1.81*
	Mod (3)	2.46	2.64	2.95*	2.92
	High (5)	2.73	3.71	3.99*	4.06*
Vignettes Not Selected:					
Auto Repair	Low (1)	1.16	1.57	1.45*	1.63
	Mod (3)	1.96	2.37	2.70*	2.76*
	High (5)	2.35	3.63	3.59*	4.25*
Growing A Garden	Low (1)	2.02	2.53	2.38*	2.77
	Mod (3)	3.02	3.38	3.32	3.62
	High (5)	3.71	4.22	4.43*	4.56*
Building A Tele-Vision	Low (1)	1.07	1.15	1.19	1.28*
	Mod (3)	2.00	2.33	2.43*	2.56*
	High (5)	1.88	3.20	3.50*	3.60*

* *Indicates significant changes were reported from low to high means efficacy*

The *high quality/high quantity* cooking vignette was as follows:

You have been asked to cook a meal for 10 people. Your time limit is 1 hour. All the ingredients for the meal will be provided to you. You have the option of four different kitchens to cook in. Please read the list of tools provided in each kitchen and rate your confidence level for each set of materials.

Kitchen B: *Inside Kitchen B you will find:*

2 state of the art convection ovens

4 copper bottom skillets

5 copper bottom saucepans

6 sharp Japanese knives

High powered food processor

3 stainless steel mixing bowls

Participants were then asked to rate their confidence level in cooking the meal based on using only these items on a Likert-type scale from 1 (strongly agree) to 9 (strongly disagree). High scores indicate high mean efficacy. Participants were also asked to rate their level of experience with the task on a scale from 1 (zero times having performed the task) to 5 (having completed this task 10 times or more). This same format follows for all four scenarios in all three vignettes (see Appendix U).

Table 14. *Study Three Quality and Quantity Combinations for Each Vignette by Task*

Task	Vignette	Combination
Cooking	Kitchen A	High Quality/Low Quantity
	Kitchen B	High Quality/High Quantity
	Kitchen C	Low Quality/Low Quantity
	Kitchen D	Low Quality/High Quantity
Building A Deck	Yard A	Low Quality/High Quantity
	Yard B	Low Quality/Low Quantity
	Yard C	High Quality/High Quantity
	Yard D	High Quality/Low Quantity
Sewing	Station A	Low Quality/Low Quantity
	Station B	High Quality/High Quantity
	Station C	Low Quality/High Quantity
	Station D	High Quality/Low Quantity

Rationale and Exclusions

As in previous studies, time was limited in each vignette to control for time as a resource. Money and other persons as a resource were also controlled for in the vignettes. This leaves the focus strictly on the quality and quantity of the materials at hand and the confidence of using only those resources to complete the task.

Demographics

Participants were also asked several demographic variables including age, ethnicity, and gender. We also asked the participants for their overall self-efficacy

using a Likert-type scale from 1 (strongly agree) to 5 (strongly disagree). High scores indicate high overall self-efficacy.

Results

Because the four scenarios for each task type included both high and low levels of quality and quantity means, a multiple regression analysis was used in which the confidence rating given by the participant for each scenario was treated as the dependent variable and the level of quality and quantity means were varied and used as the independent variables. For example, in the cooking vignette, each participant had four lines of data. The task-efficacy rating for each of the four constituted the dependent variables; the levels of means efficacy were coded '1' for high and '0' for low such that the independent variables of the first scenario was coded '1 1' (high quality, high quantity), the second was coded '1 0' (high quality, low quantity), the third '0 1' (low quality, high quantity), and the fourth was coded '0 0' (low quality, low quantity). This approach is referred to as policy capturing and has a relatively long history in decision making research (Aiman-Smith, Scullen & Barr, 2002).

Prior to the analyses, screening was done to determine if there were any univariate or multivariate outliers. None were found. The variables also were filtered for the individual's experience on the task. Those who indicated that they had no experience in the task were filtered out from the data set. This filtering left 129 participants responding in the cooking vignette, 76 responding in the building a deck vignette, and 87 responding in the sewing vignette.

Cooking. Using a multiple regression analysis, a significant model emerged ($F(2,515) = 54.07$, $p < .001$, Adjusted $R^2 = .171$). Quantity means efficacy yielded a larger weight in predicting task-specific self-efficacy over quality means efficacy (Quantity $\beta = .315$, $t = 7.850$, $p < .001$; Quality $\beta = .274$, $t = 6.820$, $p < .001$). While quantity means efficacy was a greater predictor of task-specific self-efficacy over quality means efficacy, statistical significance of the difference in the regression coefficients was not achieved ($z = .740$, n.s.).

Building a Deck. A significant model emerged for the building a deck vignette ($F(2,303) = 64.05$, $p < .001$, Adjusted $R^2 = .294$). Quantity means efficacy was a greater predictor of task-specific self-efficacy over quality means

efficacy (Quantity β = .536, t = 11.09, p < .001; Quality β = .108, t = 2.239, p < .05). Significance was also achieved in quantity means efficacy over quality means efficacy when comparing regression coefficients (z = 6.25 p < .001).

Sewing. A significant model also emerged in the sewing vignette ($F(2,347)$ = 6.453, p < .01, Adjusted R^2 = .03). Quantity means efficacy was a moderate predictor of task-specific self-efficacy, (Quantity β = .190, t = 3.591, p < .001); however, quality means efficacy was not a significant predictor of task-specific means-efficacy (Quality β = .006, t = .116, p = .908). Significance was also achieved in quantity means efficacy over quality means efficacy when comparing regression coefficients (z = 2.46, p < .01)

Discussion

Across two of the three scenarios, results from Study 3 indicate that the quantity of means provided was a better predictor of confidence in performing the task than in the quality of the means. Participants who were given a higher quantity of the tools to perform the task rated themselves as more confident in the task, whether the quality of the

tools was high or low. This implication could assist businesses to make better decisions when researching tools for their staff. While the quality and quantity of resources impacted confidence and performance over varying levels of task-specific self-efficacy, this study has shown that the quantity of resources drives greater confidence. Thus, if a business is purchasing equipment or tools for the staff, a higher quantity of resources at a moderate quality may impact employee performance more so than a high quality of fewer resources.

CHAPTER FIVE

GENERAL DISCUSSION AND CONCLUSION

General Discussion

In the on-going expansion of the self-efficacy construct initiated by Albert Bandura (1982, 1993, 1997, & 2000) the construct of means-efficacy emerged as a confidence in one's resources required to complete the task. Dov Eden, the original theorist of means efficacy further refined this construct to focus on the quality of the resources as having an impact on performance in a practical setting, with participants performing better on the task when they were told they had the highest quality resources to use (Eden, Ganzach, Flumin-Granat, & Zigman, 2010). The current research attempted to achieve the same results demonstrating increased confidence in quality means efficacy using a self-report method. The first study resulted in participants reporting greater task-specific self-efficacy over a number of different tasks when presented with a high quality of means. Significant change was reported in quality means efficacy across all three levels of task-specific self-efficacy in the cooking, auto repair, building a deck, and sewing vignettes. The growing

a garden vignette reported significant change in low and high self-efficacy levels, and the building a television vignette reported significant change in moderate and high efficacy levels. This change reported from low quality means to high quality means across all task-specific self-efficacy levels supports the notion that quality means efficacy can achieve similar results in a self-report method as those in the method used by Dov Eden (2001).

To further refine the means efficacy construct, the researcher introduced the notion of quantity means efficacy to determine if the amount of the resources would have a similar impact on confidence as did the quality of the resources. The second study resulted in participants reporting a greater level of confidence in the task when given a higher quantity of means across multiple scenarios. Significant change was reported in quantity means efficacy across all three levels of task-specific self-efficacy in the cooking and building a television vignettes. The auto repair and building a deck vignette reported significant changes from low to high means in the moderate and high efficacy groups. The sewing vignette reported significant changes in the low and high efficacy groups, while the growing a garden vignette only reported significant changes

in the high efficacy group. The significant change reported in these groups support the notion that in a self-report method, quantity means efficacy can influence task-specific self-efficacy levels as does quality means efficacy.

After achieving evidence for both the quality and quantity means-efficacy construct with a self-report method, the final study attempted essentially to "pit the two against each other" to determine which type of means-efficacy would have a greater influence on task-specific self-efficacy. Results from the final study indicated that participants reported higher confidence in their performance of the task when given a higher quantity of items more so than higher quality. Quantity means efficacy was a stronger predictor of task-specific self-efficacy in two of the three vignettes of building a deck and sewing. In addition, quality means efficacy failed to be a predictor of task-specific self-efficacy in the sewing vignette, further supporting quantity means efficacy and its role in the general efficacy construct.

Results from these studies can also support the proposition by Eden & Sulimani (2001) that self-efficacy and means-efficacy are independent constructs. One example

of support for this proposition was the lack of support for hypothesis 1 in the first study. I hypothesized that if someone has low efficacy for the task, she would show little or no change in confidence in task performance when moving from low to high means. However, significance was achieved in the quality means study for those with low task-specific self-efficacy in all vignettes except one. The second study followed the results from the first study in not hypothesizing this effect and resulted in similar significance across all three task-specific self-efficacy groups. Across all initial task-specific self-efficacy levels for each of the tasks, when the quantity or quality of the resources was high, participants' self-efficacy was also high. When the quality or quantity of resources was low, participants indicated a lower self-confidence in performing the task. Additionally, both quality and quantity means efficacy achieved significance in altering task-specific self-efficacy in a self-report method, rather than in an applied setting. Both of these points lend support to Eden & Sulimani's (2001) proposition that self-efficacy and means-efficacy are independent constructs that can operate independently of each other.

Implications

In a practical setting, the results indicate that business might achieve a greater return on investment by purchasing a higher quantity of resources of medium quality, if desiring to increase the performance of their employees. As technology continues to expand in our current market, newer, high-tech devices will emerge with the promise of advancing business and productivity. It is up to the business leaders' discretion as to which products to implement in their work stations. This research could guide them as to purchasing one device for each qualified employee at a lower quality, rather than a few top of the line devices that everyone had to share. As referenced earlier, this research has supported the notion of the skilled sharp shooter having enough bullets to take out his target, rather than a few high-tech bullets. Expanding on this idea into law enforcement, wouldn't it be better to have a moderate quality bullet proof vest for all the police officers, rather than a few with the top of the line and thus many left unprotected?

Limitations

There are a few limitations to the current research model. One is the use of student populations for survey research. The population used for these three studies had

a mean age of 24.6, implying that a younger population may not have the same experiences with the tasks and resources that an older population may have. Student populations could also have more experience in survey research and may be able to better see the patterns of the research design thus, responding according to what they believe the researcher wants to find. While the CSUSB student population provides a breadth of cultural diversity, for this type of research, a larger range of age in the participants is suggested.

