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Examination of the Effects of the Homework, Organization, and Planning Skills (HOPS) Intervention on Undergraduate Students

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EXAMINATION OF THE EFFECTS OF THE HOMEWORK, ORGANIZATION, AND
PLANNING SKILLS (HOPS) INTERVENTION ON UNDERGRADUATE
STUDENTS

A Thesis

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ABSTRACT

Homework, organization, and time-management skills are often a source of stress for undergraduate students. The type of homework given, self-management skills, and planning skill level combine to contribute to student success in school. Previous research has shown that the Homework, Organization, and Planning Skills (HOPS) program has been successful with teaching these skills; however, research has focused on younger students. The purpose of the current study was to determine if the HOPS program was suitable for undergraduate students, based on pretest, posttest, and follow-up scores on the Learning and Study Strategies Inventory- Second Edition (LASSI) using a randomized waitlist control trial. The HOPS program was adjusted to focus on self-management skills. Results indicated that scores on the LASSI improved for students, with significant results for several scales. Limitations of the study and future directions for research are included.

INTRODUCTION

While the utility of homework has been widely debated since the 1930's (Cooper, 1989), it appears that it will remain an enduring feature of American education. Cooper (1989) defines homework as "tasks assigned to students by school teachers that are meant to be carried out during non school hours" and classifies homework by "(a) its amount, (b) its purpose, (c) the skill area utilized, (d) the degree of individualization, (e) the degree of choice permitted to the student, (f) the completion deadline, and (g) its social context" (p. 7). Homework can affect academic goals, both short- and long-term, as well as non-academic pursuits, such as sports and social and/or familial relationships. Since these effects can be negative and/or positive, the debate on the value of homework ranges from advocacy for the complete elimination of homework to the staunch support of homework as a learning tool.

The early research on homework is fraught with methodological weaknesses (Cooper, 1989, Miller & Kelley, 1991). Cooper (1989) cites ethical and logistical obstacles when conducting empirical research. In order to obtain unconfounded data, researchers would need to randomly assign groups of students to receive no homework for long periods of time. However, if homework is important to the learning process, it is unethical to keep students from receiving assignments. Additionally, if homework is key to continuing education at a steady pace for teachers, it impedes the learning process for an entire class when homework is not assigned to some of the students. Miller and Kelley (1991) conducted a review of homework research and found several recurring flaws in methodology. Specifically, the authors found that many studies suffered from small sample sizes, had multiple variables that could not be separated when examining outcome

effects, were correlational in nature, lacked multiple baseline designs, were largely unable to be generalized to other populations, and used different classifications for terms that could result in interpretation difficulties. However, recent research has sought to remedy the shortcomings of earlier research to determine the benefits and hazards of homework, using advanced statistical techniques, larger sample sizes, and more specific variables to determine the source of outcomes. The debate on the merits and drawbacks of homework has not decreased with empirical research that is increasing in rigor, however.

Homework has been credited with increasing learning opportunities for students, strengthening lessons learned in the classroom, and an increase in long-term motivation (Bempechat, 2004). Keith, Diamond-Hallam, and Fine (2004) used structural equation modeling on longitudinal data to examine in-school and out-of-school homework assignments and their effect on GPA and achievement test scores for over 13,500 students. They found that out-of-school homework had a strong significant effect on GPA and a moderately significant effect on achievement test scores. In-school homework assignments had no such effect, indicating that homework specifically assigned for home learning is important to student growth. Additionally, research has shown that any amount of homework completed by students has a positive effect on achievement scores (Maltese, Tai, & Fan, 2012). Trautwein (2007) also the found frequency of homework was a significant predictor of achievement as the classroom level, and that homework effort was positively related to achievement, measured using grades and test scores. Lastly, Keith, Reimers, Fehrmann, Pottebaum, and Aubey (1986) found that participating

in homework had a positive effect on standardized test scores, even after researchers controlled for ethnicity, socioeconomic status, and ability test scores.

While homework may have an overall positive relationship with achievement, the type and quality of homework matters for more specific measures of student behavior and attitude related to homework. Students often complain about the additional time and effort spent on homework that adds to an increasingly long school day. Maltese et al. (2012) assessed data taken from high school students and found that the "average amounts of time students reported spending on homework across these studies translates into 100 –180 extra 50-minute class periods' worth of exposure to content" (p. 67-68). The authors determined that this high amount of exposure to subject matter means that the association between homework and increased grades and tests scores is actually moderate when time spent on homework is factored into the equation.

Moreover, Wilson and Rhodes (2010) found that only thirty-nine percent of freshman students reported completing homework assignments regularly, and only sixty-nine percent of students who responded felt that homework was meaningful to learning the ideas presented in their classes. In a survey conducted by Galloway, Conner, and Pope (2013), students described homework as "boring," "tedious," and "mindless" (p. 504). These responses suggest that homework may be seen as empty to a significant proportion of students in the United States. Dettmers, Trautwein, Ludtke, Kunter, and Baumert (2010) examined longitudinal data for over 3,400 German high school students to determine how student perception of homework assignments effected achievement. High quality homework assignments, determined by task selection and amount of challenging material included, were positively related to class level math test

achievement scores. However, at the student level, performance was relatively lower when students felt that the homework assignments were challenging. The authors also found that students who considered homework assignments to be well-organized and stimulating were more likely to see the value in the assignment, felt that their effort would lead to positive results, and had increased effort when completing assignments at both student and class levels (Dettmers et al., 2010). Considering that time spent on homework has not been found to be consistently positively correlated with achievement, these results indicate that more emphasis should be placed on homework quality in the future (Trautwein, 2007; Maltese, Tai & Fan, 2012).

Homework has also been linked to negative, non-academic effects on students and families. Galloway et al. (2013) surveyed over 4,300 high school students in high-performing schools. These students averaged more than 3 hours of homework assigned per night and reported they found homework to be only "somewhat useful" in terms of learning material taught during school and preparation for future assignments (p. 498). Fifty-six percent of students designated "homework as a primary stressor" (p. 501). Seventy-two percent of respondents reported feeling "often or always stressed over schoolwork," eighty-two percent reported having physical symptoms of stress in the past month, and sixty-eight percent stated that "schoolwork often or always kept them from getting enough sleep each night" (p. 498-499). Additionally, sixty-three percent of students reported schoolwork made it difficult to spend time with family and/or friends and sixty-one percent of students had to stop participating in an interest because of schoolwork (Galloway et al., 2013).

With an increase in required homework time, the ever-expanding student to staff ratio in classroom, students are expected to complete and manage more academic tasks alone than ever. Dickerson and Creedon (1981) defined self-management as "any response made by an individual to maintain or to change his own behavior" (p. 425). Specifically, self-management of learning can include "planning, implementing, and monitoring one's learning efforts, on the conditional knowledge of when, where, why, and how to use particular tactics and strategies in their appropriate context (Hattie, Biggs, & Purdie, 1996, p. 100). It is especially important that students be aware of their abilities, including their strengthens and weaknesses in order to successfully manage academic demands. Dunlosky and Rawson (2012) found that greater accuracy in self-evaluation of learning skills were linked to higher levels of definition retention.

