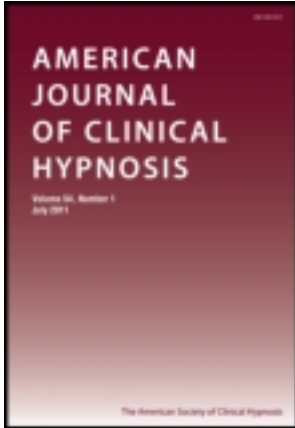


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Traditional and Alert Hypnosis for Education: A Literature Review

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In laboratory research, hypnotic suggestions have increased simple learning performance. There is also evidence that hypnosis may be used to increase higher level cognitive processes such as reading speed and listening comprehension. But using a traditional, relaxed, eyes-closed induction made it difficult to read and take tests and do other activities involved in independent academic performance. The subsequent development and refinement of an alert, eyes-open induction and appropriate suggestions made it possible for students to significantly increase reading comprehension and academic performance.

Keywords: academic performance, alert hypnosis, education, grades

Hypnotic suggestions can improve learning in laboratory and clinical situations. Hammer (1954, p. 179) noted that posthypnotic suggestions for “ease, confidence, motivation and increased ability” led to a significant improvement in learning meaningful material. Cooper and Rodgin (1952) reported suggestions for time distortion produced 20–450% reduction in time to learn paired-association nonsense syllables. In an extensive review covering this and other research, Uhr (1958) summarized 17 studies, published between 1925 and 1965, using nonsense syllables and vocabulary list learning. He estimated a 2–40% increase in verbal learning while under hypnosis. He concluded “. . . what evidence there is . . . indicates quite definite and possibly striking improvements in learning done while under a well-managed hypnotic trance” (p. 121). In addition to the laboratory studies, there are clinical reports in which hypnosis has aided reading improvement. Krippner (1963) opined that hypnosis can help adult learning in three ways: (a) improve study habits, (b) reduce test anxiety, and (c) increase motivation and interest in study. Krippner offered case reports of all three applications.

Although hypnosis could be helpful to educators and educational clinicians, a review of the hypnosis literature suggests that, in general, those early results were ignored. A search of the PsycINFO, PubMed, and American Society of Clinical Hypnosis databases using the keywords *hypnosis*, *grades*, *learning*, and *academic performance* yielded a few reports. It is clear that hypnosis was not being used in educational settings.

The Problem and Solutions

Oetting (1964) pointed out some of the structural barriers to the use of hypnosis in the classroom. He recognized that most such training involved posthypnotic suggestions for changing attitudes. He cautioned that simply suggesting a new attitude may not change the learner's cognitive processes involved in reading and study. Further, traditional hypnosis involves an authoritative control by the therapist, antithetical to independent evaluation and critical thinking for study. Most important, it is impossible for a student to read during the traditional eyes-closed hypnosis.

Oetting's (1964, p. 149) solution was an auto-hypnotic "alert trance" for academic work. To avoid the negative associations and transference effects of hypnosis, Oetting (1964) used the word *concentration*. In his induction, he used suggestions to focus on the kinesthetic sensations involved in moving the chair, sitting down, and opening the book, and the visual sensations from focusing on one part of the page. He used the suggestion: "You will only see the materials in front of you that you are going to work on. You simply concentrate right here in front of you on the work that you are going to do" (p. 150).

Oetting (1964) never mentioned eye closure or drowsiness. Nor, unfortunately, did he present any case results. His study is simply an early statement of the possibility of an eyes-open, alert form of hypnosis.

Researchers at Stanford (Liebert, Rubin, & Hilgard, 1965) speculated that alert hypnosis could enhance learning more than the traditional procedure could. Using college students who were in the upper quartile of the Stanford Hypnotic Susceptibility Scale Forms A or C by Weitzenhoffer and Hilgard (1959, 1962), they conducted a controlled learning experiment. The subjects' task was to listen and memorize word-number pairs (e.g., River-1, Wood-8) until they completed two perfect repetitions of the list.

On the first day, subjects memorized while awake; on the next day, they were randomly assigned to one of three groups:

- Group 1 learned a similar list after a traditional hypnosis induction.
- Group 2 learned a similar list after an eyes-closed but alert induction that did not mention sleep or drowsiness.
- Group 3 simply took another form of the test without any suggestions.

All of the students made about the same number of errors on the first list. However, there were significant differences on the second. The students in Group 3, waking control, made almost the same number of errors in both lists ($M = 31.6$ and $M = 28.4$). The students in Group 1, traditional hypnosis, increased from a mean of 38.0 errors to 50.4 errors. However, the students in Group 2, alert hypnosis, decreased from a mean of 39.0 errors to 26.0 errors. The improvement using alert hypnosis was significantly greater ($p = .03$). Here was evidence that hypnosis and suggestions for alertness could enhance controlled laboratory learning. The students did their memorizing while hypnotized, not following a posthypnotic suggestion. Data are presented in Table 1.

