

**Promoting Academic Achievement in the Middle School Classroom:  
Integrating Effective Study Skills Instruction**

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## **Abstract**

This study aimed to discover what study skills are most useful for middle school students, as well as strategies for integrating study skills instruction into the four main content area classrooms (English, math, science, and social studies) at the middle school level. Twenty-nine in-service middle school teachers participated in the study by either completing a questionnaire or participating in an interview. A content analysis of a study skills resource binder for teachers was also performed. Results indicate that while many study skills are important for middle school students to know and apply to their academics, those that involve higher order thinking skills or a deeper level of processing are most beneficial to students. Moreover, results suggest that many middle school teachers do not possess a clear understanding of study skills and, consequently, are ill-equipped to provide study skills instruction within their classrooms. As a result, teachers may need to receive more formalized study skills training in order to provide study skills instruction in their classrooms and help boost student learning and academic achievement in the core content areas.

## **Introduction**

An extensive body of research indicates that the knowledge and appropriate usage of study skills (also frequently referred to as study strategies) is an important factor in academic success (Meneghetti, DeBeni, & Cornoldi, 2007; Yip, 2007). Students who are exposed to a variety of study strategies and are able to properly select and apply them to their academic tasks are typically higher achievers than those students who use maladaptive strategies or do not use the study skills they possess effectively (Meneghetti et al, 2007). Consequently, it is important for students to begin developing study skills at an early age, ideally during early adolescence, so as to increase academic achievement during the middle school years and prepare students to be more independent and

skilled learners in their high school and college years. For the purposes of this study, the term “study skills” will be defined as “competence in acquiring, recording, organizing, synthesizing, remembering, and using information and ideas” (Proctor, Prevatt, Adams, Hurst & Petscher, 2006, p. 37).

Recent research on the frontal lobe of the brain suggests that early adolescents are not fully prepared to be self-regulated and independent learners (Boller, 2008). As a result, middle school students may struggle in selecting and applying appropriate study skills to their academic tasks. This suggests that in order for middle school students to develop a solid set of study skills, they need to receive study skills instruction on a regular basis, ideally in their core content area classrooms (English, math, science, social studies) where these kinds of skills could be regularly applied.

In this study, I sought answers to two main questions regarding study skills and instruction at the middle school level (specifically grades 6-8): (1) Which study skills are most useful for middle school students to possess and (2) how can core content teachers integrate study skills instruction into their normal classroom routines? By exploring what study skills middle school teachers perceive to be the most useful for their students, I hoped to pinpoint specific study skills or kinds of study skills that every core content area teacher could help students develop through in-class study skills instruction. Similarly, by investigating how teachers might already integrate this kind of instruction into their classrooms, I hoped to identify a set of strategies that teachers could use to make study skills instruction a regular part of their classroom routine.

Two major themes developed from the data obtained in this study. The first suggests that while teachers believe many study skills are useful for middle school students, those that they perceive to be the most useful, are skills that involve deeper levels of processing and higher order

thinking skills. The second major theme stemming from this study is the notion that many core content area teachers are not currently providing study skills instruction within their classrooms due, at least in part, to their own lack of knowledge regarding what actually constitutes study skills.

## **Literature Review**

Study skills research in general suggests that there is a strong correlation between study skills and academic achievement (Yip, 2007; Meneghetti et al., 2007; Cukras, 2006). For example, a study conducted by Meneghetti et al (2007) with a group of 354 students between the ages of 12 and 15, found that high achieving students are able to “recognize the utility of good strategies” and typically use good study skills over less effective study skills (p. 630). Furthermore, they discovered that successful students not only possess knowledge of good study skills but also the ability to select appropriate skills and monitor their usage while studying. Students who possess poor study skills, on the other hand, struggle to apply good study skills to their academic tasks, particularly those skills that involve cognitive and metacognitive processes such as monitoring comprehension while reading. These findings, consequently, suggest that in order to increase learning and achievement, lower achieving students need to develop study skills, specifically those that involve higher order/critical thinking skills.