Research on the educational aspect of self-management skills has produced mostly positive results. Most research concurs that self-management interventions are successful with students with learning disabilities and/or mental health issues. Zou et. al (2012) performed a meta-analysis of self-management interventions in educational settings for persons diagnosed with schizophrenia and found that self-management interventions are both cost-feasible and successful for this population. Likewise, Carr, Moore, and Anderson (2014) conducted a meta-analysis to determine the effect of self-management intervention for students diagnosed with autism, with similar results found. Self-management was found to be a successful intervention for social and academic learning across age and ability levels. Furthermore, studies have shown that self-monitoring can produce higher homework completion and accuracy of fourth-grade students with disabilities in an inclusive general education classroom (Falkenberg &

Barbetta, 2013). Several studies have also confirmed the success of self-monitoring and management skills on academic performance (Dean, Malott, & Fulton, 1983; Mahoney, Moore, Wade, & Moura, 1973; Richards, McReynolds, Holt, & Sexton, 1976).

While self-management has been established as a successful intervention, it is not without limitations. Many studies do not include follow-up data, making it difficult to gauge the long-term effects of this type of intervention. Additionally, there are many ways to assess or alter self-managed behavior, including goal distance proximity, addition of self-rewards or group contingencies, and types of goals set. Results of studies tend to be less significant when they measure specific aspects of self-management, rather than the general concept (Greiner & Karoly, 1976; Mercier & Ladouceur, 1983; Morgan, 1987). Lastly, fading self-management programs can be difficult. Rock and Thead (2007) found that self-monitoring sheets were successful in increasing productivity, accuracy and academic engagement for student, with and without disabilities. However, they also noted that when the intervention was faded, results were varied when compared to the effects of the full intervention.

In addition to homework type and self-management concerns, research has shown the importance of organizational and time management skills in academic achievement. Multiple studies have shown that time management skills and self-efficacy contribute to academic performance. George, Sinikka, Stansal, Gelb, and Pheri (2008) studied the effects of a time diary and found that time management skills predicted grade point average, personal success ratings, and total success ratings for undergraduate students. Personal success was defined as how well the participant's felt they were meeting goals they set, while total success was defined as a combination of GPA and personal success.

Additionally, Kitsantas, Winsler, and Huie (2008) examined the predictive validity of time management skills and self-efficacy on undergraduate academic performance. Results of this study showed that time management skills and self-efficacy were better predictors of academic performance in college than high school GPA or SAT scores, highlighting the importance of these skills for academic success.

Secondary education research of organization skills has focused on students diagnosed with Attention Hyperactivity Deficit Disorder (ADHD) (Abikoff et al., 2013; Pfiffner, Villodas, Kaiser, Rooney, & McBurnett, 2013; Power et al., 2012). Langberg et al. (2011a) studied students with ADHD in grades 5-8. This study found that teacher and parent ratings of how well students organized their materials were significant predictors of academic achievement, measured using student grades. Langberg, Epstein, Urbanowicz, Simon, and Graham (2008) also studied middle school students in grades 4-7 who were diagnosed with ADHD and showed a significant lack of organizational skills. The researchers taught students to physically organize supplies, record tests and homework in a planner, and develop long-term planning skills. Parent ratings of academic functioning improved significantly with the acquisition of these skills, and there was a slight, but significant improvement in overall grade point average (GPA). These results showed not only that students with low organizational skills have academic difficulties, but also that increased organizational skills could improve academic functioning. Using this research, the Homework, Organization, and Planning Skills (HOPS) Interventions manual was developed (Langberg, 2011).

The Homework, Organization, and Planning Skills (HOPS) Interventions manual is a well-researched system for middle school children with ADHD (Langberg, 2011). In

this program, students receive 16 sessions that last twenty minutes or less with a focus on skills including, but not limited to, materials organization, short-term and long-term planning skills, and time efficiency. A school mental health (SMH) worker delivers lessons during the school day. Langberg (2011) intended the intervention to work along side a response-to-intervention (RTI) system, and the program is considered a Tier 3 intervention when used in a 1:1 student to teacher ratio. However, with a slight time increase to thirty minutes and an additional staff member, Langberg (2011) endorses using the HOPS system in a group setting of up to thirty students.

The HOPS manual has been empirically evaluated in multiple studies. In randomized trials, parent ratings were found to show significant increases in homework completion, planning, and organization skills for students diagnosed with ADHD in grades 6-8 (Langberg, Epstein, Becker, Girio-Herrera, & Vaughn, 2012). The results were typically continued at a three-month follow-up assessment. Additionally, students who received treatment had significantly higher GPAs than students who did not receive the treatment. However, teacher ratings of organizational skills did not differ between the two groups. These findings are consistent with previous research. Using implementation of the HOPS system and focus groups of SMH providers and teachers, Langberg et al. (2011b) found that parent ratings of student organizational skills showed students made significant improvements. Conversely, pre-intervention teacher ratings did not differ from post-intervention ratings. Based on this information, it was recommended that the protocol be adjusted to add in components for missing assignments, as the authors believed that teachers were unable to directly observe the increase in organizational skills that the parents reported.

Research has shown consistent parent-rating improvement for several skills and improved class grades for students with ADHD in middle school that have received the HOPS intervention. Importantly, Langberg et al. (2012) found that SMH workers were able to provide treatment using the manual without on-going supervision at a high rate of fidelity. Additionally, they found that both parents and SMH providers were satisfied with the intervention. Specifically, parents reported that they would strongly advise other parents to use the HOPS program. Also, SMH providers reported they were likely to use the HOPS program again and favored it to formerly used interventions. Furthermore, Langberg et al. (2013) studied possible moderators for outcome prediction using HOPS. Therapeutic alliance, as indicated by students, was found to be a significant predictor of outcome. More importantly, the implementation of the binder organization predicted increases in parent-ratings on organization skills. The authors also found that demographic features, including, but not limited to, gender, ethnicity, and ADHD medication use were not significant predictors of outcome measures. This supports claims that the HOPS program is suitable for use with students with diverse backgrounds and diagnoses. Jointly this research supports the HOPS intervention as a feasible, successful, and cost-effective program.

The purpose of this study was to determine if the HOPS intervention succeeds with students at the undergraduate college level. The HOPS intervention lacks research with students older than middle school age. The current study compared a waitlist control group versus a group that will receive standard treatment using the HOPS manual. This data will determine the overall effectiveness of the HOPS intervention at the

undergraduate level when the intervention is implemented using self-monitoring exclusively.

Participants

Power analysis using GPower was run to determine sample size. Power was set at 0.80, effect size at 0.35, and correlation among measures was 0.6. A sample size of twenty-one was identified. In order to increase power and plan for anticipated attrition concerns, the sample size minimum was raised to thirty-six participants. Participants were recruited through flyers, emails, and a university-sponsored research participation system. Participation in sessions was 100%, with make up sessions counting as participation. Seven participants utilized make up sessions. The number of make up sessions needed ranged from 0 to 2 sessions (M = 0.50, SD = 0.63). Demographic variables for participants are provided in Table 1 below.

Table 1. Demographic Variables.

Variable	Descriptor	Treatment (n=16)	Control (n=14)	Total (N=30)
Gender	Male	5 (31%)	4 (29%)	9 (30%)
	Female	11 (69%)	10 (71%)	21 (70%)
Ethnicity	Caucasian	6 (38%)	9 (64%)	15 (50%)
	Other[a]	5 (31%)	3 (21%)	8 (27%)
	African-American	5 (31%)	2 (14%)	7 (23%)
Age	Mean	19.5	23	21
	Range	18-22	18-55	18-55

[a] No remaining groups accounted for more than 6% of participants.