The design of the current research may have been limiting in the type of tasks used to assess for means efficacy. The household tasks used are avocational, or hobby related, and the results found here may not generalize fully to work setting. Further, it is possible that these results are dependent on the self-report method used to assess participant efficacy for these tasks. This may have added to the unique results found in the low efficacy group, where means efficacy influenced task-specific self-efficacy, though the existing body of literature indicated otherwise. Thus, the type of task may be an important factor when assessing quality and quantity means. There is also the possibility that the

manipulations for quality and quantity means efficacy were not equally strong, which may have had an effect in study three when comparing quality and quantity means efficacy.

Another limitation to note is the time constraints used to control time as a resource. The time constraints used in this study may have been too limiting or restrictive. While attempting to control for time as a resource, I may have made it a confounding factor with unrealistic time limits. Is it really feasible to build a deck in two hours? For future research of this nature, I would suggest controlling for time as a resource, but with more realistic expectations.

Finally, another limitation which may have an effect on the results of this research is our current economic climate. The United States has been battling a recession for several years, and many Americans have been forced to make do with less. This could shift the cultural norm to value quality resources much less than in times previous. Citizens trying to save money may purchase items of less quality, and may purchase those items in bulk for the best deal. This societal wave to save and make the most of their resources could have had an effect on the

significance of quantity means efficacy over quality means efficacy.

Future Research

As the means-efficacy construct further progresses, other avenues must be explored to determine optimal performance in employees. Our studies controlled for the amount of time given to a participant to complete the task. This "time as a resource" notion may modify an individual's confidence in the task, independently of quality or quantity of resources. The current research also used a within-subjects design to increase statistical power since this was the first attempt in assessing quantity means efficacy. Future research may want to examine the effects of quality and quantity means efficacy using a between-subjects design to determine if the same effects occur.

One may also look into the possibility of other people as a resource, which may influence confidence in the task required, also know as collective efficacy. The collective efficacy construct should be challenged against the quality and quantity means efficacy constructs such that, in a team setting, would preferences for quantity and quality in individuals affect the performance of the team?

Another possible research path to further the means efficacy construct would to investigate the effects of quantity means efficacy in an applied setting with a model similar to the one used by Dov Eden (2001) in the quality means efficacy research. As discussed previously, his participants were told the computers were of the highest quality available and saw a marked increase in employee performance. A study of the quantity of resources could be developed in a similar style to determine if quantity means efficacy enhances performance in an applied method.

If quantity means efficacy does produce similar results in an applied setting, pitting quality and quantity means against each other, as in this study, in an applied setting may provide more information into the actual return on investment the increase in performance provides. This return on investment research could further assist Industrial/Organizational consultants in businesses wishing to strengthen the performance of their workforce.

Conclusion

In the development of the efficacy construct from self-efficacy to task-specific self-efficacy, and now to means efficacy, the strides made have been beneficial to

the field of Industrial/Organizational psychology. The inclusion of Dov Eden's quality means efficacy research and this new construct of quantity means efficacy has brought even more richness to this arena. Quantity means-efficacy has exhibited itself as a viable component to the means efficacy framework in terms of increasing task-specific self-efficacy and performance. The next time you are a "MacGyver" and have to complete a task with paper clips and rubber bands, just make sure you have *enough* paper clips and rubber bands to get the task done.

APPENDIX A:

STUDY ONE SURVEY

Self-Confidence in Household Tasks

Instructions: This survey is designed to assess your confidence in various household tasks. First you will respond to a statement regarding your overall confidence in your ability to perform a task. After you have responded by circling the corresponding number to your choice, read the vignette and respond to the statement that follows. Be sure to respond to each statement before moving on to the next vignette. Thanks for your participation!

Task #1: Cooking – creating a meal

I feel confident in my ability to cook a good meal.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You have been selected to cook a meal for a large party. You need to prepare the meal by yourself this evening. In the kitchen you find a small assortment of pots and pans. Some have missing handles and most of the Teflon coated pans have some of the Teflon scratched off the surface. The oven is a much older model than you are used to. There are knobs broken off the oven. You find knives in the butcher's block, which are dull. There is no sharpener in sight.

Do you feel confident that you would cook a good meal using these items?

I feel confident that I could cook a good meal <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

The host of the party informs you that you are in the old service kitchen, which is no longer in use. She directs you to the main kitchen in the house. Here you find state-of-the-art double ovens, copper bottom pots and pans, and a full knife block with sharp Japanese knives.

Do you feel confident that you could cook a good meal using these items?

I feel confident that I could cook a good meal using these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed the same task....

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #2: Auto Repair – Repairing a dent

I feel confident in my ability to do auto repair.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree

1	2	3	4	5

You borrowed your parents' car while they were away for the weekend and accidentally backed into a tree. There is now a dent in the rear side panel of the car. You decide to fix it yourself before your parents return home in a few days. In the garage you find a hammer with a broken handle, sand paper that has already been used, and a dent puller that is old and rusted.

Do you feel confident that you could successfully remove the dent in the car to where it would be unnoticeable?

I feel confident that I could successfully remove the dent to where it would be unnoticeable <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You decide to drive the car down to a friend's house. His father repairs cars but is not at home. Your friend tells you that you can use the materials in his garage but that he will not be around to help you. Inside the garage you find fresh sand paper in several grits, a quality electric dent puller, and a brand new hammer.

Do you feel confident that with these materials you could successfully remove the dent in the car to where it would be unnoticeable?

I feel confident that I could successfully remove the dent in the car to where it would be unnoticeable <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task...

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #3: Growing a garden – cultivating tomatoes

I feel confident in my ability to grow a garden.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your grandmother just moved into a new house and wants a tomato garden in her backyard. She tells you to go to the tool shed where you find a broken shovel, a dusty bag of top soil which has dried out, a hand-operated tiller, and some generic fertilizer.

Do you feel confident that you could grow a successful tomato garden using these items?

I feel confident that I could grow a successful tomato garden <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree

1	2	3	4	5

Your uncle comes by the house as you are looking in the tool shed. He has more supplies in his truck, but cannot help you. In his truck you find a new shovel, fresh top soil, Miracle-Gro fertilizer, and an electric rototiller.

Do you feel confident that you could grow a successful tomato garden using these items?

I feel confident that I could grow a successful tomato garden using these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #5: Construction – building a deck

I feel confident in my ability to build quality structures out of wood.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your parents have asked you to build a deck coming off the back porch for their backyard. They would like to have the deck finished in time for a party they are having in one week. Your father says there are some items in the shed you can use. Inside the shed you find: some warped lumber, a wheelbarrow that is missing a wheel, chipped concrete piers, and some mismatched screws and nails with several screwdrivers that are missing handles.

Do you feel confident that you could build a quality deck using these items?

I feel confident that I could build a quality deck <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Upon further thought, your father returns to the hardware store and brings back fresh supplies. Among his purchases you find: new pre-cut lumber, a new wheelbarrow and concrete piers, and a full case of proper screws and nails, with several screwdrivers in different sizes.

Do you feel confident that you could build a quality deck using these items?

I feel confident that I could build a quality deck <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task...

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #6: Electronics – Building a television

I feel confident in my ability to build a television.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You want a big screen television in your house but don't have the money it takes to purchase it. Your father suggests you build it. Since the biggest game of the year is coming up, you only have a few days to build this television. Currently you have these materials: a cracked optical screen, warped lumber, a broken hammer, and capacitors and resistors that may or may not work since you have had them for so long. Your eeproms are part the expiration date and your spudger is cracked.

Do you feel confident that you could build a big screen television using these items?

I feel confident that I could build a big screen television using these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your neighbor does electronic repair for a living but is currently on a business trip. His wife is home and offers you full access to the supplies in his tool shed. In the shed you find: fresh lumber, a new hammer, a large, high-quality optical screen, new capacitors and resistors, a fresh spudger and brand new eeproms.

Do you feel confident that you could build a big screen television using these items?

I feel confident that I could build a big screen television using these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task...

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #7: Sewing – making a dress

I feel confident in my ability to sew.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your sister is shopping for a formal occasion and needs to find the perfect dress. After searching for weeks she is unable to find anything she likes. Since you understand her taste you decide to make her the perfect dress, but you must get started right away since the occasion is in one week. You go out to your mother's sewing closet and find: a spool of thread, some cheap silk, and a few rusted sewing needles.

Do you feel confident that you could make the perfect dress for your sister using these items?

I feel confident that I could make the perfect dress for my sister <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Remembering that your grandma is an excellent seamstress, you head to her house. In her closet you find: a brand new state-of-the-art sewing machine, fresh sewing needles, some expensive Chinese silk, and some linen thread.

Do you feel confident that you could make the perfect dress for your sister using these items?

I feel confident that I could make the perfect dress for my sister <u>using these items</u>.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Thank you for your participation in our survey.

Survey developed by Jennifer Rice

Demographic Information

Please complete the following by checking the appropriate answer.

Gender

____ Male ____ Female

Ethnicity

____ African American/Black

____ Asian American/Pacific Islander/Indian

____ Latino/Hispanic

____ White/European American

____ Native American

____ Middle Eastern

____ Multiracial/Other please specify _____

Age

____ Please write in your age.

Please circle the corresponding number to this statement.

I have high confidence in my overall abilities.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

APPENDIX B:

STUDY ONE INFORMED CONSENT

INFORMED CONSENT

You are invited to participate in a study designed to continue the development of measure of self-confidence. This study is being conducted by Jennifer Rice, under the supervision of Dr. Janet Kottke, Professor of Psychology. This study has been approved by the Department of Psychology Institutional Review Board Sub-Committee of the California State University, San Bernardino, and a copy of the official Psychology IRB stamp of approval should appear on this consent form.

In this study you will be asked to respond to a survey. The survey will take approximately 20 minutes to complete. All of your responses will be held in the strictest of confidence by the researchers. All data will be reported in group form only. Since no identifying information is collected on the survey, all your responses will be completely anonymous. Results from this study will be available from Dr. Kottke (909-537-5585) after January 1, 2007.

Your participation in this study is totally voluntary. You are free not to answer any question and withdraw at any time during this study without penalty. This study involves no risks beyond those of everyday life, nor any direct benefits to you as an individual. If you are a CSUSB student, you may receive 1 unit of extra credit in a selected Psychology class at your instructor's discretion. When you have completed the survey, you will receive a debriefing statement describing the study in more detail. In order to ensure the validity of the study, we ask that you not discuss this study with other participants.

If you have any questions or concerns about this study, please feel free to contact Dr. Janet Kottke at (909) 537-5585.

By placing an "X" in the box below, I acknowledge that I have been informed of, and that I understand, the nature and purpose of this study, that I freely consent to participate, and that at the conclusion of the study, I may ask for additional explanation regarding the study. I also acknowledge that I am at least 18 years of age.

Place an "X" here: _____

Today's date: _____

CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO
PSYCHOLOGY INSTITUTIONAL REVIEW BOARD SUB-COMMITTEE
APPROVED 05 / 03 / 07 VOID AFTER 05 / 03 / 08
IRB# H-06SU-07 CHAIR

APPENDIX C:

STUDY ONE DEBRIEFING STATEMENT

Debriefing Statement

The survey you have just completed was designed to assess your individual task-specific self-efficacy and means efficacy. Self-efficacy is the confidence you have in your abilities to complete tasks, while means efficacy if the confidence you have in your resources. Intentions are to further refine the construct of means efficacy, as well as identify patterns or relationships between the two.