Another study focusing on study skills and achievement conducted with second and third year undergraduate students at the University of Hong Kong found that though several factors contribute to academic performance, a student’s ability to effectively use study skills is a good predictor of academic success (Yip, 2007). Moreover, he found that study skills are strongly related to learning and achievement, and students should be taught basic study skills to increase their

academic performance. This suggests that if college students need a stronger set of study skills to tackle their academic tasks, then study skills instruction should be provided prior to students entering college, when they are in middle and high school. In doing so, students would not only develop valuable skills they could use in the lower grades but skills they could also apply to their future studies. This notion aligns with a study conducted by Simmons (2006) in which he found that many college students are not confident in their ability to study effectively, partially due to the fact that many never received any kind of formalized study skills instruction prior to college.

While developing study skills at the middle school level could lead to higher levels of achievement, students of this age need a substantial amount of instruction and monitoring in their academic tasks because the frontal lobe of the brain which controls executive functioning or one's ability to regulate his or her own behavior is not fully developed during early adolescence (Boller, 2008). Consequently, middle school students cannot be expected to develop and appropriately and consistently use a solid set of study skills without a significant amount of guidance. They need to receive study skills instruction in which the teacher not only models the proper usage of a variety of study skills but also monitors their application to ensure that they select appropriate skills and use them correctly. Moreover, it is important to link study skills instruction to content, as it is difficult for students to transfer these skills to their actual coursework when study skills are taught in isolation (i.e. in a separate study skills course) (Petersen, Lavelle & Guarino, 2006). Therefore, it would seem that the best place to provide study skills instruction is in the core content area classrooms of English, math, science, and social studies, where all students can apply these skills directly to the content they are learning within that particular classroom.

Though these studies point to the importance of study skills and instruction, they fail to address the specific needs of middle school students. The purpose of this study was to fill the gap in

research regarding what study skills are most important for middle school students to possess, as well as to discover ways for core content area teachers to effectively integrate study skills instruction into their classrooms.

## **Methodology**

### *Sample*

Participants were 29 middle school teachers (grades 6-8) from rural and suburban schools in Central New York teaching in one or more of the following subjects: English, math, science, social studies, and special education (see Tables 1 and 2). Twenty-three participants completed the questionnaire, while six participated in an individual or paired interview. The six interview participants were all as follows: two (2) English teachers, two (2) math teachers, one (1) science teacher, and one (1) special education teacher. Participants' teaching experience ranged from two (2) to 33 years of teaching at his or her particular grade level and subject ( $M = 11.4$  years of teaching). All six of the interview participants were middleclass Caucasians between the ages of 25 and 60.

**TABLE 1      Questionnaire Participants**

<b>Characteristic</b>	<b>Number</b>	<b>Percent</b>
Subject Taught		
English	5	22%
Math	6	26%
Social Studies	6	26%
Science	5	22%
All Four Subjects	1	4%
Grade Level Taught		
Six	4	17%
Seven	13	57%
Eight	10	43%

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\*Note: Percentages for grade level taught take into account participants who teach multiple grade levels. As a result, the sum of percentages for this category is over 100%.

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Prior to commencing the study, a research design was submitted to and approved by the Human Subjects Committee of my institution. Participants were then invited and informed about the purpose of the study through an email (Appendix A). Those who responded to the online questionnaire were assumed to have waived their consent. Participants who agreed to be interviewed were provided with an Informed Consent form prior to the interview (Appendix B). This informed consent explained the purpose of the study and assured participants that participation was voluntary, responses would remain confidential, and that they could withdraw from the study at any time without penalty. The study used a sample of convenience and, therefore, generalizability cannot be assumed.

**TABLE 2 Interview Participants**

<b>Characteristic</b>	<b>Number</b>	<b>Percent</b>
Subject Taught		
English	2	33%
Math	2	33%
Social Studies	0	0%
Science	1	17%
Special Education	1	17%
Grade Level Taught		
Six	2	33%
Seven	1	17%
Eight	3	50%

*Instruments*

Participants’ attitudes about the importance of particular study skills and study skills instruction at the middle school level was measured using a 27-item questionnaire (Appendix C). The first three items asked participants to provide information about the subject and grade level they currently teach, as well as the number of years they have been teaching that particular subject and grade. The next set of items asked participants to reveal how often they teach study skills in their

classroom and to rate their level of agreement with three statements pertaining to (1) the relationship between study skills and academic achievement, (2) their students' knowledge and effective use of study skills in general, and (3) their perceptions regarding the value of integrating study skills instruction into their classrooms. The final twenty questions on the questionnaire addressed ten specific study skills and asked participants to rate how useful each skill is for middle school students and how well their students are able to use each of the skills. Several of the ten study skills measured by the questionnaire replicated a study performed by Meneghetti et al , (2007) and are presented in Table 3.