Experimental Design

This study examined the effectiveness of the Homework, Organization, and Planning Skills (HOPS) program using a randomized control trial design. After obtaining permission from the Institutional Review Board (see Appendix C), two groups

(Treatment and Control) served as the between-subjects factor, while three time points served as the within-subjects factor. Study skills were assessed for both groups via the Learning and Study Strategies Inventory- Second Edition (LASSI) at each of the three time samples. These included prior to treatment, after completion of treatment, and a six-week follow-up for the Treatment group. The Control group completed the LASSI six weeks prior to treatment, immediately prior to treatment, and after treatment to assess for any confounding variables that may have influenced their scores in the six weeks prior to receiving treatment.

Materials and Measures

    Learning and Study Strategies Inventory- Second Edition (LASSI). The Learning and Studying Strategies Inventory- Second Edition (LASSI) was completed to measure changes in study strategies, skills, and personal awareness. The LASSI is an 80-question assessment that measures 10 scales related to learning and study approaches in three areas: academic skills, will to learn, and self-management of learning. Students complete the self-report measure by responding to a statement using a 5 point Likert Scale, ranging from "not at all typical" to "very much typical" of the student. Each scale has a maximum score of 40 points, while minimum scores can range from 12-21 points. Individual scale scores correspond to national sample norms in the form of percentiles. According to the manual, scores below the 50th percentile indicate areas of weakness; scores between the 50th and 75th percentiles indicate areas in which students need some help to improve their skills, and scores at or above the 75th percentile indicate areas of strength in that particular skill area. Percentile cutoff scores can be altered to reflect local norms at the user's discretion.

To determine learning skill achievement and awareness, Information Processing, Selecting Main Ideas, and Test Strategies are measured in individual scales. The Information Processing Scale measures students' ability to "use imagery, verbal elaboration, organization strategies, and reasoning skills as learning strategies" (Weinstein & Palmer, 2002, p. 5). The scale also measures students' ability to connect new and previously learned information. The Selecting Main Ideas Scale measures students' ability to determine what information is important when studying. Finally, the Test Strategies Scale measures students' ability to prepare for tests, as well as test taking approaches.

To measure students' will to learn, Anxiety, Attitude, and Motivation are measured in individual scales. The Anxiety Scale measures students' concern about school and educational performance. The Attitude Scale measures students' interest in education and goal achievement at the undergraduate level. The Motivation Scale measures students' drive to complete assignments and continue to work through challenging academic demands.

To measure students' self-regulation of learning, Concentration, Self-Testing, Study Aids, and Time Management are measured in individual scales. The Concentration Scale measures students' ability to sustain attention while completing educational tasks. The Self Testing Scale measures students' ability to review information in order to establish the amount of knowledge they have retained about a subject. The Study Aids Scale measures students' ability to use outside resources, such as organizational tools and practices problems, to learn and recall new information. Finally, the Time Management

Scale measures how well students organize their time and predict schedule conflicts in an educational setting.

The LASSI First Edition was normed on a sample of 880 freshman students at one university. Correlation data was completed on a sample of 209 students using test-retest data. Comparing results to similar assessments, measuring results against academic performance measures, and repeated testing of the sample assessed validity. The LASSI Second Edition was normed on a sample of students from twelve different educational institutions located in diverse geographical locations. The sample included students from a variety of educational settings, ranging from technical colleges to universities. The Second Edition was updated to include new technology (internet) and remove outdated items, increase scales to broadly capture the requirements of different types of academic institutions, even the number of items per scale, and improve the psychometric properties of the first edition. Reliability was measured using Coefficient alpha for each scale, ranging from .73 to .89 (Weinstein & Palmer, 2002). Technical adequacy for the LASSI has been demonstrated in multiple studies, using a variety of participants (Cano, 2006; Flowers, Bridges, & Moore, 2012, Yip, 2013).

Demographic Questionnaire. To obtain demographic information about participants, a demographic questionnaire was completed (see Appendix A). The questionnaire included age, gender, ethnicity, educational diagnostic information, and previous educational information for participants.

Post Study Questionnaire. Qualitative data was gathered to determine the participant's perspective of the study (see Appendix B). Participants were asked to rate the helpfulness of the study, the average percentage of work associated with the study

they completed outside of the weekly session, how likely they were to recommend the study to a friend, and any ideas to increase out of session participation for future studies.

Homework, Organization, and Planning Skills Program. The intervention was conducted in a group setting for one hour, one time per week. The researcher completed 100 percent of the sessions. The intervention was adapted from the original treatment manual (Langberg, 2011) to include organization skills from every lesson plan presented in a manner that was more suitable for the demands placed on an undergraduate student. For example, students were not required to obtain teacher signatures on their homework, but were encouraged to meet with professors and track their own assignments. Additionally, treatment sessions included more discussion between the interventionist and the participants, following a 15-minute lesson, based on multiple HOPS manual sessions. Homework assignments were given each session and reviewed the following session (see Appendix D).

Self-monitoring was the focus of treatment, due the participant's educational level. Each student set goals in three areas: organization, time management, and professor interaction. If a student felt they were currently successful with professor interaction, they were allowed to choose a different goal that was academic in nature or related to time management.

Behavior was self- monitored using a weekly planner and binder system. The binder included necessary school supplies, such as a folder to keep important papers, loose-leaf paper, graphing paper, and a supply bag to keep pens, notecards, and other materials in for improved study organization. Copies of the HOPS program materials,

including the Self-Management Plan, Self-Management Checklist, Evening Schedule, Rewards List, and Points System Tracking Sheet, were also included.

During every session a new skill set was introduced and reviewed. Discussions centered on barriers to success with using the self-management aspect of the program in order to increase the likelihood that the participants would attempt the skills in a generalized setting. The participants developed a personalized point system based on their goals and the difficulty of reaching the goals. Points were to be traded in for rewards that were equal to the effort placed into the goal. Point delivery and reward trade-ins were self-delivered by the participant outside of the weekly session. For example, if a student wrote down their assignments for the day, they could reward themselves 5 points, which could be traded in for watching 30 minutes of television or for a preferred snack. These points were graphed in later sessions, and goals were modified as needed. In addition to the individual point system, a group reward was introduced in session 4 to emphasize the behavioral change technique of being held accountable by another person. The class determined a group goal, such as a pizza party, that would only be earned if everyone in the group completed their points and assignment sheets for the entire week.

Inter-observer agreement. Inter-observer agreement (IOA) was collected for 79 percent of LASSI assessments. A graduate student not involved in the treatment scored each assessment independently, and reported their findings to the researcher. Dividing the total number of agreements by the total number of agreements and disagreements and multiplying by 100 determined IOA. The average IOA was 94.9%, with a range of 60% to 100%.

Procedure

  Pretest. All participants completed a consent form (see Appendix E), a Demographic Questionnaire, and the LASSI during the first session. Participants were randomly assigned without replacement to either the Treatment or Control group. Thirty-six undergraduate students were recruited to participate in the HOPS intervention. Of the original participants, six discontinued involvement in the study. One participant did not attend the first meeting, one participant moved during the intervention, one withdrew due to personal issues, and three discontinued for unknown reasons. Final participants included 30 students. The Treatment group included 16 students, while the Waitlist Control group included 14 students, 3 of whom did not receive treatment after participating in the pretest portions of the study due to scheduling conflicts.