Thank you for your participation in this study. If you have any questions about the study, please feel free to contact Dr. Janet Kottke, (909) 537-5585. If you would like to obtain a copy of the group results of this study, please contact Dr. Janet Kottke, (909) 537-5585 after January 1, 2008.

APPENDIX D:

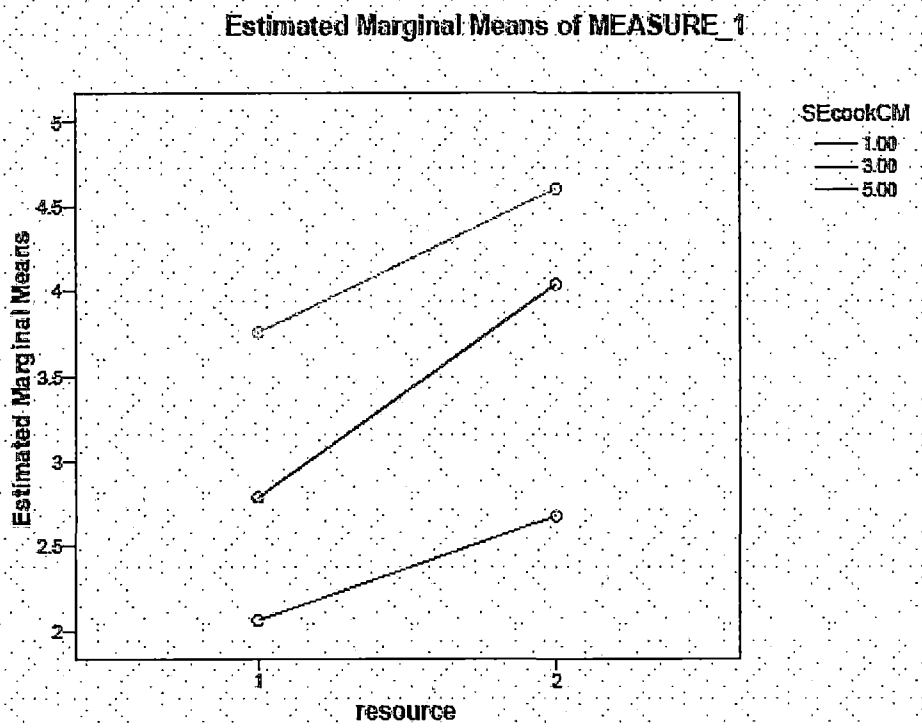
STUDY ONE RATIONAL SPLITS TABLE

Study One Reported Means of Task-Specific Self-Efficacy From Low to High Means Efficacy Across All Vignettes (Rational Splits)

Task	Task Self-Efficacy	Low Means Efficacy	High Means Efficacy	F	Sig	Mean Diff
Cooking	Low (1)	1.33	2.00	1.80	1.82	-.667
	Mod (3)	2.50	3.46	59.50	<.001	-.958
	High (5)	3.76	4.60	33.56	<.001	-.843
Auto Repair	Low (1)	1.16	1.45	9.22	.003	-.292
	Mod (3)	2.00	2.93	74.47	<.001	-.930
	High (5)	3.00	3.88	7.44	.007	-.875
Building a Deck	Low (1)	1.13	1.41	4.10	.044	-.286
	Mod (3)	2.05	3.16	79.00	<.001	-1.11
	High (5)	2.46	4.64	37.56	<.001	-2.18
Growing a Garden	Low (1)	1.77	2.12	2.17	.142	-.353
	Mod (3)	3.09	3.62	38.72	<.001	-.530
	High (5)	4.29	4.91	8.28	.005	-.619
Building a Television	Low (1)	1.07	1.19	2.17	.143	-.115
	Mod (3)	2.02	2.53	15.18	<.001	-.512
	High (5)	1.00	4.50	33.03	<.001	-3.50
Sewing	Low (1)	1.06	1.24	1.19	.278	-.176
	Mod (3)	2.41	3.22	87.13	<.001	-.802
	High (5)	2.75	4.63	63.03	<.001	-1.88

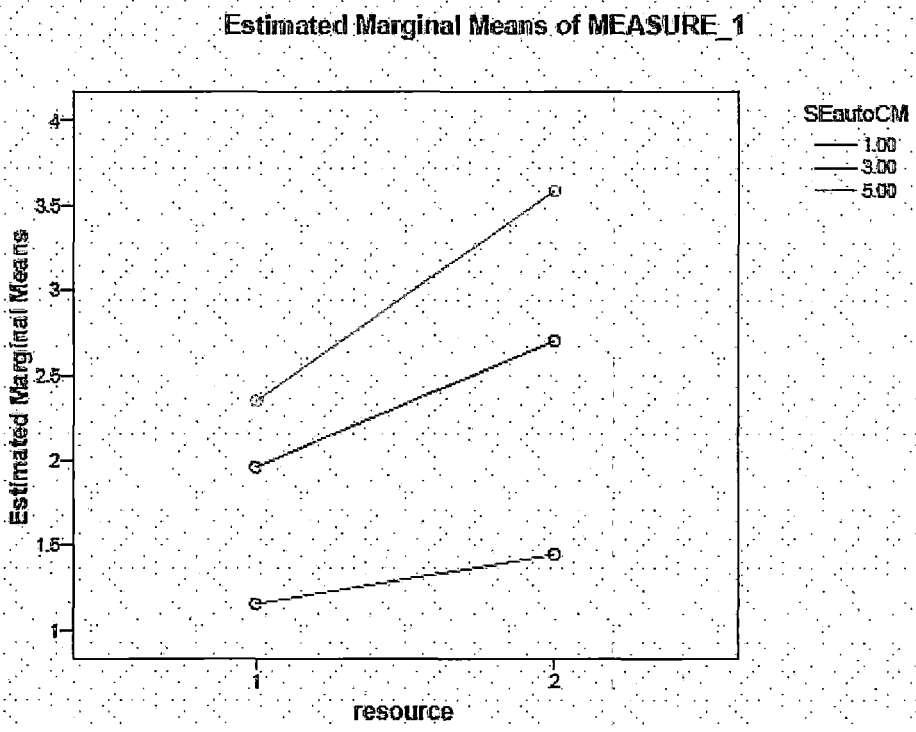
APPENDIX E:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY ONE COOKING VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
5
4.5
4
3.5
3
2.5
2
1
2
resource
SEcookCM
1.00
3.00
5.00

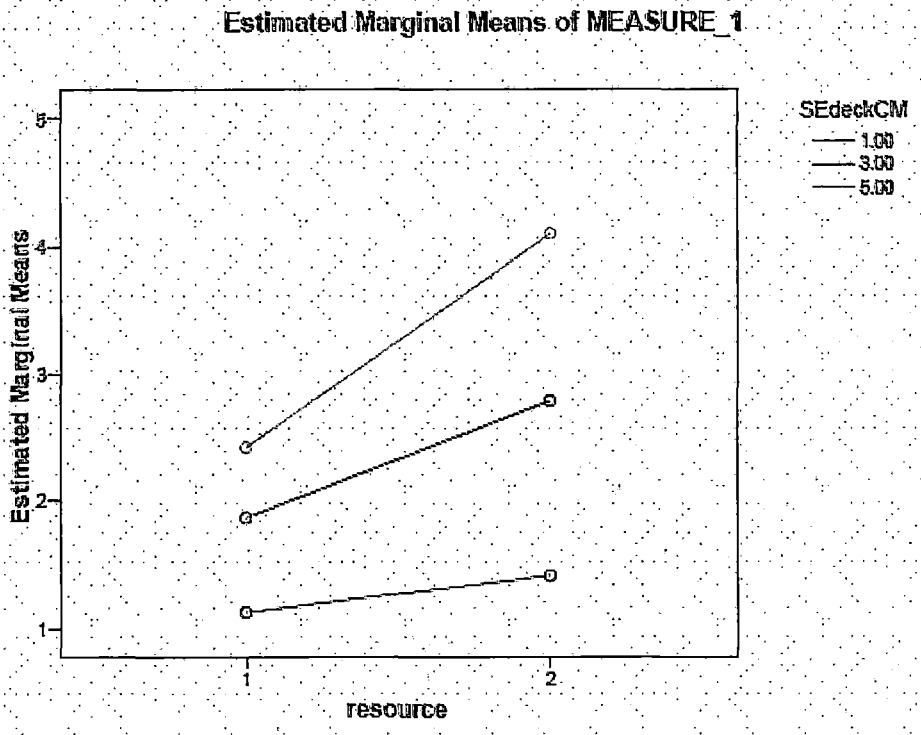
APPENDIX F:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY ONE AUTO REPAIR VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
4
3.5
3
2.5
2
1.5
1
1
2
resource
SEautoCM
1.00
3.00
5.00

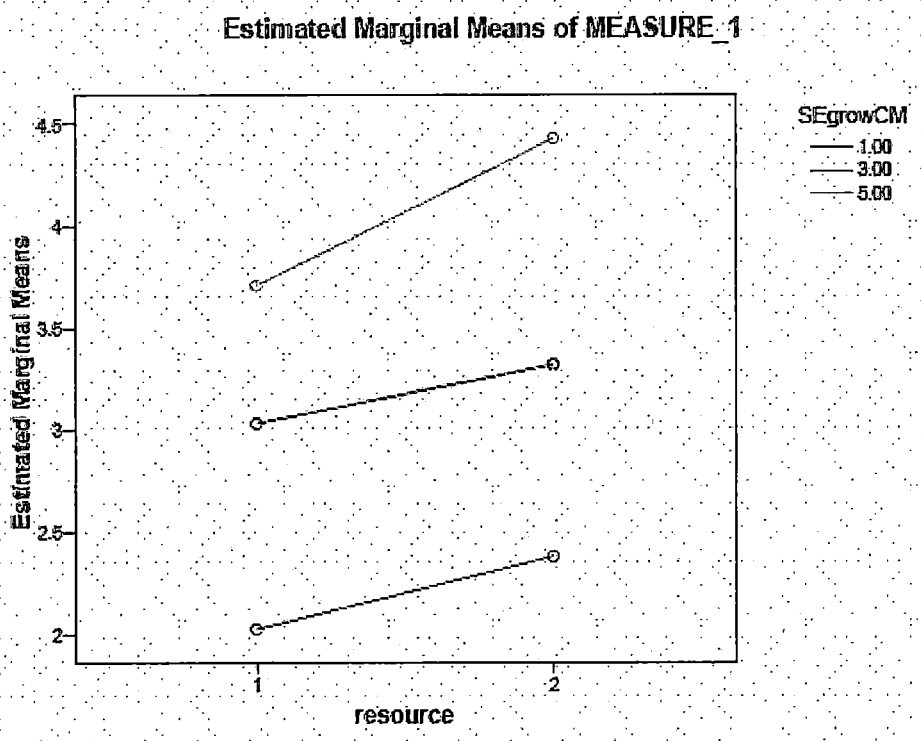
APPENDIX G:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY ONE BUILDING A DECK VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
5
4
3
2
1
1
2
resource
SEdeckCM
1.00
3.00
5.00