**TABLE 3      Ten Study Skills Measured by Questionnaire**

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1. Observe title, subtitles, highlighted words, and figures prior to reading text
  2. Take notes on important details of text
  3. Monitor comprehension while reading
  4. Ask questions while reading
  5. Identify and highlight important details after first reading
  6. Create flashcards to learn important information
  7. Create graphic organizers to organize and learn information
  8. Write a summary of / paraphrase the text
  9. Memorize main points of a text using a trick (i.e. acronym)
  10. Repeat material after a certain amount of time
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The interviews addressed some similar questions as those presented on the questionnaire, such as which study skills work best in the middle school classroom (Appendix D). It also asked participants to tell which study skills they feel are least effective and to describe strategies for integrating study skills instruction into their normal classroom routines. Table 4 shows the five questions addressed in each interview.



**TABLE 4 Interview Questions for Middle School Teachers**

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1. Tell me what you do for study skills in your classroom.
  2. What skills / strategies work best?
  3. What skills / strategies do not work very well?
  4. Do you use (teach and monitor) these skills in your classroom?
  5. What specifically can be done to integrate study skills instruction into your classroom?
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To ensure accuracy and reliability, a pilot questionnaire was distributed to two middle school teachers prior to the start of the study. This allowed the final version of the questionnaire to be direct and unbiased. The questionnaire and interviews were also supplemented by the content analysis of a study skills binder, a binder created by a team of 6<sup>th</sup> grade teachers with resources for teaching and practicing study skills within the classroom. By analyzing the study skills resources in this binder, the data from the two primary instruments used in the study was further validated.

## **Analysis and Results**

### *Questionnaire*

The average responses to the likert-scale questions concerning 10 specific study skills were calculated for the purposes of determining which study skills teachers believe to be most useful for middle school students, as well as for comparing students' abilities to use each of the skills. Table 5 shows the average response for each of these questions.

Results revealed that teachers feel that all ten study skills are useful for middle school students to know and apply to their academic tasks, as each skill received an average response

between 3.95 and 4.52 out of 5, deeming them all “somewhat useful” or “useful” skills. Two study skills, however, received notably higher average responses than the others, and two received markedly lower average responses. The two skills that received the highest average responses in terms of usefulness were “taking notes on important details of text” ( $M = 4.52$ ) and “monitoring comprehension while reading” ( $M = 4.52$ ). The two skills that received the lowest average responses were “creating flashcards to learn important information” ( $M = 4.00$ ) and “memorizing main points of a text using a trick (i.e. acronym)” ( $M = 3.96$ ).

Results also revealed that teachers believe students could improve their ability to actually use the ten study skills. The average response for each question pertaining to students’ ability to effectively use each skill ranged between 3.30 and 3.78, indicating that teachers only “somewhat agree” that middle school students have the ability to effectively apply the study skills to their academic tasks. Though the results for each of these questions were relatively similar, two study

**TABLE 5 Average Responses to Questions about Specific Study Skills**

<b>Study Skill</b>	<b>Usefulness*</b>	<b>Effective Usage**</b>
1. Observe title, subtitles, highlighted words, and figures prior to reading text	4.22	3.52
2. Take notes on important details of text	4.52	3.30
3. Monitor comprehension while reading	4.52	3.35
4. Ask questions while reading	4.39	3.78
5. Identify and highlight important details after first reading	4.26	3.61
6. Create flashcards to learn important information	4.00	3.61
7. Create graphic organizers to organize and learn Information	4.22	3.48
8. Write a summary of / paraphrase the text	4.22	3.30
9. Memorize main points of a text using a trick	3.96	3.43
10. Repeat material after a certain amount of time	4.22	3.65

\* Question: How useful is the following study skill?  
Measured on a scale of 1-5, 1 being “Not at all Useful” and 5 being “Extremely Useful.”