  Intervention Phase 1. After pretest measures were collected, the Treatment group began intervention sessions. The researcher implemented intervention using the lessons plans provided in the Appendix. The researcher previously determined discussion topics, but participants were allowed to deviate from the topic to query about more general organization or planning issues they were currently or had formerly faced. Participants in the Control group continued their normal schedules without receiving specific skill training from the researcher.

  Posttest. After completing the HOPS intervention, the Treatment group completed the LASSI as a posttest measure. The Control group also completed the LASSI as a second pretest measure to ensure no significant changes had taken place due to environmental changes, such as another study skills group or personal differences.

Intervention Phase 2. The Control group received 6 weeks of HOPS sessions identical to the Treatment group. Discussions were inherently different, however, based on participant questions and concerns. Group rewards were also different, as the participants determined them. The Treatment group was encouraged to continue with the skills obtained during the intervention, but the researcher did not contact the group to ensure that these behaviors were occurring.

Posttest 2 and Follow-up. Both groups completed the LASSI after the Control group finished the six-week intervention. This measure served as posttest data for the Control group and follow-up data for the Treatment group. Due to the university schedule, follow-up data was not gathered for the Control group.

RESULTS

Analyses

Multiple analyses were run to examine the data. Descriptive statistics were computed to summarize the sample population demographics, including gender, ethnicity, age, reported frequency of a diagnosis, semesters/hours completed at a university, and grade point average. Group means, standard deviations, and ranges were calculated for each measurement. Intervention measure outcomes were examined using a series of one-way analyses of covariance (ANCOVAs) were conducted to determine statistically significant differences between the Treatment and Control groups on LASSI scale z-scores when controlling for time sampled (pretest, posttest, and follow-up for the Treatment group only). Raw scores were converted to percentile scores based on LASSI norms for each scale (Weinstein & Palmer, 2002). Percentile scores were then converted to z-scores for analysis. Table 2 summarizes the quantitative data for the LASSI scales at each time sample.

LASSI. Both Treatment and Control groups completed the LASSI before the intervention began. The raw scores for each of the ten scales were converted to percentile scores, then to z-scores in order to ensure comparability among the groups. At the pretest time sample, the Treatment group z-scores ranged from -2.33 to 0.52 (M = -0.59, SD = 0.78) on the Anxiety scale, -2.33 to 1.04 (M = -0.69, SD = 1.11) on the Attitude scale, -2.33 to 0.52 (M = -1.02, SD = 0.86) on the Concentration scale, -2.33 to 1.65 (M = -0.11, SD = 1.19) on the Information Processing Scale, -2.33 to 1.04 (M = -0.28, SD = 1.08) on the Motivation scale, -2.33 to 1.04 (M = -0.58, SD = 1.12) on the Self Testing scale, -2.33 to 1.04 (M = -0.61, SD = 1.13) on the Selecting Main Ideas scale, -2.33 to

Table 2. Learning and Study Strategies Inventory (LASSI) Scale Scores.

Scale	Time[a]	Treatment M[b] (SD)	Control M (SD)	F[c]	P	Partial η^2
Anxiety	T1	-0.59 (0.78)	-0.53 (1.20)			
	T2	-0.15 (0.68)	-0.16 (1.11)	0.03[d]	0.87	0.00
	T3	-0.02 (0.76)	0.53 (0.75)	1.68[e]	0.21	0.07
Attitude	T1	-0.69 (1.11)	-0.81 (1.15)			
	T2	-0.74 (0.98)	-0.73 (1.20)	0.16	0.69	0.01
	T3	-0.29 (1.22)	-0.32 (1.33)	0.23	0.64	0.01
Concentration	T1	-1.02 (0.86)	-0.68 (0.94)			
	T2	-0.31 (0.62)	-0.56 (0.67)	2.85	0.10	0.10
	T3	-0.25 (0.90)	0.12 (0.67)	4.74	0.04*	0.18
Information Processing	T1	-0.11 (1.19)	-0.10 (0.68)			
	T2	0.19 (0.85)	-0.08 (0.98)	1.01	0.32	0.04
	T3	0.15 (0.75)	0.17 (0.72)	0.19	0.69	0.01
Motivation	T1	-0.28 (1.08)	-0.34 (1.24)			
	T2	0.12 (0.74)	-0.41 (1.11)	4.94	0.04*	0.16
	T3	0.45 (0.95)	-0.10 (1.03)	0.03	0.86	0.00
Self Testing	T1	-0.58 (1.12)	-0.83 (1.01)			
	T2	0.10 (0.77)	-0.52 (0.96)	3.20	0.09	0.11
	T3	-0.17 (0.85)	-0.06 (0.92)	4.85	0.04*	0.18
Selecting Main Ideas	T1	-0.61 (1.13)	0.04 (1.20)			
	T2	0.00 (0.98)	0.07 (0.93)	2.05	0.16	0.07
	T3	0.41 (0.85)	0.47 (0.95)	0.70	0.41	0.03
Study Aids	T1	0.11 (1.09)	-0.78 (0.99)			
	T2	0.27 (0.90)	-0.59 (1.03)	0.83	0.37	0.03
	T3	0.39 (1.12)	-0.07 (0.93)	0.21	0.65	0.01
Time Management	T1	-0.88 (0.86)	-1.37 (1.04)			
	T2	-0.33 (0.66)	-1.39 (0.89)	11.39	0.00*	0.30
	T3	-0.29 (1.00)	-0.69 (0.78)	0.26	0.61	0.01
Test Strategies	T1	-0.45 (1.13)	-0.13 (0.94)			
	T2	-0.21 (0.79)	-0.11 (0.86)	0.00	0.98	0.00
	T3	0.15 (0.51)	0.43 (0.60)	1.03	0.32	0.05

Note. [a] T1= Time One, T2= Time Two, T3= Time Three. [b] Mean scores reported are z-scores. [c] Based on analysis of covariance (ANCOVA) with group (treatment vs. control) as the between subjects factor and time ([d] pretest or [e] posttest) as covariate. * Significant at $p<0.05$.

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1.28 (M = 0.11, SD = 1.09) on the Study Aids scale, -2.33 to 0.67 (M = -0.88, SD = 0.86) on the Time Management scale, and -2.33 to 1.28 (M = -0.45, SD = 1.13) on the Test Strategies scale.

Control group z-scores were comparable to the Treatment group scores, and ranged from -2.33 to 1.28 (M = -0.53, SD = 1.20) on the Anxiety scale, -2.33 to 1.04 (M = -0.81, SD = 1.15) on the Attitude scale, -2.33 to 1.04 (M = -0.68, SD = 0.94) on the Concentration scale, -0.84 to 1.28 (M = -0.10, SD = 0.68) on the Information Processing Scale, -1.65 to 2.33 (M = -0.34, SD = 1.24) on the Motivation scale, -2.33 to 1.04 (M = -0.83, SD = 1.01) on the Self Testing scale, -2.33 to 2.33 (M = 0.04, SD = 1.20) on the Selecting Main Ideas scale, -2.33 to 1.28 (M = -0.78, SD = 0.99) on the Study Aids scale, -2.33 to 0.39 (M = -1.37, SD = 1.04) on the Time Management scale, and -2.33 to 1.28 (M = -0.13, SD = 0.94) on the Test Strategies scale. These results indicate that the groups were similar in pretest scores, and their scores can be compared without concern.

