A Time-Management Procedure for Helping Graduate Students Accomplish Academic Tasks

Yousef Abdulwahab Abuhmaidan

Western Michigan University

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A TIME-MANAGEMENT PROCEDURE FOR HELPING GRADUATE STUDENTS
ACOMPLISH ACADEMIC TASKS

by

Yousef Abdulwahab Abuhamidan

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of the Master of Arts
Department of Psychology

Western Michigan University
Kalamazoo, Michigan
December 1986
A TIME-MANAGEMENT PROCEDURE FOR HELPING GRADUATE STUDENTS
ACCOMPISH ACADEMIC TASKS

Yousef Abdulwahab Abuhamdan, M.A.
Western Michigan University, 1986

The purpose of this study was to investigate the effect of 
time-management and a task checklist on task completion, the amount 
of study time and students' grade point average (GPA). A package 
consisting of a time-management calendar and a task checklist was 
provided to five Jordanian students. A multiple-baseline across-
subjects design was used. Individual weekly meetings were conducted 
to assess the progress of the students on the use of the time-manage-
ment calendar and task checklist. Students were asked to bring proof 
of accomplishments for the completed tasks. During the study the com-
pletion of tasks went from 64.6% to 92.2% following intervention, 
while the amount of time spent studying went from 70.8% to 95.0%. The 
grade point average (GPA) was slightly increased for four of the 
students and slightly decreased for one student.
ACKNOWLEDGEMENTS

I would like to express my gratitude to Dr. Richard Malott for his extensive guidance whose timely involvement in this thesis through helpful suggestions and constructive feedback has enriched my experience at Western Michigan University. I would also like to express my appreciation to the thesis committee, Dr. Dale Brethower and Dr. Howard Farris, for their guidance and constructive feedback.

I would like to thank Marsha Benz for her supervision and Connie Wittkop for her advice and corrective feedback. I would like to thank Carla Jones for her help and feedback. I would also like to thank Maria Garcia for her supervision and help through the supervisory system. My thanks to the Jordanian students who participated in this study. I would never forget to thank my wife for her great assistance and patience throughout this thesis.

Yousef Abdulwahab Abuhmaidan
DEDICATION

This work is dedicated to my parents whose discipline, love, and encouragement have helped me to complete this work.
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CHAPTER I

INTRODUCTION

Graduate students often complain that they have difficulty managing their time so that they will have sufficient time to complete their studies. For example, prior to the implementation of this study, at a meeting of 10 Jordanian graduate students at Western Michigan University in the United States, eight of the students suggested that they had serious time-management problems and wanted help in this area.

The problem, however, may not be one just of available time, but may be one of misuse of available time. That is, many factors may be responsible for a student's failure to complete tasks. For example, Dean, Malott and Fulton (1983) have noted that:

(a) Reinforcers inherent in the study materials may be weak and infrequent (Michael, 1974), (b) external sources of reinforcement for studying are usually absent (Reese, 1978, pp. 54-58), (c) test scores are usually too delayed to effectively reward studying or to punish insufficient studying (Malott, Tillema, & Glenn, 1978, pp. 165-184), and (d) reinforcers for many behaviors incompatible with studying are usually numerous and immediately available (pp. 77-81).

Therefore, the problem of a student not completing course material needs to be confronted directly. A time-management system should help students allocate their time more effectively, thereby allowing them to increase the rate of assignment completion, master their subject matter more effectively, earn better grades, and be more effective professionals upon graduation.
McCay (1970) stated, "The principle of overcoming time pressures is this: Time is related to output—increase your output and you will have more time. A feeling of being short of time is very often a symptom of accumulating obsolescence of your knowledge and skills" (p. 18).

Those using self-management techniques share a common desire to attain more of their long-term goals. For example, Fredrikson (1982) states, "The ultimate goal in a behavioral self-management program is to change one's behavior to conform to personally identified goals" (p. 220). Williams (1985) talks about self-management as a lifestyle and not only a technique, and contends that any person can use a time-management system to improve his or her performance.