\*\*Statement: My students are able to effectively use the following study skill.  
Measured on a scale of 1-5, 1 being “Strongly Disagree” and 5 being “Strongly Agree.”

skills received notably lower average responses. These two skills were “taking notes on important details of text” ( $M = 3.30$ ) and “writing a summary / paraphrasing text” ( $M = 3.30$ ).

### *Interviews*

The qualitative responses to the interview questions concerning which study skills are best for middle school students and strategies for integrating study skills instruction into the core content area classrooms were compiled and then grouped according to three major themes or types of skills: organization, motivation, and knowledge acquisition. Each of these themes was further broken down into subthemes. The theme of organization was broken down into the two subthemes of the organization of materials and the organization of ideas, while the theme of motivation was narrowed into three subthemes including fun activities, engaging multiple learning styles, and using different student groupings. Finally, the theme of knowledge acquisition was broken down into the subthemes of repetition, vocabulary, and various/other skills or strategies. The themes and subthemes are shown in Table 6.

**TABLE 6** Interview Themes and Subthemes

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<b>Organization</b>	<b>Motivation</b>	<b>Knowledge Acquisition</b>
<ul style="list-style-type: none"><li>• Materials</li><li>• Ideas/Information</li></ul>	<ul style="list-style-type: none"><li>• Fun Activities</li><li>• Different Groupings</li><li>• Engaging Multiple Learning Styles</li></ul>	<ul style="list-style-type: none"><li>• Repetition</li><li>• Vocabulary</li><li>• Various/Other Strategies</li></ul>

## *Organization*

The responses related to organization focused on students being able to organize either study/school materials or important information and facts. Though the organization of materials could be considered a study skill, this particular type of organization does not fall into the definition of study skills herein presented. The organization of information or ideas, on the other hand, does. Some of the organizational study skills participants believed to be valuable for middle school students included: creating chapter outlines or graphic organizers (i.e. Venn diagrams and concept maps) and highlighting main ideas and key words in a text.

The 6<sup>th</sup> grade math teacher interviewed commented extensively on the use of graphic organizers when responding to methods for integrating study skills instruction into the classroom. He revealed that he helps his students understand math concepts by modeling how to complete graphic organizers with math information and then instructing the students to complete the graphic organizers on their own while he monitors their progress. “I show students how [to complete the graphic organizer] for the first topic, and then they create their own for the rest...we always go over them in class to make sure they haven’t missed anything. I like it because it teaches the kids how to pick out details and take meaningful notes instead of writing down everything I say” (6<sup>th</sup> grade math teacher). In this way, this teacher not only helps his students develop the skills of organizing and using important information through graphic organizers, but he also provides them with precise notes that can be used when preparing for quizzes and exams. Consequently, this was his primary suggestion for how to integrate study skills into the classroom – have the teacher model how to use the skill and then allow students practice the study skill on their own.

### *Motivation*

This particular theme derived from the interview responses concerned strategies for engaging students in lessons and motivating them to learn content. Some of the strategies mentioned included: using different groupings of students when doing in-class activities, using multiple learning styles, and engaging students in fun learning activities. The 8<sup>th</sup> grade math teacher who was interviewed elaborated on how teachers can use fun activities to motivate students and help them comprehend content by providing an example of what he does in the classroom. He explained:

We were talking about parabolas today...and to begin the lesson I had the kids watch the NCAA tournament on the TV...Then we played basketball and I had them shoot baskets with wads of paper to my hoop in front of the classroom. (8<sup>th</sup> grade math teacher)

He further explained that by having the students engage in this kinesthetic activity, the students were able to actually visualize a parabola and understand how it is made. By doing this fun hands-on activity with his students, he was able to help his students grasp a difficult math concept.

### *Knowledge Acquisition*

The final theme in the interview responses was knowledge acquisition, which was further broken down into the subthemes of a) repetition, b) vocabulary, and c) various/other skills or strategies.