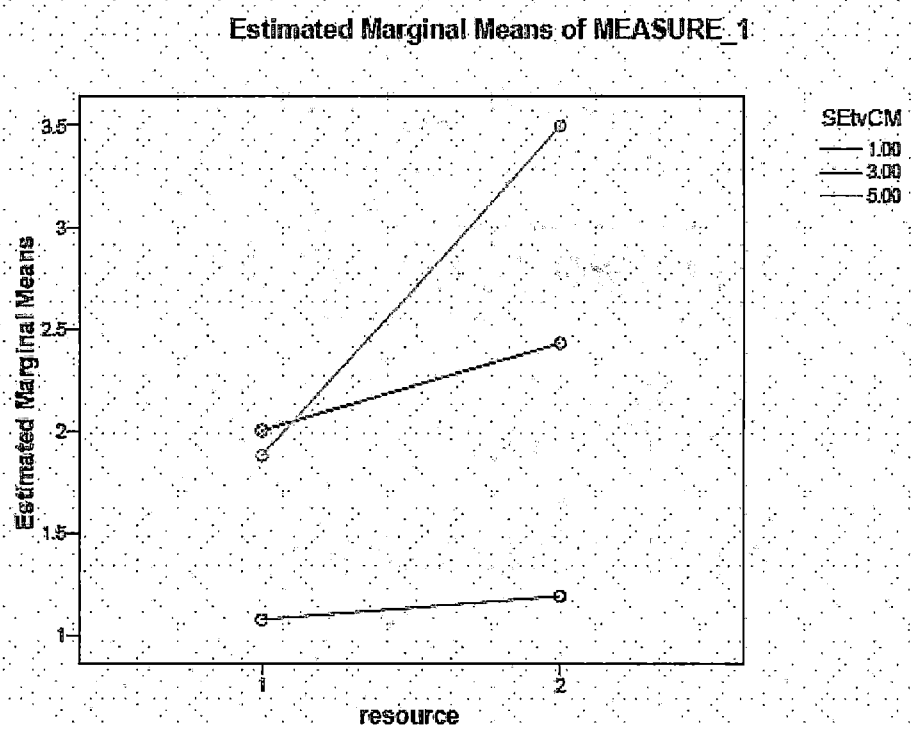
APPENDIX H:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY ONE GROWING A GARDEN VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
4.5
4
3.5
3
2.5
2
1
2
resource
SEgrowCM
1.00
3.00
5.00

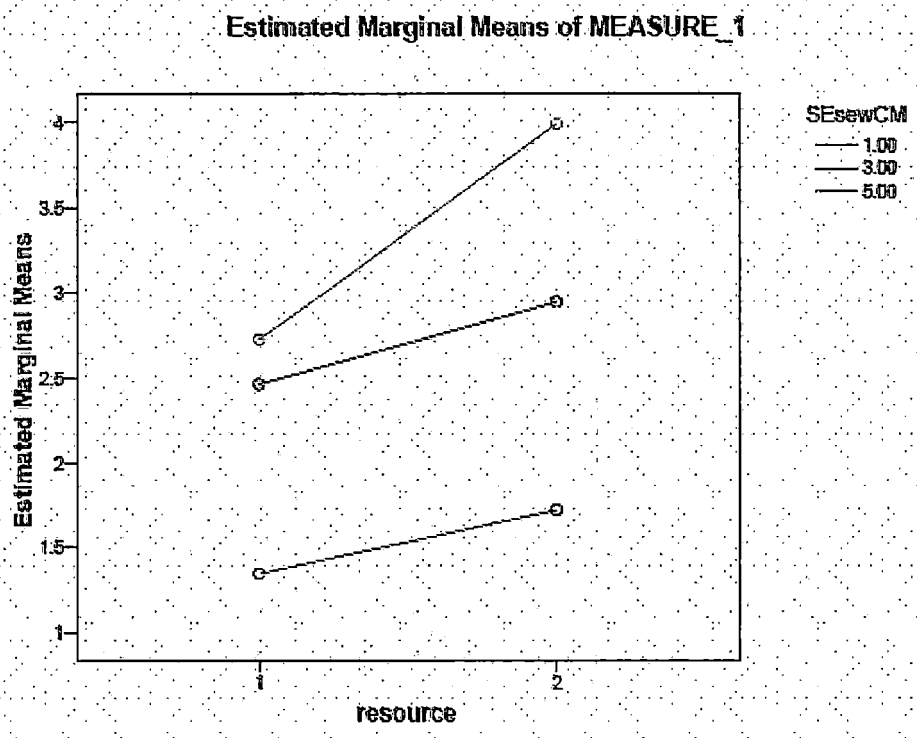
APPENDIX I:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY ONE BUILDING A TELEVISION VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
3.5
3
2.5
2
1.5
1
1
2
resource
SEtvCM
1.00
3.00
5.00

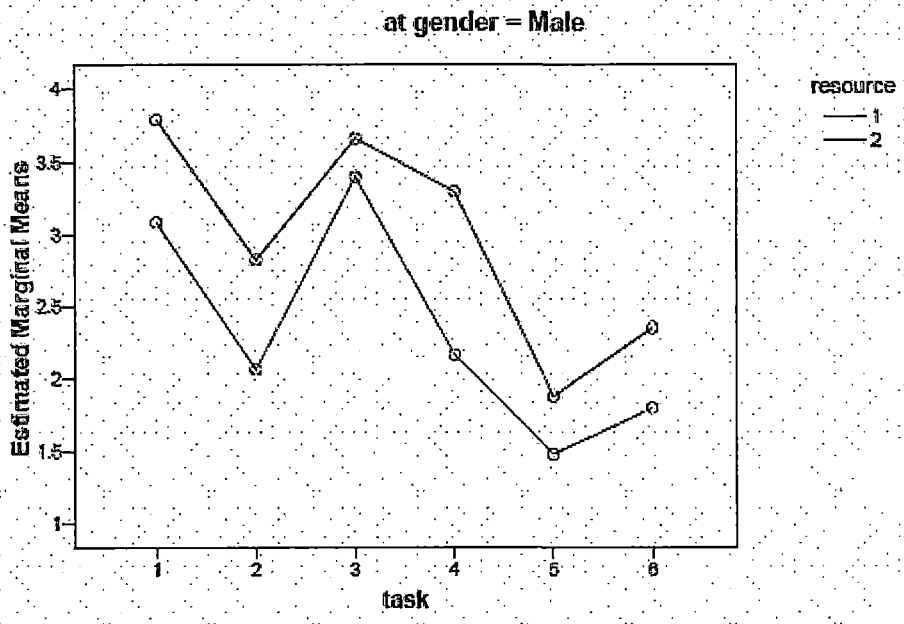
APPENDIX J:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY ONE SEWING VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
4
3.5
3
2.5
2
1.5
1
1
2
resource
SEsewCM
1.00
3.00
5.00

APPENDIX K:

STUDY ONE GRAPHICAL REPRESENTATION OF TASK-SPECIFIC SELF-EFFICACY IN MALES BY TASK AND RESOURCE

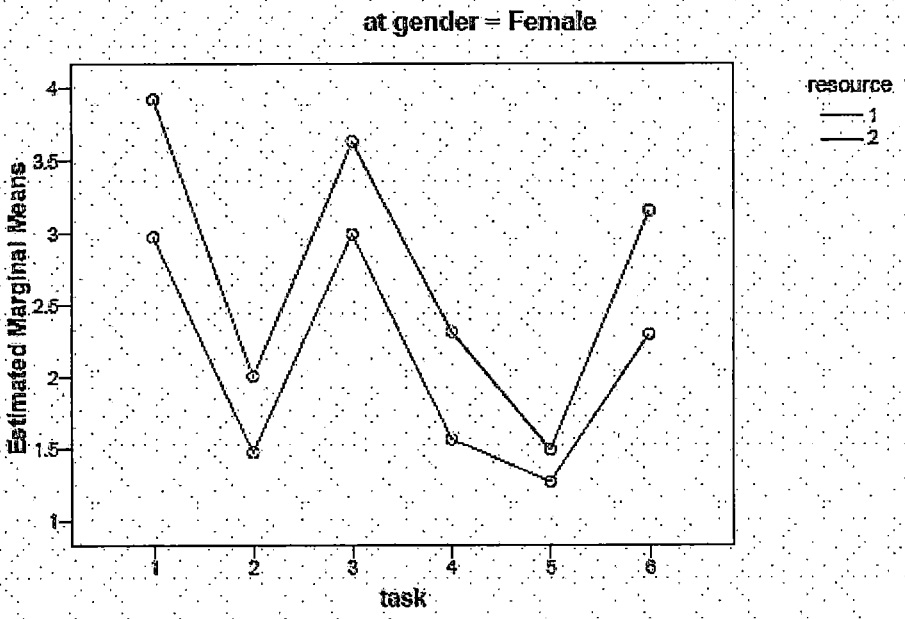

at gender = Male
Estimated Marginal Means
4
3.5
3
2.5
2
1.5
1
1
2
3
4
5
6
task
resource
1
2

APPENDIX L:

STUDY TWO GRAPHICAL REPRESENTATION OF

TASK-SPECIFIC SELF-EFFICACY IN

FEMALES BY TASK AND RESOURCE


at gender = Female
Estimated Marginal Means
4
3.5
3
2.5
2
1.5
1
1
2
3
4
5
6
task
resource
1
2

APPENDIX M:

STUDY TWO SURVEY

Self-Confidence in Household Tasks

Instructions: This survey is designed to assess your confidence in various household tasks. First you will respond to a statement regarding your overall confidence in your ability to perform a task. After you have responded by circling the corresponding number to your choice, read the vignette and respond to the statement that follows. Be sure to respond to each statement before moving on to the next vignette. Thank you for your participation!

Task #1: Cooking – creating a meal

I feel confident in my ability to cook a good meal.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You have been selected to cook a meal for a large party. You only have two hours to prepare the meal. In the kitchen you have the following items:

A large pot	A wooden spoon	A skillet
A wisk	A bunch of tomatoes	5 pounds of ground beef
Basil	Fettucini noodles	

Do you feel confident that you could cook a good meal with only these items?

I feel confident that I could cook a good meal using only these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

The host of the party tells you there are more supplies in the pantry. In addition to the items you already have, you find:

Garlic	Ten loaves of bread	Three pounds of mushrooms
A bunch of onions	Mozzarella cheese	Salt and Pepper
Oregano	Two dozen eggs	15 chicken breasts
Two gallons of milk	Olive Oil	Green Peppers
A pound of butter	Two lemons	Parsley bunch
A saucepan	A baking sheet	A toaster oven
An electric mixer	A colander	A mixing bowl

Do you feel confident that you could cook a good meal with the addition of these items?