The effect of time-management, self-management, and checklists on task completion and academic performance has been studied by a number of researchers. Dean et al. (1983) evaluate a self-management training program for increasing academic performance. In the first experiment, students used a notebook called a self-management calendar to record all self-management activities. The results show that eight of the nine students showed increased academic performance. The nine students during baseline had a median quiz score of 70.0%. Following intervention it was 88.0%. The second experiment was conducted by evaluating three self-management procedures. These procedures were hourly self-recording, student-developed rule statements, and an environmental management procedure. Eight out of nine students improved their academic performance while using these techniques.
Bacon, Fulton, and Malott (1982) showed that a checklist is effective for improving staff performance. His procedure involved the following three components: Task definition, recording responses on a checklist, and periodic supervisory review. The percentage of tasks completed increased by 28.5% when the checklist was used.

Dillon, Kent, and Malott (1980) showed that an incentive (a letter of recommendation) increased the rate of task completion when it was available, and task completion decreased when the incentive was absent. In addition, written task specifications, weekly sub-goals and deadlines, and weekly feedback also resulted in a higher rate of completion of the weekly research tasks.

Miller and Gimpl (1972) investigated verbal self-control of the amount of study behavior emitted by college students. Groups increased study time by 61.3% from week one to week three. The use of self-instruction alone increased the amount of study behavior by 39.9%.

Champlin and Karoly (1975) required students who had low scores on the first test of an introductory psychology class to enter a training program and participate in developing a negotiable contract. They concluded that students were more likely to comply with the contract if they actively participated in the development of the contract than if they were merely assigned tasks to complete.

Larrow (1980) investigated the effect of a treatment package consisting of contingency contracting, graphing, and self-management lectures on academic performance. Larrow found that subjects with low
grade point averages (GPA's) were the main beneficiaries of this treatment package.

Most of the prior research indicates the importance of time-management and self-management techniques in improving academic performance and task completion. Previous studies also indicate the importance of time-management and checklists when used with low GPA students.

The present study was designed to investigate the effect of a package consisting of both a time-management calendar and a checklist for task completion as compared to past studies which employed different treatment packages. However, while previous studies have focused on improving the academic performance of American students, this study focused on improving the academic performance of Jordanian graduate students. In addition, most of the previous studies were employed to improve study skills for students on probation, while this study focused on employing self-management techniques with students of "normal" achievement histories in an attempt to increase rate of task completion and study hours, which would ultimately lead to an increase in their GPA's.
Subjects and Setting

Subjects

The subjects consisted of five male Jordanian graduate students between the ages of 24 and 30. The researcher attended a monthly Jordanian meeting held on Western Michigan University's (WMU's) campus and asked for volunteers to participate in a study designed to increase the amount of time spent in study and academic task completion. Prior to the onset of the study, each student signed an informed consent sheet.

Setting

This study was conducted at WMU. The first group meeting within the experiment was held in the main library. Individual weekly meetings were chosen and agreed upon according to each student's schedule. These meetings were held at the students' apartments on Saturdays. The researcher met with each student on an individual basis.
Procedure

Experimental Design

The experimenter employed an experimental design consisting of multiple-baseline across subjects. In the baseline phase, students simply recorded the weekly number of completed tasks of the required tasks. In the intervention phase, the students received a time-management package.

Baseline

Prior to treatment, all subjects met with the experimenter in the main library for initial instructions. This included a form which contained questions about the number of classes they were enrolled in for the semester and their GPA of the previous semester. The students were randomly placed in one of three groups, so that after three weeks of baseline, the first group received the treatment package; after four weeks of baseline the second group received the time-management package. The third group received it after five weeks of baseline. In the baseline period, students were asked to write down on a sheet of paper the number of tasks they should complete daily and the number of tasks that were actually completed. The experimenter praised them orally when they provided this sheet in the weekly meeting regardless of their accomplishments. They also recorded their daily study time.
**Time-management Package**

The researcher employed a time-management package consisting of a semester assignment chart, a weekly calendar, and a task checklist. The semester assignment chart (Appendix B) was designed to help students keep records of due dates for tasks to be accomplished throughout the semester. Students were asked to record the dates of any major assignments (e.g., papers due and tests) on this assignment chart. On the weekly calendar (Appendix C), the students indicated what tasks were to be completed. The students were also required to record the time spent in completing the tasks for each class on the calendar. The checklist (Appendix D) was divided into six columns. In the first column, the students wrote the classes taken that semester. In the second column, they indicated the days they had classes. In the third column, they wrote the required tasks for every class according to the class syllabus. In the fourth column, they noted the proof of accomplishment which indicated which tasks had been accomplished. The proof of accomplishment was specified as flashcards, notes, problems solved, or term papers completed. In the fifth column, they indicated the deadline for the completion of every task, which should be before the day of that class. In the last column, they placed a check for every completed task or made comments.