Following the intervention, the Treatment group completed the LASSI as a posttest measure. Z-scores ranged from -1.65 to 1.04 (M = -0.15, SD = 0.68) on the Anxiety scale, -2.33 to 0.52 (M = -0.74, SD = 0.98) on the Attitude scale, -1.65 to 0.67 (M = -0.31, SD = 0.62) on the Concentration scale, -1.65 to 1.28 (M = 0.19, SD = 0.85) on the Information Processing Scale, -1.28 to 1.04 (M = 0.12, SD = 0.74) on the Motivation scale, -1.04 to 1.65 (M = 0.10, SD = 0.77) on the Self Testing scale, -1.65 to 2.33 (M = 0.00, SD = 0.98) on the Selecting Main Ideas scale, -1.28 to 1.65 (M = 0.27, SD = 0.90) on the Study Aids scale, -1.65 to 0.67 (M = -0.33, SD = 0.66) on the Time Management scale, and -1.65 to 1.28 (M = -0.21, SD = 0.51) on the Test Strategies scale.

To serve as a basis for comparison and to control for history effects the Control group completed the LASSI again before entering treatment. Control group z-scores at time sample two ranged from -2.33 to 1.28 (M = -0.16, SD = 1.11) on the Anxiety scale, -2.33 to 1.65 (M = -0.73, SD = 1.20) on the Attitude scale, -1.65 to 0.67 (M = -0.56, SD = 0.67) on the Concentration scale, -1.65 to 1.28 (M = -0.08, SD = 0.98) on the Information Processing Scale, -1.28 to 1.04 (M = -0.41, SD = 1.11) on the Motivation scale, -1.28 to 1.65 (M = -0.52, SD = 0.96) on the Self Testing scale, -1.65 to 2.33 (M = 0.07, SD = 0.93) on the Selecting Main Ideas scale, -1.28 to 1.65 (M = -0.549, SD = 1.03) on the Study Aids scale, -1.65 to 0.67 (M = -1.39, SD = 0.89) on the Time Management scale, and -1.65 to 1.28 (M = -0.11, SD = 0.86) on the Test Strategies scale. These scores were not significantly different than the pretest scores at time sample one, suggesting that the Control group had not changed since the first pretest was administered.

An ANCOVA was performed using group as the independent variable, LASSI scale z-scores as the dependent variable, and time one pretest scores as the covariate for each of the ten LASSI scales to determine if there was a significant effect caused by the intervention for the Treatment group. No significant effect was found for the Anxiety scale, $F (1, 27) = 0.03$, $p > 0.05$, the Attitude scale, $F (1, 27) = 0.16$, $p > 0.05$, the Concentration scale, $F (1, 27) = 2.85$, $p > 0.05$, the Information Processing scale, $F (1, 27) = 1.01$, $p > 0.05$, the Self Testing scale, $F (1, 27) = 3.20$, $p > 0.05$, the Selecting main Ideas scale, $F = (1, 27) = 2.05$, $p > 0.05$, the Study Aids scale, $F (1, 27) = 0.83$, $p > 0.05$, and the Test Strategies scale, $F (1, 27) = 0.00$, $p > 0.05$. Significant effects were found for the Motivation scale, $F (1, 27) = 4.94$, $p < 0.05$, and the Time Management scale, $F (1, 27) = 11.39$, $p < 0.05$. These results indicate that participants perceived themselves as

significantly better at managing their time and were more motivated after receiving treatment. The results also demonstrate that even when statistical significance was not reached, the changes in participant's average scores trended in the therapeutic direction.

After completing the intervention, the Control group completed the LASSI as a posttest measure. Z-scores ranged from -84 to 1.28 (M = 0.53, SD = 0.75) on the Anxiety scale, -2.33 to 2.33 (M = -0.32, SD = 1.33) on the Attitude scale, -1.28 to 0.67 (M = 0.12, SD = 0.67) on the Concentration scale, -0.84 to 1.65 (M = 0.17, SD = 0.72) on the Information Processing Scale, -1.65 to 2.33 (M = -0.10, SD = 1.03) on the Motivation scale, -1.28 to 1.65 (M = -0.06, SD = 0.92) on the Self Testing scale, -1.03 to 1.65 (M = 0.47, SD = 0.95) on the Selecting Main Ideas scale, -1.28 to 1.65 (M = -0.07, SD = 0.93) on the Study Aids scale, -2.33 to 0.67 (M = -0.69, SD = 0.78) on the Time Management scale, and -0.52 to 1.65 (M = 0.43, SD = 0.60) on the Test Strategies scale.

An ANCOVA was performed using group as the independent variable, LASSI scale z-scores as the dependent variable, and time two pretest scores as the covariate for each of the ten LASSI scales to determine if there was a significant effect caused by the intervention for the Control group. No significant effect was found for the Anxiety scale, $F(1, 22) = 1.68$, $p > 0.05$, the Attention scale, $F(1, 22) = 0.23$, $p > 0.05$, the Information Processing scale, $F(1, 22) = 0.19$, $p > 0.05$, the Motivation scale, $F(1, 22) = 0.03$, $p > 0.05$, the Selecting Main Ideas scale, $F(1, 22) = 0.70$, $p > 0.05$, the Study Aids scale, $F(1, 22) = 0.21$, $p > 0.05$, the Time Management scale, $F(1, 22) = 0.26$, $p > 0.05$, and the Test Strategies scale, $F(1, 22) = 1.03$, $p > 0.05$. Significant effects were found for the Concentration scale, $F(1, 22) = 4.74$, $p < 0.05$, and the Self Testing scale, $F(1, 22) = 4.85$, $p < 0.05$. These results indicate that participants perceived themselves as better in

their concentration and self-testing skills. Additionally, while mean changes in other scales were not statistically significant, all scores trended in the therapeutic direction.

An ANCOVA was performed using group as the independent variable, LASSI scale z-scores at time three as the dependent variable, and time one pretest scores as the covariate for each of the ten LASSI scales to determine if there was a significant difference between the Treatment and Control groups with regards to their pretest and follow-up scores. Results of the ANCOVAs revealed no significant differences between the groups for any of the LASSI scales.

In order to further examine data trends, paired sample t-tests were conducted to examine group changes over time. For each group (treatment and delayed treatment control), a paired samples t-test was conducted comparing times. Table 3 summarizes the results.

Results showed that 42% of scores were at or approaching significance ($p < 0.10$) when a within subject paired samples t-test was completed. Notably, the Treatment group was significantly better on the following scales after receiving treatment: Anxiety ($M = -0.43$, $SD = 0.73$), $t (15) = -2.36$, $p < 0.05$; Concentration ($M = -0.71$, $SD = 0.99$), $t (15) = -2.87$, $p < 0.05$; and Selecting Main Ideas ($M = -0.67$, $SD = 1.32$), $t (15) = -2.03$, $p < 0.05$. Importantly, their scores continued to be statistically significant during follow-up on the Selecting Main Ideas scale ($M = 0.37$, $SD = 0.71$), $t (13) = 1.97$, $p < 0.05$. Lastly, the Treatment group had significantly better scores from pretest to follow-up on the Motivation scale ($M = -0.60$, $SD = 0.98$), $t (13) = -2.29$, $p < 0.05$.