I feel confident in my ability to cook a good meal by having access to all these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task...

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #2: Auto Repair – Repairing a dent

I feel confident in my ability to do auto repair.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You borrowed your parents' car while they were away for the weekend and accidentally backed into a tree. There is now a dent in the rear side panel of the car. You decide to fix it yourself before they return home in two days. In the garage you find:

Dent Puller	Metal Primer Spray
Hammer	Disc Sander
Sand Paper	Tack Cloth

Do you feel confident that you could successfully remove the dent in the car to where it would be unnoticeable?

I feel confident in my ability to successfully remove the dent to where it would be unnoticeable using only these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You gather your materials and drive the car down to your friend's house. His father repairs cars but is not home. Your friend tells you that you can use any of the materials in his garage but that he will not be around to help you. Inside the garage you find:

Electric drill	Plastic squeegees	Perforated file
Newspaper	Masking tape	Acetone
Auto-body glazing putty	Auto-body filler	Rubber sanding block

Coarse grit sanding disks Finishing spray paint in the color of the car

Do you feel confident that with the addition of these materials you could successfully remove the dent in the car to where it would be unnoticeable?

I feel confident that I could successfully remove the dent in the car to where it would be unnoticeable be having access to all these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #3: Growing a garden – cultivating tomatoes

I feel confident in my ability to grow a garden.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your grandmother just moved into a new house and wants a tomato garden in her backyard. She tells you to go to the tool shed where you find these items:

Tomato seeds	Shovel
Top Soil	Fertilizer

Do you feel confident that you could grow a successful tomato garden with only these items?

I feel confident that I could grow a successful tomato garden using only these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your uncle comes by the house as you are looking in the tool shed. He has more supplies in his truck. In addition to the previous materials, you now have:

A rototiller	A hoe	Compost manure
Mulch	Chicken wire	Limestone
Ground stakes		

Do you feel confident that you could grow a successful tomato garden with the addition of these items?

I feel confident that I could grow a successful tomato garden with the addition of these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #4: Assembling a horseblat

I have confidence in my ability to assemble a horseblat.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your uncle owns a farm and asks you for some assistance in the stable since he broke his leg. He asks you to assemble a quality horseblat, which needs to be finished in two days. Inside the stable you find the following items:

A rake	Heavy twine
A shovel	Chicken wire
Metal stakes	Concrete

Do you feel confident that you could assemble a quality horseblat using only these items?

I feel confident that I could assemble a quality horseblat using only these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

The next door neighbor comes by and offers you more tools. In his stable you find:

Putty	A barrel	Kindling
Caulk	Nails	Matches
Iron rails	A hammer	An ax

Do you feel confident that you could assemble a quality horseblat with the addition of these items?

I feel confident that I could assemble a quality horseblat with the addition of these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly	Somewhat	Neither Agree	Somewhat	Strongly

Disagree	Disagree	Nor Disagree	Agree	Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #5: Construction – Building a deck

I feel confident in my ability to build quality structures out of wood.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

As a way to earn extra money over the summer, your parents have asked you to build a deck coming off the back porch for their backyard. They would like to have the deck finished in time for a party they are having in one week. Your father goes to the hardware store and returns with these items:

Lumber	Screws	Nails
Hammer	Wheelbarrow	Shovel
Ready-Mix concrete	Screwdrivers (Phillips head and flatheads)	

Do you feel confident that you could build a quality deck using only these items?

I feel confident that I could build a quality deck using only these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Upon further thought, your father returns to the hardware store and brings back more items. Among his purchases you find:

Levels	Mason's line	Structural connectors
Adjustable wrench	Chalk line	Railing material
Deck stain	Black polyethylene	Plumb bob
Concrete piers	Hex bolts	Nuts and washers
Framing square		

Do you feel confident that you could build a quality deck with the addition of these items?

I feel confident that I could build a quality deck by having access to all these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #6: Electronics – Building a television

I feel confident in my ability to build a television.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You want a big screen television in your home but don't have the money it takes to purchase one. Your father suggests you build one. Since the biggest game of the year is coming up, you only have 3 days to build this television. Currently you have these materials:

Capacitors	Resistors	Hammer
Tuners	Screwdriver	Optical screen
ABC fuses	Screws	Nails
Lumber		

Do you feel confident that you could build a big screen television using only these items?

I feel confident in my ability to build a big screen television using only these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Your neighbor does electronic repair for a living but is currently on a business trip. His wife is home and offers you full access to the supplies in his tool shed. In his shed you find:

IC Protectors	Diodes	Eeproms
A flyback	Pilot lamp	High voltage blocks
An API chassis	Soldering gun	Semiconductors
Pen vacuum	Desolder wick	Multimeter
Heat transfer liquid	Optoisolator	Battery clips
Transistor	12v relay	Spudger

Do you feel confident that you could build a big screen television with the addition of these items?

I feel confident that I could build a big screen television with the addition of these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task...

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Task #7: Sewing – making a dress

I feel confident in my ability to sew.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree

1	2	3	4	5

Your sister is shopping for a formal occasion and needs to find the perfect dress. After searching for weeks she is unable to find anything she likes. Since you understand her taste you decide to make her the perfect dress, but you must get started right away since the occasion is in one week. You go to your mother's sewing closet and find:

A sewing machine	Needles	2 bolts of silk
A bolt of taffeta	Measuring tape	Black and white thread
Scissors		

Do you feel confident that you could make the perfect dress for your sister using only these items?

I feel confident that I could make the perfect dress for my sister using only these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Remembering that your grandma is an excellent seamstress, you head to her house for supplies. In her closet you find:

Beads	Darts	Buttons
Zippers	Lace	A bolt of chiffon
Elastic	Thimbles	A bolt of satin
Rotary cutter	Grid board	Fabric marking pens
Box of multicolored threads		

Do you feel confident that you could make the perfect dress for your sister with the addition of these items?

I feel confident that I could make the perfect dress for my sister with the addition of these items.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with this task?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Thank you for your participation in our survey.

Survey developed by Jennifer Rice

Demographic Information

Please complete the following by checking the appropriate answer.

Gender

____ Male ____ Female

Ethnicity

____ African American/Black

____ Asian American/Pacific Islander/Indian

____ Latino/Hispanic

____ White/European American

____ Native American

____ Middle Eastern

____ Multiracial/Other please specify _____

Age

____ Please write in your age.

Please circle the corresponding number to this statement.

I have high confidence in my overall abilities.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

APPENDIX N:

STUDY TWO INFORMED CONSENT

INFORMED CONSENT

You are invited to participate in a study designed to continue the development of measure of self-confidence. This study is being conducted by Jennifer Rice, under the supervision of Dr. Janet Kottke, Professor of Psychology. This study has been approved by the Department of Psychology Institutional Review Board Sub-Committee of the California State University, San Bernardino, and a copy of the official Psychology IRB stamp of approval should appear on this consent form.

In this study you will be asked to respond to a survey. The survey will take approximately 20 minutes to complete. All of your responses will be held in the strictest of confidence by the researchers. All data will be reported in group form only. Since no identifying information is collected on the survey, all your responses will be completely anonymous. Results from this study will be available from Dr. Kottke (909-537-5585) after January 1, 2007.

Your participation in this study is totally voluntary. You are free not to answer any question and withdraw at any time during this study without penalty. This study involves no risks beyond those of everyday life, nor any direct benefits to you as an individual. If you are a CSUSB student, you may receive 1 unit of extra credit in a selected Psychology class at your instructor's discretion. When you have completed the survey, you will receive a debriefing statement describing the study in more detail. In order to ensure the validity of the study, we ask that you not discuss this study with other participants.

If you have any questions or concerns about this study, please feel free to contact Dr. Janet Kottke at (909) 537-5585.

By placing an "X" in the box below, I acknowledge that I have been informed of, and that I understand, the nature and purpose of this study, that I freely consent to participate, and that at the conclusion of the study, I may ask for additional explanation regarding the study. I also acknowledge that I am at least 18 years of age.

Place an "X" here: _____

Today's date: _____

CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO
PSYCHOLOGY INSTITUTIONAL REVIEW BOARD SUB-COMMITTEE
APPROVED 5/28/06 VOID AFTER 5/28/07
IRB# H0650107 CHAIR

APPENDIX O:

STUDY TWO DEBRIEFING STATEMENT

Debriefing Statement

The survey you have just completed was designed to assess your individual task-specific self-efficacy and means efficacy. Self-efficacy is the confidence you have in your abilities to complete tasks, while means efficacy if the confidence you have in your resources. Intentions are to further refine the construct of means efficacy, as well as identify patterns or relationships between the two.

Thank you for your participation in this study. If you have any questions about the study, please feel free to contact Dr. Janet Kottke, (909) 537-5585. If you would like to obtain a copy of the group results of this study, please contact Dr. Janet Kottke, (909) 537-5585 after January 1, 2007.

APPENDIX P:

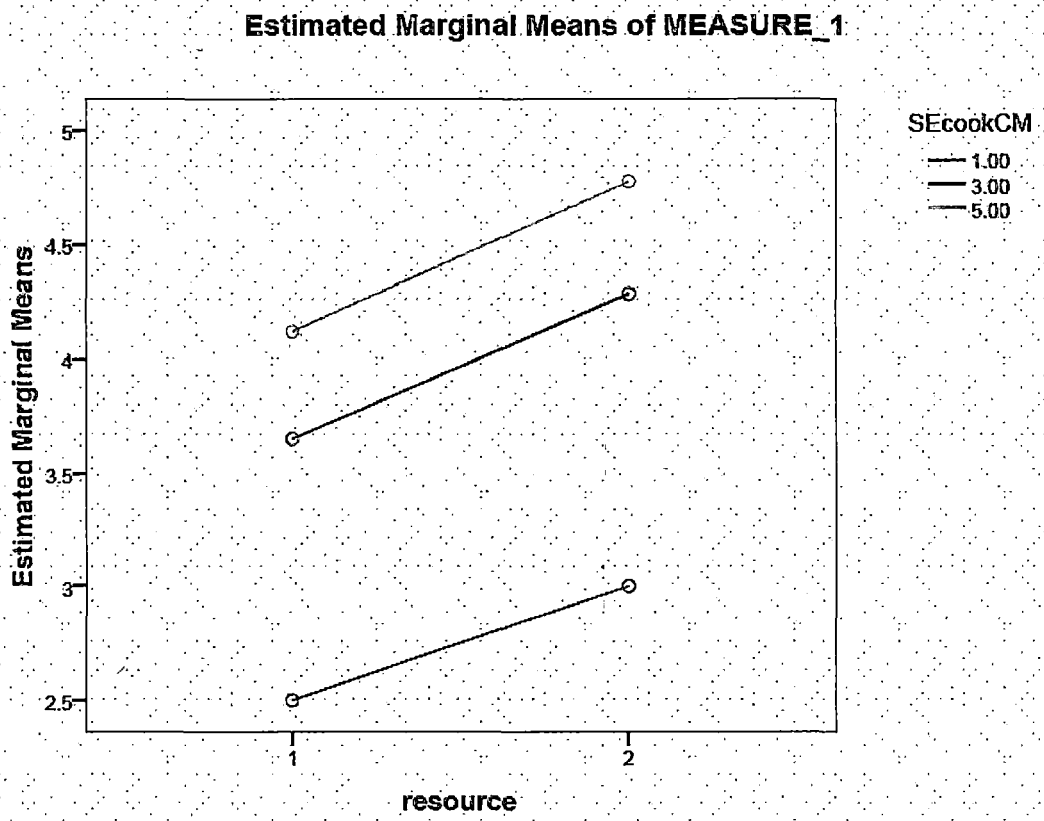
STUDY TWO RATIONAL SPLITS TABLE

Study Two Reported Means of Task-Specific Self-Efficacy From Low to High Means Efficacy Across All Vignettes (Rational Splits)