**Repetition:** Under the subtheme of repetition, participants described three specific ways in which teachers can help their students develop study skills by repeating information, ideas, and skills through regular classroom activities. One of the 8<sup>th</sup> grade English teachers mentioned the

importance of regularly using important vocabulary and modeling strategies in lessons, as this helps remind students of skills they need to be using while completing their class work. She explained:

One way I teach students to do this [employ strategies such as visualizing, making connections, asking questions, etc.] is through the use of reader-response journals. I read and respond with the students. I model my responses and identify the type of response (prediction, connection, etc.). The next step is to have students identify the type of response. Finally, students share their responses. Initially, I comment on the responses and identify the type the student has written. If a student has written a summary or retelling of the story, I offer suggestions for taking the “response” (which in this case is not a response) to the next level. Students quickly become adept at identifying response types and writing different types of responses. (8<sup>th</sup> grade English teacher)

A more specific idea for integrating study skills instruction into the content area classrooms through repetition was provided by the 6<sup>th</sup> grade special education teacher. She suggested that teachers focus on one study skill each week, model it for students, and have students practice the skill each day with the content being learned. Teachers could also model the skill more than once, allowing students to better understand how to use the skill themselves.

The final strategy identified for helping students develop skills for knowledge acquisition through repetition was using different learning styles. No specific examples were provided for this strategy.

**Vocabulary:** The vocabulary subtheme focused specifically on skills or strategies that can be used to help students learn vocabulary. The skills or strategies participants mentioned within this category were flashcards, quizzes, games, and illustrations. Several teachers mentioned using

flashcards, while the other strategies were only mentioned by one or two of the interview participants. The responses pertaining to learning vocabulary frequently overlapped with the subtheme of repetition, as many of the participants noted that the best way to learn vocabulary is by repeating the words and definition through a variety of different methods. The special education teacher explained, “constant repetition of information is the best way to do it, but in multiple ways – like flashcards, then charades or something, and an auditory piece...”

**Other Skills and Strategies:** The final subtheme in the knowledge acquisition category was various / other skills or strategies. This subtheme contained skills or strategies that did not fit into one of the other categories. The two specific study skills mentioned in this category were note-taking and SQ3R (a reading strategy that stands for Survey, Question, Read, Recite, Review).

### *Study Skills Resources*

The 6<sup>th</sup> grade study skills binder was analyzed by reviewing the teacher resources within and determining which study skills were addressed most heavily. The three study skills related to this study that received the most attention in the study skills resource binder were note-taking, test-taking, and listening skills. The resources for these particular study skills were mostly worksheets for students and teachers to use when practicing each of the skills. For example, included in the binder was an activity in which the teacher instructs the students to draw certain shapes and lines on a piece of paper (“Draw a circle. Add a diameter...”) and then compares the students’ resulting diagrams with a master version of the diagram. Through this activity, teachers can measure students’ listening skills and their ability to follow directions.

## Discussion

### *Effective Study Skills*

The first goal of this study was to discover study skills that are valuable for middle school students to possess. Though participants noted that many study skills are useful for middle school students to know and apply to their academics, those that received the highest average responses on the questionnaire (taking notes on important details of text; monitoring comprehension while reading) were those that typically involve higher order thinking skills or a great deal of self-regulation. Appropriately, research has shown that metacognitive processing is the best way to engage in effective and meaningful learning (Meneghetti, et al, 2007). The study skills that received the lowest average responses in terms of usefulness (creating flashcards to learn important information; memorizing main points of a text using a trick), on the other hand, are skills or strategies that require basic recall of information rather than the ability to process information and monitor learning. Coincidentally, the skills that received the lowest rating in terms of students' ability to effectively use them were also skills that involve deep processing or the ability to monitor learning (taking notes of important details of texts; writing a summary / paraphrasing a text).

The difference in usefulness of each skill suggests that the skills that benefit middle school students most and lead to higher levels of achievement are those that require critical thinking and the ability to monitor and regulate one's own understanding and learning. These results align with a study conducted by Meneghetti et al, (2007) in which they found that higher achieving students were better able to use study skills that involve a greater depth of processing than low achieving students.