**Dependent Variables**

The dependent variables consisted of the percentage of completed tasks (the number of completed tasks divided by the number of possible
tasks. A second dependent variable was the number of study hours. A third dependent variable was the student's GPA during the study compared to the GPA prior to this study.

The researcher defined "task" by an assignment which was required for the enrolled class such as reading chapters, writing a term paper, or solving problems. Each completed academic task was verified by a proof of accomplishment. The number of flashcards or number of problems (tasks) were agreed upon between the researcher and the student according to each task requirement. The researcher checked these proofs of accomplishment and the accuracy of self report by asking students questions about these tasks (i.e., define some terms or solve a problem). The students specified the tasks on a weekly basis. A task was considered accomplished if it was completed by the deadline which was already specified in the checklist for each task during that week. The researcher met with the students during the experiment without any previous notice to check the accuracy of the self reports on the average of once a week for each student. A Jordanian Ph.D. student, who was not involved in the present study, was selected as an independent observer. Instructions were give to the independent observer by the researcher, which included examples and non-examples of the completed proof of accomplishments. The independent observer attended the weekly meetings with the researcher to check the reliability of the data being collected. The observer checked the proof of accomplishments and made a decision on whether each task was completed. Interobserver agreement was calculated by using the following
formula: \[ \frac{A \times 100}{A + D} \]

where A refers to agreement and D to disagreement. Throughout the 15 weeks of this study, interobserver agreement on the proofs of accomplishment was 94.0%. However, the reliability taken in the use of the time-management package (independent variable) was 86.0%. Many confounding variables could have occurred (e.g., the subjects recording their time or the completion of the task inaccurately). This variable was controlled with randomly unexpected visits to check the students' accuracy of recording and to avoid the last-minute recordings prior to the weekly meeting.

**Human Subject Protection**

The researcher kept all the names and addresses confidential. The information was used only for experimental purposes. The research was designed to help the students improve their academic performance by increasing the time spent in reading and completing tasks. In this study no risks were foreseen for the students. The researcher told the subjects about the goal of this study and its benefit to the students. Students allowed the researcher to visit them without any previous notification (see Appendix D).
CHAPTER III

RESULTS

Task Completion

All the subjects increased their percentages of completed tasks when they started using the time-management calendar and the task checklist. The overall average increase was 27.6% (from 64.6% to 92.2%) (See Table 1).

Table 1 shows the actual percentage of completed tasks during baseline and after intervention.

Table 1
Mean Percentage of Completed Tasks

<table>
<thead>
<tr>
<th>Student</th>
<th>% of Completed Tasks During Baseline</th>
<th>% of Completed Tasks During Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>79.0%</td>
<td>98.0%</td>
</tr>
<tr>
<td>2</td>
<td>67.0%</td>
<td>95.0%</td>
</tr>
<tr>
<td>3</td>
<td>46.0%</td>
<td>91.0%</td>
</tr>
<tr>
<td>4</td>
<td>60.0%</td>
<td>91.0%</td>
</tr>
<tr>
<td>5</td>
<td>71.0%</td>
<td>86.0%</td>
</tr>
<tr>
<td>MEAN</td>
<td>64.6%</td>
<td>92.2%</td>
</tr>
</tbody>
</table>
The students had a median completed tasks of 67.0% in the baseline. Following intervention the students had a median of 100.0% (See Figure 1).

Study Hours

The students were asked to record their weekly study plan, including the number of hours they planned to study. The students were also asked to record, on a daily basis, their actual study hours. They could see the percentage of actual-versus-planned hours of studying (See Table 2).

Table 2
The Percentage of Study Hours Reported Relative to the Study Hours Planned

<table>
<thead>
<tr>
<th>Student</th>
<th>Baseline</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>69.0%</td>
<td>98.0%</td>
</tr>
<tr>
<td>2</td>
<td>73.0%</td>
<td>92.0%</td>
</tr>
<tr>
<td>3</td>
<td>76.0%</td>
<td>92.0%</td>
</tr>
<tr>
<td>4</td>
<td>67.0%</td>
<td>98.0%</td>
</tr>
<tr>
<td>5</td>
<td>69.0%</td>
<td>95.0%</td>
</tr>
</tbody>
</table>

| MEAN    | 70.8%    | 95.0%        |

The percentage of study hours reported versus the planned study hours increased for each student. The overall average increase was 24.2% (from 70.8% to 95.0%).
Figure 1. The Median of the Percentage of Completed Tasks for Each Subject.