Task	Task Self-Efficacy	Low Means Efficacy	High Means Efficacy	F	Sig	Mean Diff
Cooking	Low (1)	1.83	1.83	.00	1.00	.000
	Mod (3)	3.41	4.05	19.20	<.001	-.644
	High (5)	4.12	4.77	17.44	<.001	-.654
Auto Repair	Low (1)	1.57	1.63	.26	.608	-.056
	Mod (3)	2.66	3.07	14.95	<.001	-.411
	High (5)	3.89	4.78	11.26	.001	-.889
Building a Deck	Low (1)	1.44	1.48	.08	.768	-.037
	Mod (3)	2.97	3.27	15.96	<.001	-.295
	High (5)	4.46	4.62	.72	.397	-.154
Growing a Garden	Low (1)	2.00	2.33	1.01	.318	-.333
	Mod (3)	3.62	3.94	13.75	<.001	-.326
	High (5)	4.69	4.89	1.45	.231	-.192
Building a Television	Low (1)	1.15	1.28	4.86	.029	-.243
	Mod (3)	2.47	2.72	6.91	.010	-4.38
	High (5)					
Sewing	Low (1)	1.15	1.35	2.83	.096	-.206
	Mod (3)	2.68	3.05	20.49	<.001	-.373
	High (5)	4.56	4.78	.87	.353	-.222

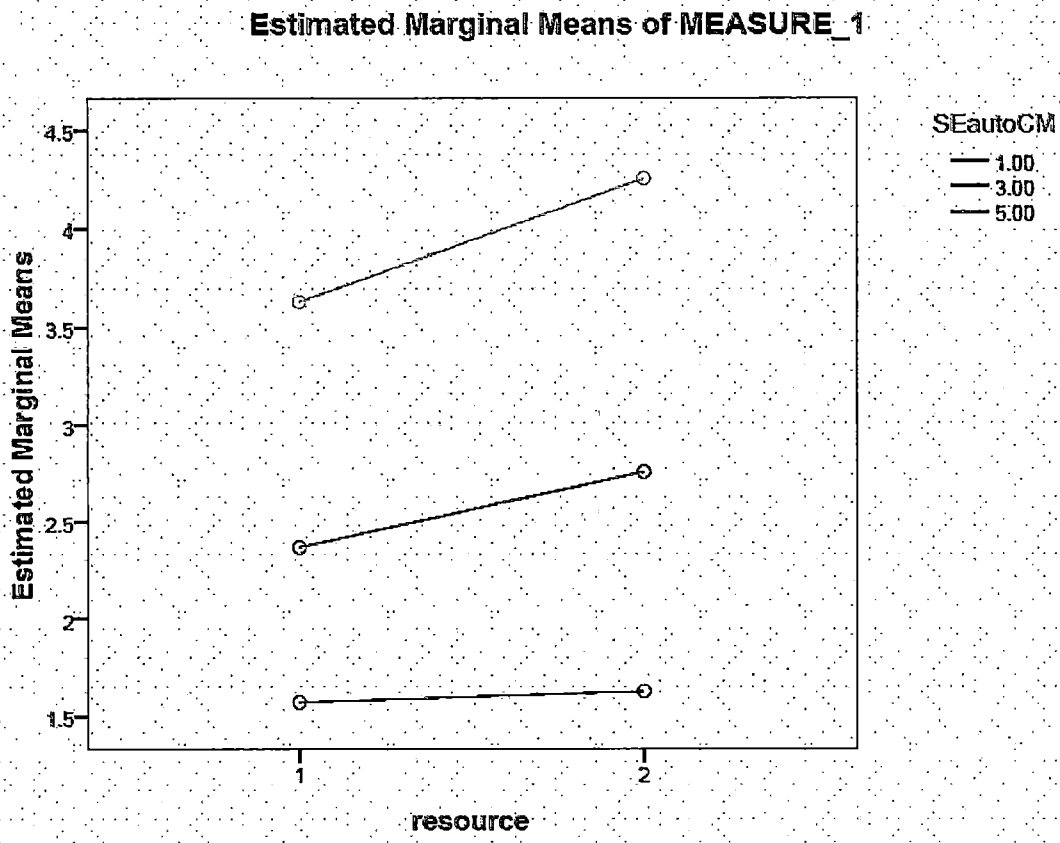
APPENDIX Q:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY TWO COOKING VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
5
4.5
4
3.5
3
2.5
1
2
resource
SEcookCM
1.00
3.00
5.00

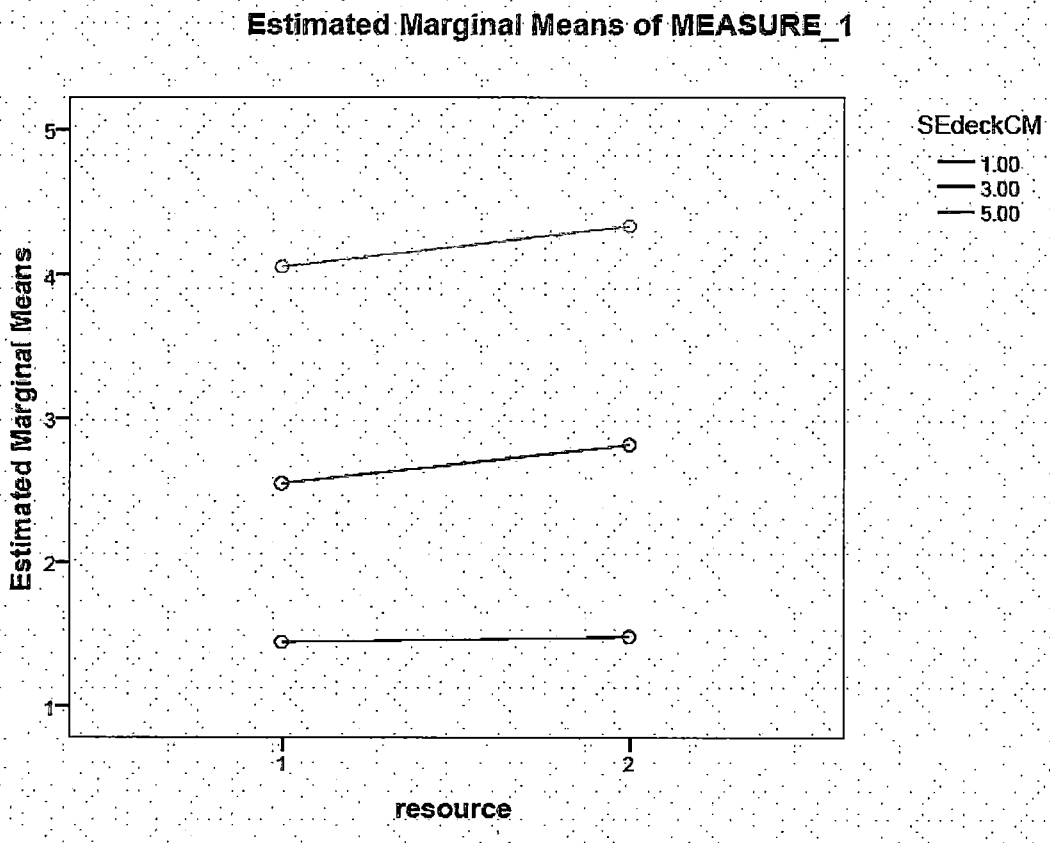
APPENDIX R:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY TWO AUTO REPAIR VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
4.5
4
3.5
3
2.5
2
1.5
1
2
resource
SEautoCM
1.00
3.00
5.00

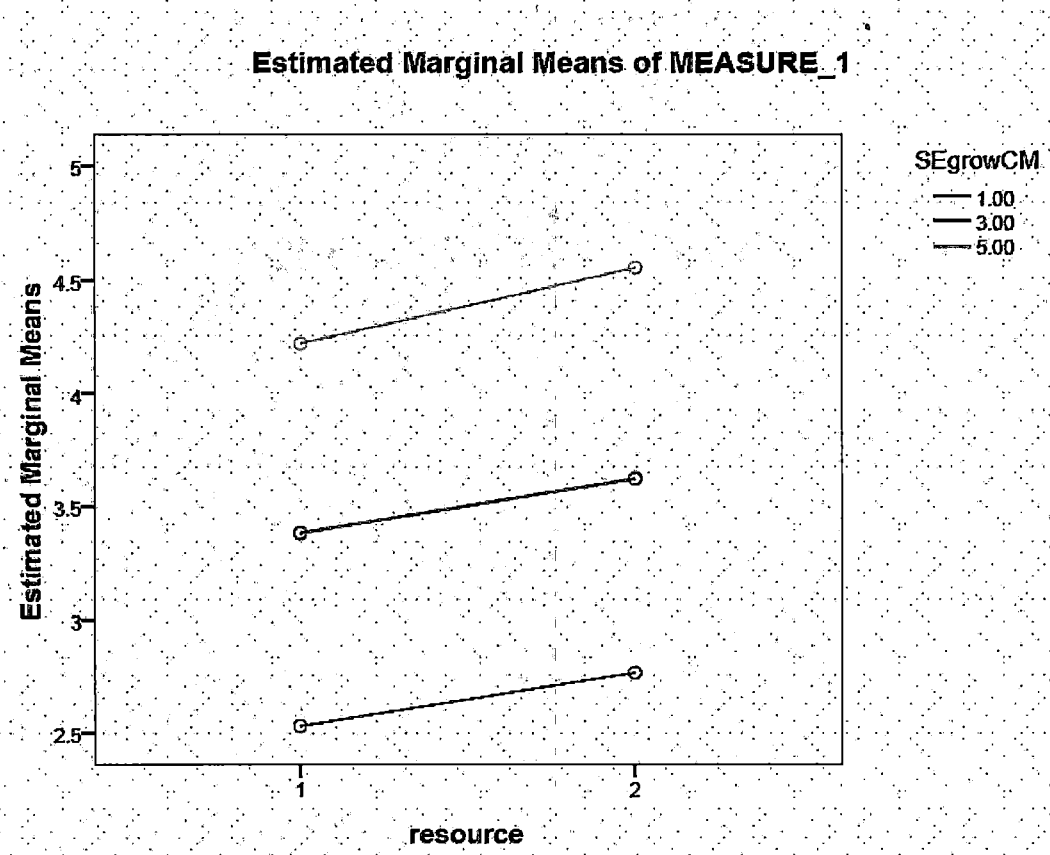
APPENDIX S:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY TWO BUILDING A DECK VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
5
4
3
2
1
1
2
resource
SEdeckCM
1.00
3.00
5.00