These very skills, however, are those that are the most underdeveloped in middle school students according to participants' responses. This may be a result of two things: (1) the level of skill and self-regulatory abilities that are needed to use and maintain these particular study skills and (2) teachers not focusing on developing these kinds of skills within the classroom. For example, though creating flashcards to learn information received one of the lowest ratings on the questionnaire, several teachers who were interviewed mentioned this as a good study strategy and noted that they use it within their own classrooms. Only one participant, an 8<sup>th</sup> grade English teacher, mentioned helping her students learn how to monitor comprehension while reading, and only two cited note-taking as being an important skill for middle school students to possess. Therefore, though students may not be prepared to be completely independent learners at the middle school level, their inability to consistently and effectively use study skills that involve higher order thinking and deep processing may be linked to these skills simply not being taught.

### *Strategies for Integration*

While the second question driving this study focused on exploring strategies for integrating study skills instruction into the middle school classroom, few ideas pertaining to this question were obtained. The one teacher who suggested teaching a study skill each week and practicing it with the content being learned in each core content class (a suggestion also made by Boller, 2008) was a special education teacher and therefore did not have any experience teaching a study skill to an entire general education class and then monitoring the students' application of the skill. Therefore, while theoretically it is a good strategy for integrating study skills instruction into core content area classrooms, this study provides no evidence that it actually works. The only other suggestion provided for integrating this kind of instruction into English, math, science, and social studies

classrooms was a simple, yet noteworthy strategy: model how to use a skill in front of students and then give them several opportunities to practice it on their own with teacher support.

Some participants had difficulty discussing the topic of study skills and inadvertently provided examples of motivational and instructional techniques they use in the classroom rather than study skills they help their students develop and use on their own. The entire theme of motivation derived from the interview responses focuses on these instructional techniques. The strategies offered for engaging students in material and motivating them to learn are significant, as motivation has been found to play a part in academic success (Yip, 2007). The responses related to motivation, however, reveal that some teachers do not possess a concrete understanding of what study skills are, and consequently are unprepared to provide study skills instruction in their classrooms without further developing their own knowledge and practice regarding study skills. Moreover, these responses suggest that some teachers, who actually believe they are teaching study skills in their classroom, in reality are doing something very different.

This lack of understanding regarding study skills and study skills instruction must also be taken into account when reviewing the results of the questionnaire. Though 47% of participants said that they always or almost always teach and monitor the use of study skills in their classrooms, the true number of participants who provide this type of instruction is probably much lower. This could potentially mean that well over half of the participants only sometimes or almost never teach study skills in their classrooms. These results align with Simmons' (2006) study in which 205 out of 254 (81%) college students surveyed reported that they never received any kind of formal training on how to study effectively during high school. Consequently, this study confirms that many students are not being provided with study skills instruction prior to college. This is likely a result of schools

not offering separate study skills courses or, in the case of the present study, core content teachers not integrating this kind of instruction into their classrooms.

### *Limitations*

While the results of this study offer some valuable information pertaining to study skills and study skills instruction at the middle school level, three main limitations prohibit the generalizability of the results. The first limitation, using a sample of convenience, caused the sample size to be small and the content areas associated with the participants to be unequally represented. While a fairly even number of teachers from each of the four content areas participated in the questionnaire, not all of the subjects were represented in the interviews. More specifically, an interview was not conducted with a social studies teacher, as it was with at least one teacher from each of the other three content areas (English, math, and science).

The second limitation of this study was the different definitions of study skills held by interview participants. Presenting a clear definition of study skills to these six participants may have helped direct their responses and provided more concrete information about integrating study skills into the middle school classroom.

Finally, the third limitation of this study involved using an online computer program to create and distribute the questionnaire. This particular program only allowed qualifiers to be placed on the lowest and highest numbers on the likert scale questions (i.e. 1 – strongly agree; 5 – strongly disagree), forcing participants to assume what the other numbers (2, 3, & 4) represented when responding to these questions. To make the discussion of the data obtained from these questions easier, qualifiers were developed after the questionnaires were completed. This, however, may have

skewed the data, as participants may have thought the numbers they chose for the answers represented something other than what they actually signified.