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Grade Point Average

The third dependent variable was the GPA of the Winter semester for each student compared to this Fall semester's GPA. Four out of five students had a slight increase in GPA, and for one student a slight decrease in GPA. (See Table 3).

Table 3
Grade Point Average (GPA)

<table>
<thead>
<tr>
<th>Student</th>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.25</td>
<td>3.30</td>
</tr>
<tr>
<td>2</td>
<td>3.20</td>
<td>3.50</td>
</tr>
<tr>
<td>3</td>
<td>3.50</td>
<td>3.30</td>
</tr>
<tr>
<td>4</td>
<td>3.50</td>
<td>3.67</td>
</tr>
<tr>
<td>5</td>
<td>3.65</td>
<td>4.00</td>
</tr>
</tbody>
</table>

| Total   | 3.42 | 3.56   |

Social Validation

All of the students filled out during the intervention an evaluating questionnaire on the effect the time-management calendar and checklist had on their performance. (See Table 4.)

A detailed, free-form evaluation of the use of the time-management calendar and checklist was requested from each student. The students were asked about the best and the worst features of the program. All of the students responded that the best
Table 4
Social Validation

<table>
<thead>
<tr>
<th>Question</th>
<th>% Yes</th>
<th>% No</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Did you use a calendar last semester*?</td>
<td>20%</td>
<td>80%</td>
</tr>
<tr>
<td>- Did you use any form of checklist last semester?</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>- Do you think the time-management calendar was helpful when organizing your time?</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>- Compared to last semester, did you complete more tasks this semester?</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>- As the semester progresses, are you increasing the number of study hours?</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>- Does seeing the graph of study hours motivate you to work harder to increase the number of study hours?</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>- Did you complete your tasks 90% of the time before the task due time?</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>- Did you learn any new study techniques?</td>
<td>80%</td>
<td>20%</td>
</tr>
<tr>
<td>- Do you plan to keep using the calendar?</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>- Do you plan to use the checklist?</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>- Do you think that this program will help you improve your academic performance?</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

*Last semester refers to the semester before this study was conducted.
feature was the assistance this study gave them in dividing their time and helping them to organize their activities. Some of the students said it helped them be aware of all the required tasks and their due dates. The proofs of accomplishment were of great help to the students when they took advantage of them for preparing for tests and exams. The worst feature, reported by the students, was that planning was hard and aversive; some said it put them under stress and made them anxious.
CHAPTER IV

DISCUSSION

The present study was conducted to determine the effect of a time-management package on task completion and academic performance. Past studies have produced conflicting results. Some studies have shown that self-management training has effectively increased daily study time (Miller & Gimpl, 1972) or has a significant effect on academic performance (Beneke & Harris, 1972), while some studies showed no effect of self-management on academic performance (McReynolds & Church, 1973).

In the present study, the time-management package was an effective method for increasing the number of tasks the students completed, and the number of hours they studied. In addition, the students' GPA's had slightly increased. This slight increase in GPA is consistent with other results of previous research (Ziesat & Rosenthal, 1978). It was possible that the treatment phase was too brief. The experimenter helped students to better structure their time by providing behavioral consequences for assignment completion more frequently than would normally be the case, by helping them establish realistic deadlines, and by providing the students with feedback on their performance. The students found the weekly meetings with the experimenter positive, and compliance with the procedures was good.

However, a few additional variables are of interest for further research. For example, what is the effect of showing the average
group performance as well as the individual performance? This may have had an effect on the results. This variable may have motivated the students to improve their performance to compete with each other, which may account for the obtained results. Second, the present study did not examine the accuracy of self-report of the hours studied. However, random visits to the students throughout the semester may have helped to minimize this limitation. Finally, there were no formal incentives that were used in this study. Only praise from the experimenter and the knowledge that the results of this study would be sent to Jordan could have functioned as incentives, even though the students would not be identified.

Any procedure used to change the target behavior needs a maintenance system. In this study, the researcher attempted to teach students to alter their problem behaviors such as procrastinating by having them use the calendar to organize their time. Therefore, using the calendar, planning, self-monitoring, and self-recording could potentially have helped them to acquire a set of skills that would be used when the formal procedures were no longer in effect. Possibly we have altered their repertoire and they will keep using this system.