Table 3. Paired Samples T-Test Results for LASSI Scales

	Pair[a]	M (SD)	t	df	p
Treatment	1: Anxiety Time 1 and 2	-0.43 (0.73)	-2.36	15	0.03*
	2: Anxiety Time 2 and 3	-0.05 (0.74)	-0.25	13	0.81
	3: Anxiety Time 1 and 3	-0.62 (0.93)	-2.49	13	0.03*
	4: Attitude Time 1 and 2	0.06 (0.94)	0.24	15	0.82
	5: Attitude Time 2 and 3	-0.28 (0.84)	-1.23	13	0.24
	6: Attitude Time 1 and 3	-0.37 (0.88)	-1.56	13	0.14
	7: Concentration Time 1 and 2	-0.71 (0.99)	-2.87	15	0.01*
	8: Concentration Time 2 and 3	-0.10 (0.61)	-0.64	13	0.53
	9: Concentration Time 1 and 3	-0.85 (1.16)	-2.75	13	0.02*
	10: Information Processing Time 1 and 2	-0.30 (0.86)	-1.41	15	0.18
	11: Information Processing Time 2 and 3	0.04 (0.82)	0.20	13	0.84
	12: Information Processing Time 1 and 3	-0.30 (1.40)	-0.95	13	0.36
	13: Motivation Time 1 and 2	-0.39 (0.76)	-2.08	15	0.06
	14: Motivation Time 2 and 3	-0.19 (0.55)	-1.26	13	0.23
	15: Motivation Time 1 and 3	-0.60 (0.99)	-2.30	13	0.04*
	16: Selecting Main Ideas Time 1 and 2	-0.67 (1.32)	-2.03	15	0.02*
	17: Selecting Main Ideas Time 2 and 3	0.37 (0.71)	1.97	13	0.03*
	18: Selecting Main Ideas Time 1 and 3	-1.09 (1.00)	-4.13	13	0.00*
	19: Self Testing Time 1 and 2	-0.61 (0.95)	-2.55	15	0.06
	20: Self Testing Time 2 and 3	-0.40 (0.63)	-2.39	13	0.07
	21: Self Testing Time 1 and 3	-0.30 (1.40)	-0.81	13	0.43
	22: Study Aids Time 1 and 2	-0.16 (0.80)	-0.78	15	0.45
	23: Study Aids Time 2 and 3	-0.11 (0.90)	-0.45	13	0.66
	24: Study Aids Time 1 and 3	-0.26 (0.68)	-1.44	13	0.17
	25: Test Strategies Time 1 and 2	-0.55 (1.03)	-2.13	15	0.47
	26: Test Strategies Time 2 and 3	-0.01 (0.97)	-0.03	13	0.22
	27: Test Strategies Time 1 and 3	-0.64 (1.12)	-2.13	13	0.05
	28: Time Management Time 1 and 2	-0.24 (1.32)	-0.73	15	0.05
	29: Time Management Time 2 and 3	-0.33 (0.95)	-1.28	13	0.979
	30: Time Management Time 1 and 3	-0.51 (1.29)	-1.49	13	0.16

(Table 3 continued)

Control					
	1: Anxiety Time 1 and 2	-0.37 (0.71)	-1.98	13	0.07
	2: Anxiety Time 2 and 3	-0.25 (0.65)	-1.23	10	0.23
	3: Anxiety Time 1 and 3	-0.57 (1.16)	-1.64	10	0.13
	4: Attitude Time 1 and 2	-0.09 (0.55)	-0.60	13	0.56
	5: Attitude Time 2 and 3	-0.45 (0.76)	-1.94	10	0.08
	6: Attitude Time 1 and 3	-0.43 (0.78)	-1.80	10	0.10
	7: Concentration Time 1 and 2	-0.12 (0.56)	-0.83	13	0.42
	8: Concentration Time 2 and 3	-0.61 (0.48)	-4.25	10	>0.01*
	9: Concentration Time 1 and 3	-0.68 (0.60)	-3.77	10	0.00*
	10: Information Processing Time 1 and 2	-0.03 (0.82)	-0.14	13	0.89
	11: Information Processing Time 2 and 3	-0.15 (0.63)	-0.81	10	0.44
	12: Information Processing Time 1 and 3	-0.18 (0.81)	-0.76	10	0.47
	13: Motivation Time 1 and 2	0.07 (0.70)	0.37	13	0.71
	14: Motivation Time 2 and 3	-0.18 (0.57)	-1.04	10	0.32
	15: Motivation Time 1 and 3	-0.07 (0.94)	-0.26	10	0.80
	16: Selecting Main Ideas Time 1 and 2	-0.32 (0.55)	-2.14	13	0.76
	17: Selecting Main Ideas Time 2 and 3	-0.52 (0.69)	-2.51	10	0.38
	18: Selecting Main Ideas Time 1 and 3	-0.74 (0.69)	-0.36	10	0.73
	19: Self Testing Time 1 and 2	-0.03 (0.37)	-0.31	13	0.52
	20: Self Testing Time 2 and 3	-0.14 (0.51)	-0.92	10	0.03*
	21: Self Testing Time 1 and 3	-0.66 (0.63)	-3.50	10	>0.01*
	22: Study Aids Time 1 and 2	-0.19 (0.56)	-1.26	13	0.23
	23: Study Aids Time 2 and 3	-0.43 (0.62)	-2.30	10	0.04*
	24: Study Aids Time 1 and 3	-0.63 (0.81)	-2.56	10	0.03*
	25: Test Strategies Time 1 and 2	0.02 (0.44)	0.13	13	0.90
	26: Test Strategies Time 2 and 3	-0.70 (0.73)	-3.18	10	>0.01*
	27: Test Strategies Time 1 and 3	-0.31 (0.70)	-1.44	10	0.18
	28: Time Management Time 1 and 2	-0.02 (0.63)	-0.12	13	0.90
	29: Time Management Time 2 and 3	-0.37 (0.32)	-3.85	10	0.01*
	30: Time Management Time 1 and 3	-0.61 (0.93)	-2.16	10	0.06

Note. [a]Mean scores are reported as z-scores. *Significant at $p < 0.05$

In addition to the Concentration and Self-Testing scales that were statistically significantly when analyzed through ANCOVA, the Control group's scores improved on the following scales after receiving intervention: Study Aids (M = -0.43, SD = 0.62), t (10) =-2.30, $p < 0.05$; Time Management (M =-0.37, SD = 0.32), t (10) = -3.85, $p < 0.05$, and Test Strategies (M = -0.70, SD = 0.73), t (10) = -3.18, $p < 0.05$.

Additionally, an ANCOVA conducted with group as the independent variable, Concentration scale z-scores at time two as the dependent variable, and time one pretest scores and the number of make-up sessions a participant completed was found to be significant, $F(1, 23) = 8.61$, $p < 0.05$ for the Treatment group. Participants who did not use a make up session (n=9) had the largest difference in z-scores (1.04) in a positive direction, while participants who needed one makeup session (n=6) had a difference in scores of 0.32 in a positive direction. One student participated in two make up sessions, and their z-score remained the same for both time one and time two measurements. These results suggest that makeup sessions negatively effected Concentration scale scores for the Treatment group when examining pre and posttest scores.