### *Implications*

The present findings suggest that because study skills are so closely linked with academic success and many middle school students are not currently using study skills effectively, integrating study skills instruction into the core content area classrooms at the middle school level could lead to higher levels of achievement. Moreover, helping students develop study skills that involve higher order thinking skills rather than just basic recall skills will provide students with the ability to monitor and increase their level of learning in several different subject areas not only at the middle school level but also in high school and beyond. As a result, teachers need to have a clear understanding of what constitutes a study skill and ought to be more thoroughly equipped to provide study skills instruction within their classrooms. For pre-service teachers this might be accomplished through study skills training in college education programs, and for in-service teachers, through professional development workshops.

### *Recommendations for Further Research*

To increase the body of knowledge on study skills and study skills instruction at the middle school level, continued research on what particular study skills middle school students should possess and strategies for integrating study skills instruction into core content area classrooms is necessary. However, this research should extend beyond just teachers' perceptions of study skills and study skills instruction and also engage students, as this will lead to a greater knowledge of which study skills middle school students really need to develop in order to enhance their learning and increase their level of achievement. Moreover, in-depth research focused on teachers'

knowledge of study skills and study skills instruction could provide valuable information about teachers' understanding of the definition and purpose of study skills and lead to further research on how to appropriately equip teachers to provide study skills instruction within core content classrooms. This is an especially important component of study skills research because without teachers who are equipped to teach study skills, study skills instruction in core content classrooms will never become a regular practice and students will likely continue to approach their academics with an underdeveloped set of study skills.

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## Appendices

<b>Appendix A</b>	Emails to Teachers
<b>Appendix B</b>	Informed Consent
<b>Appendix C</b>	Questionnaire
<b>Appendix D</b>	Interview Guide



## **Appendix A**

### **Emails to Teachers Regarding Questionnaire**

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#### **Email #1**

Dear Teacher,

As part of the [REDACTED] Curriculum & Instruction Master's Program, I have prepared a study that is designed to explore how study skills instruction can be integrated into the four major content area classrooms (English, math, science, and social studies) at the middle school level. I am contacting you to request your participation in the study.

If you are willing to participate in this study, please take a few minutes to complete the short [online study skills questionnaire](#). This will provide information about what study skills are useful for middle school students to possess and your students' current ability to effectively use particular study skills. Participation in this study is voluntary, and all responses will remain anonymous.

Thank you for your time. I look forward to your response!

[REDACTED]

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#### **Email #2**

Dear Teachers,

Thank you to those of you who have taken the time to take the online Study Skills in the Middle School Classroom questionnaire to assist with my graduate research at [REDACTED]. If you have not yet taken the short questionnaire and you are willing to be a part of this important research, please visit the page below to complete the questionnaire. Please remember, all responses will remain anonymous.

Questionnaire: <http://spreadsheets.google.com/viewform?hl=en&formkey=dHNydENVaENnLXloVnRET051WTg0Zmc6MA>

Thank you for your time.

[REDACTED]

**Appendix B**  
**Informed Consent**

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**Informed Consent**

The study in which you are about to participate explores the topic of study skills and study skills instruction at the middle school level. The study is being conducted by [REDACTED], a graduate student in the Curriculum & Instruction program at [REDACTED]. The study is being supervised by [REDACTED], Professor of Education, and has been approved by the [REDACTED] Human Subjects Committee.

This study will be performed using three instruments: questionnaires, interviews, and observations. The questionnaire will be distributed among core content area teachers and will be composed of open-ended questions and likert scales about teachers' perspectives on the need for study skills and integrating study skills into the core content area classrooms (English, social studies, math, and science). An interview will also be conducted with select 7<sup>th</sup> and 8<sup>th</sup> grade teachers and will be composed of questions that further explore the possibility of integrating study skills instruction into classrooms and the best methods for teaching study skills in general. Finally, observations will take place in select classrooms to learn more about how study skills are taught to middle school students. Participants may be asked to participate in one or more aspects of the study, depending on research needs. There are no hazards or risks involved in this study, and participants will remain anonymous.

The questionnaire will take approximately 10 minutes, while each interview will take 30 minutes. Observations will be the length of the class period and may occur multiple times.