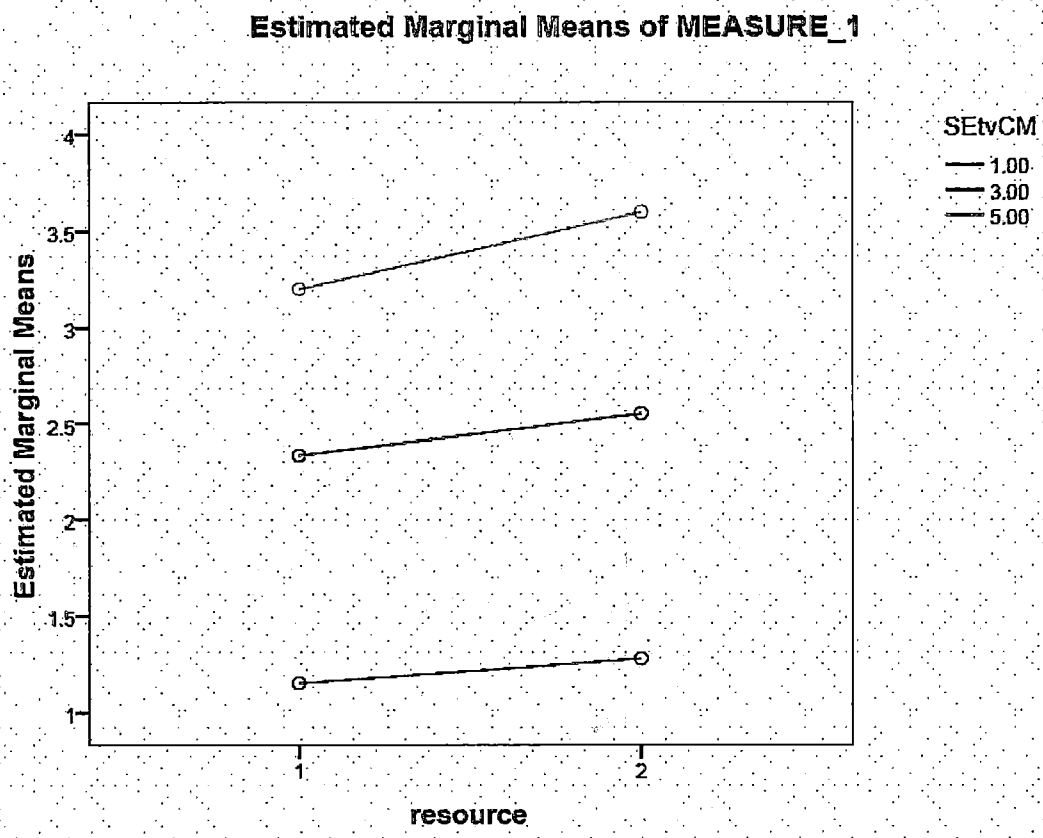
APPENDIX T:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY TWO GROWING A GARDEN VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
5
4.5
4
3.5
3
2.5
1
2
resource
SEgrowCM
1.00
3.00
5.00

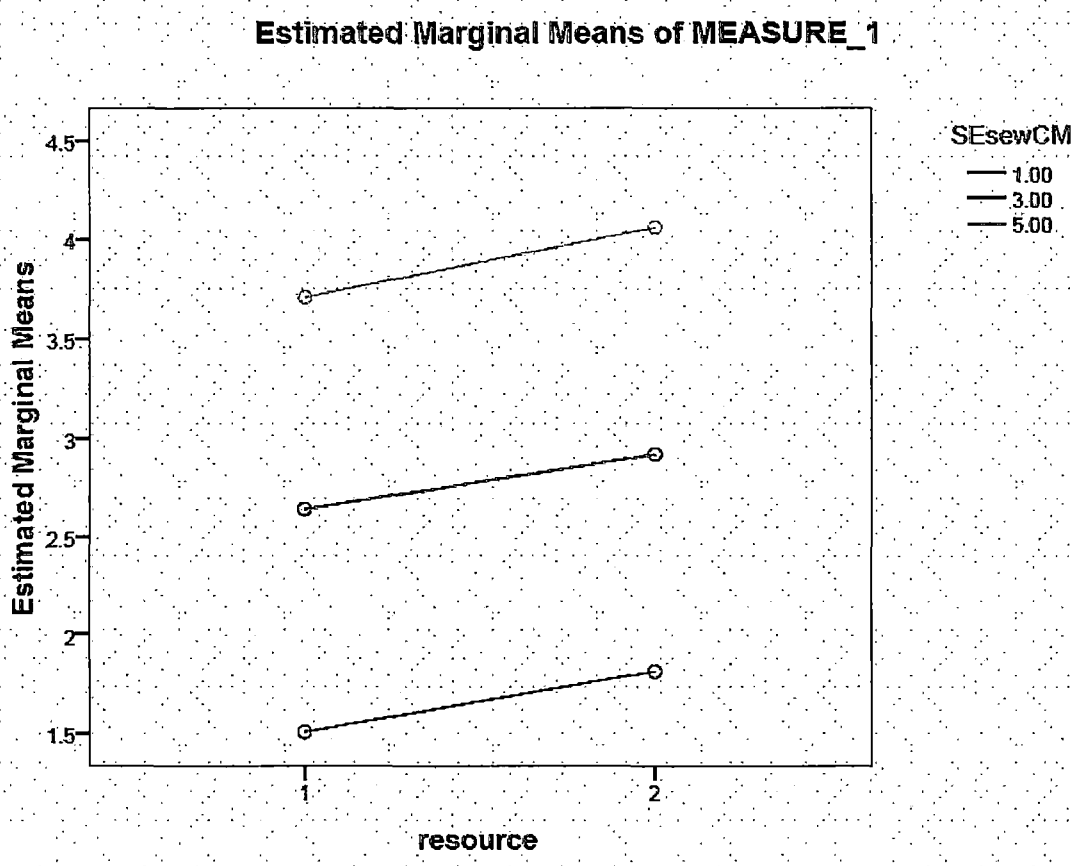
APPENDIX U:

GRAPHICAL DIFFERENCE IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY TWO BUILDING A TELEVISION VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
4
3.5
3
2.5
2
1.5
1
1
2
resource
SEtvCM
1.00
3.00
5.00

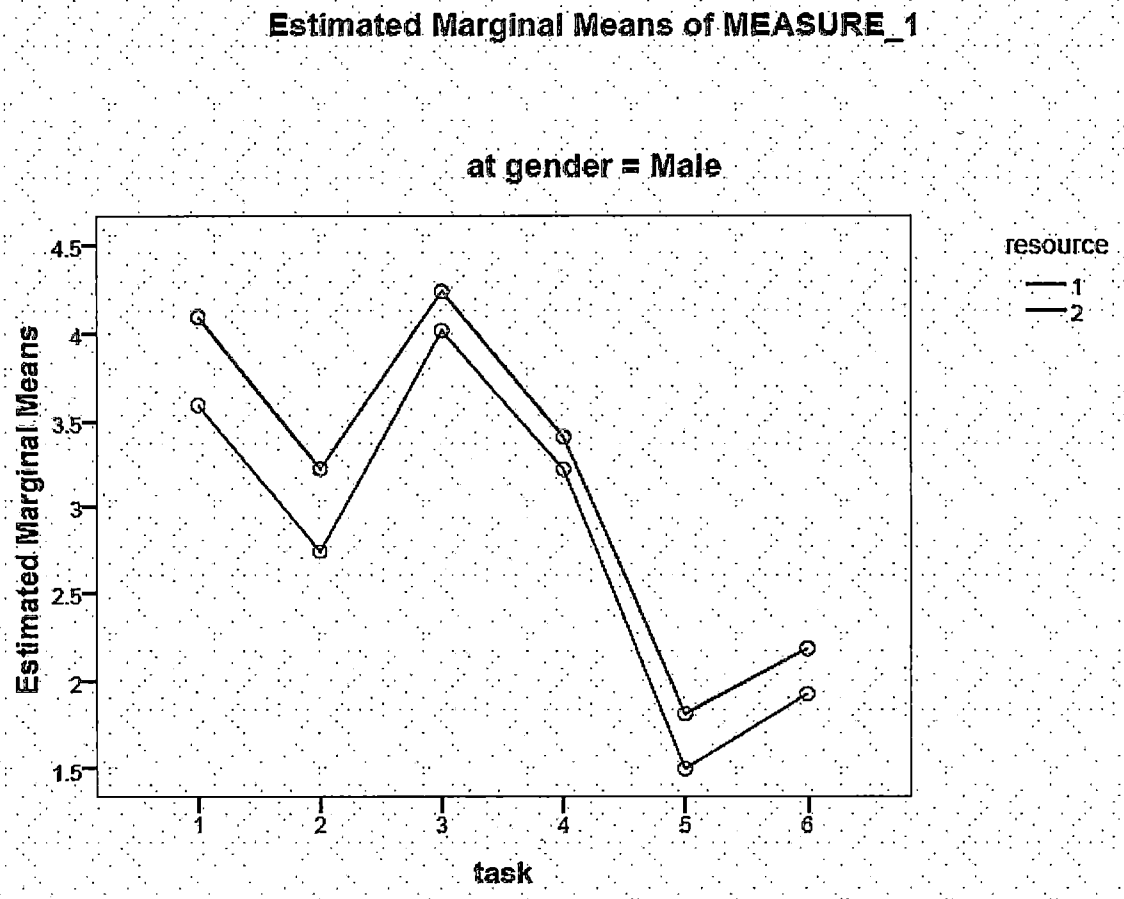
APPENDIX V:

GRAPHICAL DIFFERENCES IN TASK-SPECIFIC SELF-EFFICACY FOR STUDY TWO SEWING VIGNETTE


Estimated Marginal Means of MEASURE_1
Estimated Marginal Means
4.5
4
3.5
3
2.5
2
1.5
1
2
resource
SEsewCM
1.00
3.00
5.00