Post Study Questionnaire. Participants completed a questionnaire after receiving treatment in order to determine how helpful they found the study, how likely they were to recommend the study to others, and the percentage of work for the study they completed outside of the regular session time. Using a 5-point Likert scale rating, participant's ratings of intervention helpfulness ranged from 3 (somewhat helpful) to 5 (very helpful) (M = 4.04, SD = 0.76), while ratings to the likelihood of recommending the intervention ranged from 2 (not very likely) to 5 (very likely) (M = 4, SD = 1). Reported percentage of outside work completion ranged from 10 percent to 100 percent (M = 62.59, SD = 24.9).

DISCUSSION

The purpose of the current study was to determine the effectiveness of the Homework, Organization, and Planning Skills (HOPS) program with undergraduate students. It was hypothesized that students improve on the Learning and Study Strategies Inventory (LASSI) after completing the six-week intervention. Additionally, it was hypothesized that 6-week follow-up data would not show decreases in scores. Results showed significant improvements for multiple LASSI scales.

Scores on the LASSI for the Treatment group showed significant improvements with large effect sizes on the Motivation (partial $\eta^2 = 0.16$) and Time Management (partial $\eta^2 = 0.30$) scales, when controlling for time through an ANCOVA. Medium to large effect sizes were also found for the Treatment group after intervention on three scales: Concentration (partial $\eta^2 = 0.10$), Self Testing (partial $\eta^2 = 0.11$), and Selecting Main Ideas (partial $\eta^2 = 0.07$) despite the dichotomous significance tests finding no change. These effect sizes suggest that with larger sample sizes, significant results may have been obtained for these scales. Additionally, analyses of group change pre-test to post-test revealed statistical significant change for Anxiety, Concentration, and Selecting Main Ideas scales ($p < 0.05$). Furthermore, two scales were found to be approaching significance ($p < 0.10$): Motivation and Self Testing. These results also support the hypothesis that larger sample sizes may have increased the number of statistically significant ANCOVA results.

Results for the Control group were similar in pattern to the Treatment group. Concentration (partial $\eta^2 = 0.18$) and Self Testing (partial $\eta^2 = 0.18$) were found to be statistically significant when time was controlled for using an ANCOVA analysis

following follow up treatment. Medium to large effect sizes were also found for two scales: Anxiety (partial $\eta^2 = 0.07$) and Test Strategies (partial $\eta^2 = 0.05$) despite the absence of a statistically significant effect, suggesting that larger samples sizes may have improved statistical significance. Moreover, within-subjects t-tests revealed that the Control group improved significantly on the Concentration, Self Testing, Study Aids, and Time Management scales ($p < 0.05$), and approached significance on the Attitude scale ($p < 0.10$). These results also suggest that with increased sample sizes, results may have reached statistical significance.

When examining paired t-test scores for the Treatment (pretest to follow-up) and Control (pretest to posttest), the results were encouraging. The Treatment group was significantly better in regards to anxiety levels, ability to process information, motivation, and selecting main ideas ($p < 0.05$), and approached significance on their ability to use test strategies ($p < 0.10$). Additionally, the Control group showed significant improvements in concentration ability, self-testing skills, and study aid awareness ($p < 0.05$), and approached significance on improvements in time management skills ($p < 0.10$).

The current study is consistent with previous research on the HOPS program and self-management. Langberg et al. (2012) found that the HOPS program increased organization and planning skill, as reported by parents. The present study also found an increase in time management and study skills, as measured through self-report. Additionally, the current study was well received by participants, as demonstrated through post-study analysis. Participants reported that the study was helpful and they were likely to recommend the program. These findings are consistent with parent and

SMH provider satisfaction of the HOPS program (Langberg et al., 2012). Furthermore, the increase in study skills, such as self-testing, is consistent with the increase in academic engagement found by Rock and Thead (2007). However, the current study found stable results at follow-up when compared to the previously mentioned study. Importantly, the Treatment group's mean scores continued to improve for most scales through follow-up, unlike the variable results found in the previous literature.

It should be noted that comparison to previous research is difficult due to the exploratory character of this study. Research using the HOPS program is limited, and non-existent on university students. Additionally, the use of the LASSI to measure skill changes furthers the research base on both self-management and the measure itself, as most studies on the LASSI have centered on technical adequacy rather than it's use in assessing a self-management program (Cano, 2006; Flowers, Bridges, & Moore, 2012, Yip, 2013).

Limitations

This study had several limitations that should be taken into consideration. The HOPS manual was designed as a 16-week program, while this study delivered the intervention in 6 weeks. This may have affected student's ability to process and implement the information they received and still show progress.

Additionally, the HOPS program was designed to include teacher signatures and other aspects of the intervention that were not appropriate for the undergraduate setting. Since self-management was used for the entire intervention, it is difficult to distinguish if the HOPS program was effective or if self-management alone was effective.

Due to the exploratory nature of the study and small sample size, many statistical tests were performed to compare means, causing a greater risk of Type I errors occurring. Due to the lack of prior research, all pairs were compared. Planned comparisons to control the experimentwise alpha should be considered in future research.

Lastly, as previously noted, sample size was small for this study, and may have affected the results. While the use of follow-up paired sample t-tests was employed to explore the data, it may not have been able to fully capture the changes that took place in student's skill acquisition.

Future Directions

Despite the limitations of this study, the results were promising. This study contributed to the research base on knowledge of the HOPS program and self-management skills. Results suggest a replication study would be valuable, as sample size was a limitation of this study. Additionally, researchers may want to investigate changes to the program, such as time length of the intervention, using more or less performance feedback with participants, or requiring participants to turn in permanent products to ensure work is being completed outside of the intervention sessions. Lastly, future research should focus on determining the benefits of the HOPS program in particular, versus self-management skills alone.

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APPENDIX A: DEMOGRPAHIC QUESTIONNAIRE

Directions: Please complete the following information.

Today's Date:

Student Information:

Name:

Sex:

Race/Ethnicity:

Age:

Major/Minor:

Number of Undergraduate Semesters Completed:

Number of Hours Completed in University:

Number of Universities Attended:

Diagnosis or Exceptionality (ADHD, etc., if applicable):

Previous semester GPA:

Cumulative GPA:

Email Address:

APPENDIX B: POST-STUDY QUESTIONNAIRE

HOPS Post-Study Questionnaire   Participant # _____

1. How would you rate the helpfulness of this study in terms of helping with your

    daily life?

    | 1 | 2 | 3 | 4 | 5 |
    | Not very helpful | | | | Very Helpful |

2. What percentage of the out of class work did you complete in an average week?

    10   20   30   40   50   60   70   80   90   100

3. How likely would you be to recommend this study to a friend?

    | 1 | 2 | 3 | 4 | 5 |
    | Not very likely | | | | Very Likely |

4. List 2-3 things that would have helped you increase your out of class
    participation.

    1.

    2.

    3.