The data obtained from the questionnaires, interviews, and observations will be incorporated into a report following the completion of research and will be used to inform middle school teachers and administration about the need for study skills at the middle school level, as well as possible strategies for integrating study skills instruction into core content area classrooms. A full or abridged copy of this report will be provided to each participant once the study is completed. To ensure anonymity, all data will be destroyed (electronic files deleted and hard copies shredded) after the report has been completed.

Because participation in this study is voluntary, participants are free to discontinue participation at any time and without penalty.

If you have any questions or concerns about this study, please contact [REDACTED], [REDACTED], or [REDACTED]. If you have any questions about your rights as a research participant, please contact [REDACTED], Chair of the Human Subjects Committee at [REDACTED].

**I have read the above statement about the purpose and nature of this study, and I freely consent to participate.**

\_\_\_\_\_  
Participant's Signature                      Date

\_\_\_\_\_  
Researcher's Signature                      Date

\_\_\_\_\_  
Print Participant's Name

\_\_\_\_\_  
Print Researcher's Name

## **Appendix C**

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### **Questionnaire**

#### **Study Skills in the Middle School Classroom – Questionnaire**

Thank you for taking the time to complete this questionnaire regarding study skills and study skills instruction in the middle school classroom. I appreciate your insight into this important educational topic. All responses will remain anonymous.

**What grade do you currently teach? \***

**What subject do you currently teach? \***

**How many years have you been teaching this subject at this grade level? \***

**How often do you teach and monitor study skills in your classroom? \***

1      2      3      4      5  
Never    Always

**Students who possess good study skills are more likely to perform well in school than students who do not possess good study skills. \***

1      2      3      4      5  
Strongly Disagree    Strongly Agree

**My students possess a variety of study skills and are able to appropriately apply them to academic tasks. \***

1      2      3      4      5  
Strongly Disagree    Strongly Agree

**Integrating study skills instruction into my normal classroom routine would boost student learning and academic performance. \***

1      2      3      4      5  
Strongly Disagree    Strongly Agree

**How useful is the following study skill? \***

Observing title, subtitles, highlighted words, and figures prior to reading text

1      2      3      4      5  
Not at All Useful    Extremely Useful

**How useful is the following study skill? \***

Taking notes on important details of text

1      2      3      4      5  
Not at All Useful    Extremely Useful

**How useful is the following study skill? \***

Monitoring comprehension while reading

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**How useful is the following study skill? \***

Asking questions while reading

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**How useful is the following study skill? \***

Identifying and highlighting important details after first reading

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**How useful is the following study skill? \***

Creating flashcards to learn important information

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**How useful is the following study skill? \***

Creating graphic organizers to organize and learn information

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**How useful is the following study skill? \***

Writing a summary of / paraphrasing the text

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**How useful is the following study skill? \***

Memorizing main points of text using a trick (i.e. acronym)

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**How useful is the following study skill? \***

Repeating material after a certain amount of time

1      2      3      4      5  
Not at All Useful                      Extremely Useful

**My students are able to effectively use the following study skill. \***

Observing title, subtitles, highlighted words, and figures prior to reading text

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Taking notes on important details of text

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Monitoring comprehension while reading

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Asking questions while reading

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Identifying and highlighting important details after first reading

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Creating flashcards to learn important information

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Creating graphic organizers to organize and learn information

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Writing a summary / paraphrasing the text

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Memorizing main points of a text using a trick (i.e. acronym)

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

**My students are able to effectively use the following study skill. \***

Repeating material after a certain amount of time

1      2      3      4      5  
Strongly Disagree                      Strongly Agree

## Appendix D

### Interview Guide

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Interviewee \_\_\_\_\_ Date \_\_\_\_\_

Subject \_\_\_\_\_ Grade Level \_\_\_\_\_

Number of Years Teaching this Subject at this Grade Level \_\_\_\_\_

1. Tell me what you do for study skills in your classroom.
2. What skills / strategies work best?
3. What skills / strategies do not work very well?
4. Do you use (teach and monitor) these skills in your classroom? Explain.
5. What specifically can be done to integrate study skills instruction into your classroom?