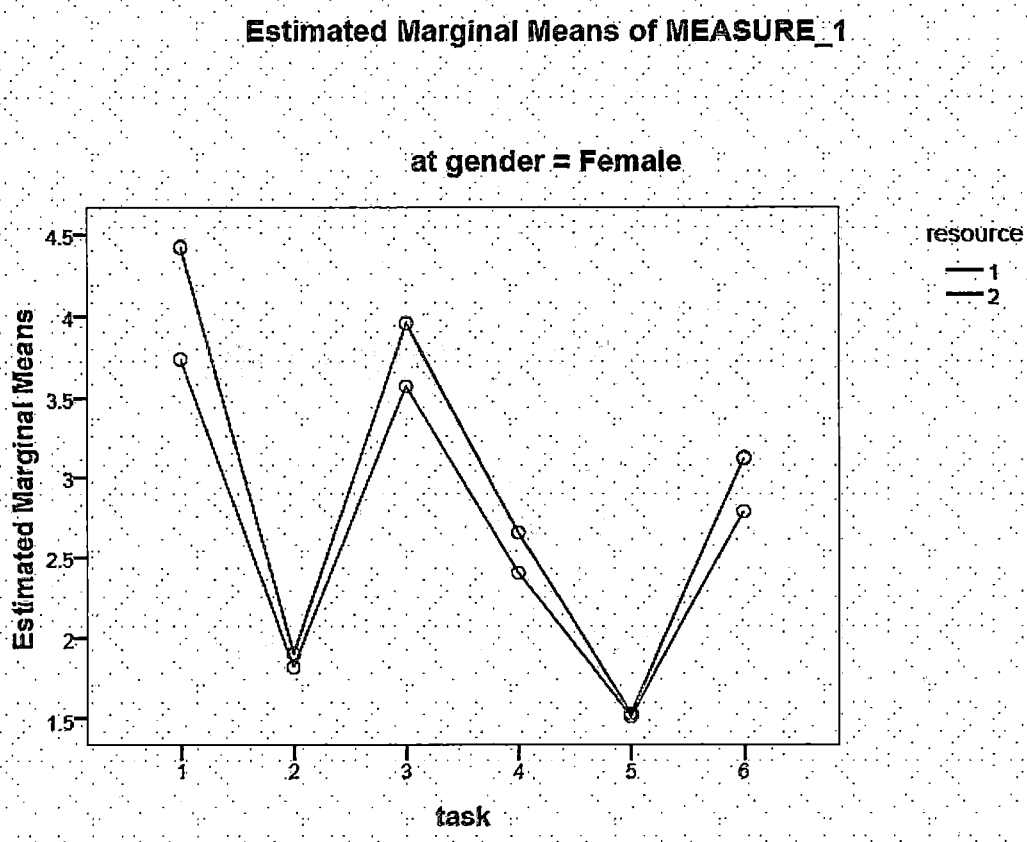
APPENDIX W:

STUDY TWO GRAPHICAL REPRESENTATION OF TASK-SPECIFIC SELF-EFFICACY IN MALES BY TASK AND RESOURCE


Estimated Marginal Means of MEASURE_1
at gender = Male
Estimated Marginal Means
4.5
4
3.5
3
2.5
2
1.5
1
2
3
4
5
6
task
resource
1
2

APPENDIX X:

STUDY TWO GRAPHICAL REPRESENTATION OF TASK-SPECIFIC SELF-EFFICACY IN FEMALES BY TASK AND RESOURCE


Estimated Marginal Means of MEASURE_1
at gender = Female
Estimated Marginal Means
4.5
4
3.5
3
2.5
2
1.5
1
2
3
4
5
6
task
resource
1
2

APPENDIX Y:

STUDY THREE SURVEY

Self-Confidence in Household Tasks

Instructions: This survey is designed to assess your confidence in various household tasks. You will first be asked to rate your overall confidence in performing the task. You will then be given a series of vignettes and will be asked to rate your confidence in performing the task based on the scenario in the vignette. Be sure to read each vignette and each scenario carefully. Thank you for your participation!

Vignette #1 – Cooking

I feel confident in my ability to cook a good meal.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

You have been asked to cook a meal for 10 people. Your time limit is 1 hour. All the ingredients for the meal will be provided to you. You have the option of four different kitchens to cook in. Please read the lists of tools provided in each kitchen and rate your confidence level for each set of materials.

Kitchen A: Inside Kitchen A, you will find:

A state of the art convection oven
A copper bottom skillet and saucepan
A high powered food processor
A sharp Japanese knife
A standing electric mixing bowl

I feel confident that I can cook a good meal for 10 people using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Kitchen B: Inside Kitchen B, you will find:

2 state of the art convection ovens
5 copper bottom saucepans
High powered food processor
4 copper bottomed skillets
6 sharp Japanese knives
3 stainless steel mixing bowls

I feel confident I can cook a good meal for 10 people using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Kitchen C: Inside Kitchen C, you will find:

1 chipped glass bowl
A wooden spoon
A hand-held electric mixer
A rusted cake pan

I feel confident that I can cook a meal for 10 people using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Kitchen D: Inside Kitchen D, you will find:

2 conventional ovens, 1 with a broken knob
4 saucepans, 1 with a handle missing
A butcher block of assorted knives, semi sharp
2 large skillets with the Teflon scratched off
A wisk
3 plastic mixing bowls
A blender with one speed

I feel confident that I can cook a good meal for 10 people using only these materials.

Strongly	Somewhat	Neither Agree	Somewhat	Strongly

Disagree	Disagree	Nor Disagree	Agree	Agree
1	2	3	4	5

How much experience do you have with the task of cooking?

I have performed this same task…

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Vignette #2 – Building a deck

I feel confident in my ability to build quality structures out of wood.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Next you will be asked to build a deck. All of the lumber needed will be provided to you. Your time limit to complete the deck is 2 hours. You will have the option of four different yards in which to build the deck. Please read the lists of tools provided in each yard and rate your confidence level for each set of materials.

Yard A: Inside Yard A, you will find

100 rusted nails
8 concrete piers with chipped concrete
5 screwdrivers, some with missing handles
A hammer with a loose head
2 liquid levels
3 standard wrenches

I feel confident that I can build a quality deck using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Yard B: Inside Yard B, you will find:

50 rusted nails
1 screwdriver with a missing handle
A hammer with a loose head
4 concrete piers with chipped concrete

I feel confident that I can build a quality deck using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Yard C: Inside Yard C, you will find:

100 extra strong nails
3 adjustable wrenches
A cordless drill with 12 bits
2 electric hammers
A laser level
8 new concrete piers

I feel confident that I can build a deck using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Yard D: Inside Yard D, you will find:

50 extra strong nails
An adjustable wrench
A cordless drill
An electric hammer
A laser level
4 new concrete piers

I feel confident that I can build a quality deck using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with the task of building structures out of wood?

I have performed this same task...

0 times	1-3 times	4-6 times	7-9 times	10 or more times
1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Vignette #3 – Sewing

I feel confident in my ability to sew.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Finally, you will be asked to make a dress. You will have 2 hours to complete this task. All of the zippers and buttons will be provided to you. You will have the options of four different sewing stations in which to make the dress. Please read the lists of tools provided in each station and rate your confidence level for each set of materials.

Station A: Inside Station A, you will find:

An antique sewing machine
2 used sewing needles
1 pair of standard scissors with the handle missing
1 bolt of polyester
1 spool of bright green thread

I feel confident I could make a quality dress using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Station B: Inside Station B, you will find:

3 bolts of Chinese silk
3 spools of black linen thread
2 high speed sewing machines
12 brand new sewing needles
3 pair of extra sharp fabric scissors

I feel confident that I can make a quality dress using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Station C: Inside Station C, you will find:

An antique sewing machine
12 used sewing needles
2 pair of standard scissors with missing handles
3 bolts of polyester
8 spools of bright green thread

I feel confident that I can make a quality dress using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

Station D: Inside Station D, you will find:

A high speed sewing machine
1 spool of black linen thread
2 brand new sewing needles
1 bolt of Chinese silk
1 pair of extra sharp fabric scissors

I feel confident that I can make a quality dress using only these materials.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

How much experience do you have with the task of sewing?

I have performed this same task...

0 times	1-3 times	4-6 times	7-9 times	10 or more times

1	2	3	4	5

When I performed this task, my experience was a good experience.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

_____ Check here if not applicable (If you have never performed this task before.)

Thank you for your participation in our survey.

Survey developed by Jennifer Rice

Demographic Information

Please complete the following by checking the appropriate answer.

Gender

____ Male ____ Female

Ethnicity

____ African American/Black

____ Asian American/Pacific Islander/Indian

____ Latino/Hispanic

____ White/European American

____ Native American

____ Middle Eastern

____ Multiracial/Other please specify _____

Age

____ Please write in your age.

Please circle the corresponding number to this statement.

I have high confidence in my overall abilities.

Strongly Disagree	Somewhat Disagree	Neither Agree Nor Disagree	Somewhat Agree	Strongly Agree
1	2	3	4	5

APPENDIX Z:

STUDY THREE INFORMED CONSENT

INFORMED CONSENT

You are invited to participate in a study designed to continue the development of measure of self-confidence. This study is being conducted by Jennifer Rice, under the supervision of Dr. Janet Kottke, Professor of Psychology. This study has been approved by the Department of Psychology Institutional Review Board Sub-Committee of the California State University, San Bernardino, and a copy of the official Psychology IRB stamp of approval should appear on this consent form.

In this study you will be asked to respond to a survey. The survey will take approximately 20 minutes to complete. All of your responses will be held in the strictest of confidence by the researchers. All data will be reported in group form only. Since no identifying information is collected on the survey, all your responses will be completely anonymous. Results from this study will be available from Dr. Kottke (909-537-5585) after January 1, 2007.

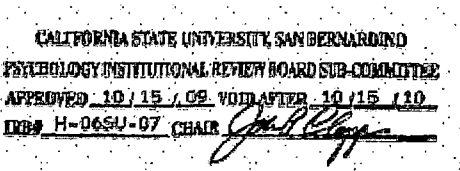
Your participation in this study is totally voluntary. You are free not to answer any question and withdraw at any time during this study without penalty. This study involves no risks beyond those of everyday life, nor any direct benefits to you as an individual. If you are a CSUSB student, you may receive 1 unit of extra credit in a selected Psychology class at your instructor's discretion. When you have completed the survey, you will receive a debriefing statement describing the study in more detail. In order to ensure the validity of the study, we ask that you not discuss this study with other participants.

If you have any questions or concerns about this study, please feel free to contact Dr. Janet Kottke at (909) 537-5585.

By placing an "X" in the box below, I acknowledge that I have been informed of, and that I understand, the nature and purpose of this study, that I freely consent to participate, and that at the conclusion of the study, I may ask for additional explanation regarding the study. I also acknowledge that I am at least 18 years of age.

Place an "X" here: _____

Today's date: _____



APPENDIX AA:

STUDY THREE DEBRIEFING STATEMENT

Debriefing Statement

The survey you have just completed was designed to assess your individual task-specific self-efficacy and means efficacy. Self-efficacy is the confidence you have in your abilities to complete tasks, while means efficacy if the confidence you have in your resources. Intentions are to further refine the construct of means efficacy, as well as identify patterns or relationships between the two.

Thank you for your participation in this study. If you have any questions about the study, please feel free to contact Dr. Janet Kottke, (909) 537-5585. If you would like to obtain a copy of the group results of this study, please contact Dr. Janet Kottke, (909) 537-5585 after January 1, 2010.

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