An informal follow-up for two months was conducted one semester after this study was over with two students. The students kept the high rate of completed tasks and study hours. Incidentally, the researcher also used this behavioral time-management program and collected data on his own performance. He is continuing to use the time-management package and finds them quite useful. However, it is not easy to alter the students' repertoire, but hopefully we can train
students to state the rules that will help them achieve long-range goals. It will not immediately control their behavior, but it will be an indirect way to control the use of the self-management training.

Theoretical Analysis

The rules specifying time-managed behavior are difficult to follow. For example, "Work a specific amount of time on your assignment each day even though the ultimate due date for the assignment may be sometime in the distant future," and, "Complete each assignment a day in advance to ensure that you have a high-quality product." In general, pace your work at a steady rate rather than procrastinate until the last minute when you may not have enough time to do high-quality work.

These rules are difficult to follow because there is no effective immediate consequence for each individual act of studying or failing to study; rather, the important outcome of studying cumulates as a result of many combined instances of studying. For example, reading one paragraph five days before a test will have little impact on the student's ultimate performance; and, therefore, these are not reinforcing the results that immediately follow, and any aversive event normally follows failure to do that. But at the same instant the students might watch television while reading that paragraph and receive immediate reinforcement for that activity.

So the question is how did implementing this time-management procedure change the immediate contingencies of reinforcement and
punishment to increase the reward value of completing tasks and increasing of study hours.

The time-management program may have allowed for the conversion from hard-to-follow rules to easier-to-follow rules. Rules that specified clear-cut deadlines with clear-cut indicators of failure can become an aversive event when those deadlines are not met. Perhaps the Jordanian culture makes failure to follow rules especially aversive because rule compliance is a very important part of the Muslim religion. Unfollowed rules generated an aversive condition, and the act of complying with rules was reinforced by terminating that aversiveness.

The researcher would recommend that all new students enrolled in this university register for a one-credit-hour self-management training course. This will make them more aware of their tasks and how to organize their activities.

Furthermore, the researcher would suggest, for further research in this area, providing a contingency on failing to comply with the instructions. Another suggestion would be to implement a similar study with a different cultural group. Moreover, one could use a valuable incentive with another group.
REFERENCES


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Appendix A

Semester Assignment Chart
### Semester Assignment Chart

<table>
<thead>
<tr>
<th>CLASS</th>
<th>JANUARY (WINTER 1986)</th>
<th>FEBRUARY (WINTER 1986)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>S</td>
<td>M</td>
</tr>
<tr>
<td>--------</td>
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### Abbreviations:
- P: Paper
- E: Exam
- T: Test
- Pr: Presentation
- Q: Quiz
- FT: Final Test

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Appendix B

Weekly Calendar
Appendix C

Task Checklist Form
TASK CHECKLIST

NAME: ___________________________________

DATE: •  _______________________

WEEK NO.: _________

- Specify tasks for each class in which you are enrolled.
- Write "completed" in the comments column when the task is done as specified in the deadline.
- Have your proofs of accomplishment ready for the weekly meeting.
- Prepare the tasks that you want to do for next week.

<table>
<thead>
<tr>
<th>Class</th>
<th>Day</th>
<th>Tasks</th>
<th>Proofs of Accomplishment</th>
<th>Deadline</th>
<th>Comments</th>
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Total of Completed Tasks. . . . . . . . . . . .
Appendix D

Informed Consent Sheet
FROM: Yousef Abuhmaidan
TO: Jordanian Students at Western Michigan University
SUBJECT: Informed Consent Sheet

I am doing my thesis on a time-management calendar and task checklist to study their effects on academic performance and task completion. I chose this thesis topic because there is a high percentage of students procrastinating completing tasks. As a result of procrastination, students' study time is not organized and grades may be low.

Many studies have been conducted to investigate the effects of time management. It has been indicated that the reason for procrastination is lack of time management.

The researcher will provide you with a time-management calendar. A weekly meeting will take place in Waldo Library at Western Michigan University. You will receive feedback from the researcher, and you will be able to see your progress in a chart for the completed tasks.

You may withdraw from this study at any time. If you agree to participate in this study, sign the space indicated below.

Print Name ______________________ Signature ______________________ Date ________________
BIBLIOGRAPHY


Malott, R. W. (1986). The role of private events in rule-governed behavior. Unpublished manuscript, Western Michigan University, Kalamazoo, MI.