APPENDIX C: IRB APPROVAL

ACTION ON EXEMPTION APPROVAL REQUEST

Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu | lsu.edu/irb

TO: George Noell
          Psychology

FROM: Dennis Landin
           Chair, Institutional Review Board

DATE: September 24, 2014

RE: **IRB#** E8936

TITLE: Examination of the Relationship Between Parental Involvement and Homework Achievement
            When Implementing the Homework, Organization, and Planning Skills (HOPS) Intervention

New Protocol/Modification/Continuation: New Protocol

Review Date: 9/23/2014

Approved_____X_____ **Disapproved**_____

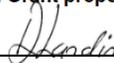**Approval Date:** _9/23/2014_   **Approval Expiration Date:** _9/22/2017_

Exemption Category/Paragraph: _1a_

Signed Consent Waived?: _No_

Re-review frequency: (three years unless otherwise stated)

LSU Proposal Number (if applicable): _____

Protocol Matches Scope of Work in Grant proposal: (if applicable) _____

By: Dennis Landin, Chairman _____

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is CONDITIONAL on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE:
*All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS
(45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office
or on our World Wide Web site at http://www.lsu.edu/irb

APPENDIX D: LESSONS PLANS

Session One: (HOPS Session 1)
- Review the study and HOPS system with participants
- Get informed consent
- Fill out demographic questionnaire and LASSI pre-test
- Quick preview of self-monitoring concept. "What is self-monitoring" discussion
- Homework: Mark down every time you write an assignment down, plan ahead for an activity, or talk to a professor outside of class without changing behavior on purpose (Will serve as baseline)

Session Two: (HOPS Sessions 2-6, 12)
- Check homework, answer questions
- Put together binder and planner
- Introduce self-monitoring:
    - 3 goals
        - Organization
        - Time Management
        - Professor Interaction or other personal academic goal
    - Develop points and rewards menu
    - Make overall goal based on Baseline data
- Introduce Weekly Assignment Tracking Sheet and Points Tracking Sheet
- Homework: Track points and be ready to talk about professor interaction

Session Three: (HOPS Sessions 7-9, 14)
- In-session candy motivator added for participation
- Review Homework and answer questions
- Trouble shoot difficulties/pre-thinking for session on barriers to success
    - What are the easy/hard parts of the program?
    - Do you think you need to adjust goals/self-management plan?
- Introduce Time Management Skills
    - Planning for tests, homework assignments in advance
        - Time, Place, and Method
        - Looking at monthly schedule to see what is ahead
    - Long-term projects planning
        - Separate tasks with individual deadlines
    - Evening Schedule
        - Specificity of activity/not "Studying"
        - Discussion of current after school schedule- How are you spending your time?
    - Add to points menu
        - Test and Quiz recording with Time, Place, and Method one point each

- Homework: Add in time management to rewards and points menu and track progress

Session Four: (HOPS Sessions 10, 11, 14)
- Review Homework and answer questions
- Discussion: Barriers to Success/Trouble shoot difficulties with program
  - Motivation
    - Change reinforcement system
    - Add others to keep you accountable
    - Notice when it is helpful (see data graphing)
  - Embarrassment
    - Plan your question(s) for your professor
    - Imagine the interaction going well before
  - Forgetting
    - Reminders for self: sticky notes, multiple reminders, alarms
  - Time
    - Estimating length of activities
- Update self-management plan based on discussion
- Graph own data points, modify goals for data if needed
- Homework: Put one reminder in place for a task you have forgotten to do and record it's helpfulness
- Set group goal: If everyone does the outside work for the next week, the group earns X. Link this to accountability lesson.

Session Five: (HOPS Session 13, 15)
- Review Homework and answer questions
- Trouble shoot difficulties/barriers to success with program
  - Discuss how behavior changed when looking for barriers
  - Adjust self-management plan as needed
- Graph progress with points system and review goals from Session 1
- Long-term goal setting
  - Planning ahead for graduate school, work, etc.
    - Letters of recommendation
    - Volunteer opportunities
    - Research
    - Course sequence
  - Consequences of social media
- Discuss termination of group
  - Review progress
  - What did you learn about behavior change for yourself and in general?
  - What was the hardest/easiest skill?
  - What did you like/dislike about the sessions?
  - What parts of the program are you likely to (not) continue?
- Homework: Think of 3 ways to keep yourself motivated to stay organized after the group is finished

Session Six: (HOPS Session 16)

- Review Homework and answer questions
- Celebrate success (group goal) and draw for gift cards
- LASSI Post-test

APPENDIX E: CONSENT FORM

1. **Study Title:** Examination of the Effects of the Homework, Organization, and Planning Skills (HOPS) Intervention on Undergraduate Students

2. **Performance Sites:** The study will be conducted at Louisiana State University

3. **Contacts:** The following investigators are available for questions about this study, M-F, 8:00 am – 4:30 pm: George Noell, Ph.D. (225) 578-4119 or Ashley Bordelon, M.Ed. (225) 578-7792

4. **Purpose of the Study:** This study will help determine if the Homework, Organization, and Planning Skills (HOPS) intervention is effective for undergraduate students.

5. **Subjects:** Undergraduate students will participate.

   Inclusion Criteria: Students must be enrolled full-time at Louisiana State University.

6. **Number of Subjects:** 40

7. **Study Procedures:** Students selected will fill out a questionnaire regarding learning and study strategies. The questionnaire should take approximately 45 minutes to complete. Students will then be placed into a group setting and will receive 16, 20-30 minute sessions, which may be combined, of the Homework, Organization, and Planning Skills (HOPS) intervention.. After all the sessions have been completed, the same questionnaire will be given to students to fill out. Overall duration of the program will depend upon student scheduling, but may range from 4 to 16 weeks to complete.

8. **Benefits:** Completion of this project will help us better understand how learning and study skills affect student achievement. Additionally, it will provide insight into how teaching organizational skills differs for undergraduate students, as previous research has focused on middle school students.

9. **Risks/Discomforts:** There are no known risks associated with participation in this study.

10. **Right to Refuse:** Participants may choose not to participate or to withdraw from the study at any time without penalty.

11. **Privacy:** Results of the study may be published, but no names or identifying information will be included in the publication. Any records with your name will be maintained in a locked file cabinet in the research lab of Dr. George Noell at

Louisiana State University. Participant identity will remain confidential unless law requires disclosure.

12. **Financial Information:** No compensation will be provided for participation. Students may receive small rewards for participation throughout the study, but this is not guaranteed.

The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators. If I have questions about subjects' rights or other concerns, I can contact Robert C. Mathews, Chairman, LSU Institutional Review Board, (225) 578-8692, irb@lsu.edu, www.lsu.edu/irb. I agree to participate in the study described above and acknowledge the researchers' obligation to provide me with a copy of this consent form if signed by me.

Subject Signature: _____ Date: _____

The study subject has indicated to me that he/she is unable to read. I certify that I have read this consent form to the subject and explained that by completing the signature line above, the subject has agreed to participate.

Signature of Reader: _____ Date: _____

VITA

Ashley Bordelon graduated with a Bachelor of Science degree in psychology in 2004 from Louisiana State University and Master of Education degree in counselor education from Southeastern Louisiana University in 2006. After working as a behavioral therapist, she enrolled in the school psychology doctoral program at Louisiana State University in 2013. Her research interests include transition planning for persons with disabilities. Ashley is currently completing her third year of graduate school and intends to complete her doctoral degree with an emphasis in behavioral interventions for children.