TABLE 1
 Studies Using Alert or Traditional Hypnosis to Increase Academic Performance

<i>Citation</i>	<i>n</i>	<i>Groups</i>	<i>Measures</i>	<i>Results</i>	<i>Conclusion</i>
Liebert et al. (1965)	5	1. Traditional hypnosis without suggestion	$M = 12.4$	$2 > 1 = 3$ $p = .03$	Alert hypnosis session reduces errors in learning
	5	2. Alert hypnosis with suggestion	$M = -13.0$		
	5	3. Waking controls without suggestion	$M = -3.2$		
Donk et al. (1970)	8	1. Alert hypnosis + suggestion	$M = 434.38$	$p < .05$ $p < .05$	Alert and Barber trained students increase reading speed
	8	2. Barber type + suggestion	$M = 435.00$		
	8	3. Traditional hypnosis + suggestion	$M = 180.38$		
	8	4. Control talk	$M = 112.50$		
Wark & LaPlante (1991)	20	1. Alert + standard suggestion	$M = 73$	$1 = 2 > 3$ $p < .01$	Alert hypnosis increases reading comprehension
	20	2. Alert + own suggestion	$M = 73$		
	20	3. Waitlist control	$M = 52$		
Wark (1996)	21	1. Low hypnotizable + alert	$M = .14$	$3 > 1 = 2$ $p = .014$	Alert hypnotizables continue to get higher grades
	21	2. Medium hypnotizable + alert	$M = -.04$		
	8	3. High hypnotizable + alert	$M = .79$		
Schreiber (1997)	30	1. Hypnotized + posthypnotic suggestion for relaxation, concentration, and recall	$M = 82, SD = 10$	$1 > 2 = 3$ $p < .01$	Hypnosis trained students get higher grades
	34	2. Control A: Waking motivation talk	$M = 74, SD = 10$		
	32	3. Control B: Waking motivation talk	$M = 74, SD = 10$		
Schreiber & Schreiber (1998)	30	1. Hypnotized + posthypnotic suggestion for relaxation, concentration, and recall	$M = 82, SD = 9.7$	$1 > 2$ $p = .05$	Hypnosis trained students get higher grades
	22	2. Relaxation + same suggestion for relaxation, concentration, and recall	$M = 76, SD = 9.7$		

(Continued)

TABLE 1
(Continued)

<i>Citation</i>	<i>n</i>	<i>Groups</i>	<i>Measures</i>	<i>Results</i>	<i>Conclusion</i>
Schreiber & McSweeney (2004)			Final exam score		
	30	1. Hypnotized + posthypnotic suggestion for relaxation, concentration, and recall	$M = 81, SD = 10$	$1 > 2$ $p < .01$	Hypnosis trained students get higher grades
34	2. Control: Waking motivation talk	$M = 73, SD = 10$			
De Vos & Louw (2006)			Residualized final exam score		
	30	1. Relaxation hypnosis + mental training suggestions	$M = + 3.2$	$1 = 2 > 3 = 4$ $p < .01$	Hypnosis trained students get higher grades
	30	2. Alert hypnosis + mental training suggestions	$M = + 1.9$		
	30	3. Control, relaxation	$M = -3.8$		
29	4. Control, no intervention	$M = -3.0$			

Note. In the "Results" column, ">" means "greater than, at the indicated p value." Numbers 1 through 4 refer to groups in the cited studies. Thus, " $1 > 2, p < .05$ " means that the gain for Group 1 is significantly greater than that for Group 2.

Krippner (1966) reported data on posthypnotic suggestions for reading improvement in an actual educational setting. Participants were 49 students, between the ages of 8 and 17 years, who were enrolled in a summer clinical program for reading improvement. They had 2-hour sessions with a reading clinician five times a week. In addition, 9 students, at their parent's request, had an hour of hypnosis training every week with Krippner. He gave suggestions for relaxation, increased interest in reading, concentration, and visualization of what they were reading. The median reading gain was 4.35 months for the nonhypnotized students and 6.44 months for the hypnotized students ($p = .02$). It is not clear whether the parental interventions, the extra time for training, or the specific effect of Krippner's hypnotic suggestions made the difference. However, the results demonstrated the potential of hypnotic suggestions to help students improve the complex cognitive skills of reading comprehension.

Krippner (1970) reviewed the research on hypnosis and reading from 1957 to 1968. He concluded that there were no controlled demonstrations of the superiority of hypnosis over other procedures. He, as did Barber (1962), critiqued the confounding of two independent variables: (a) hypnotic induction and (b) suggestions for increased reading performance. Without suggestions for improved performance during a nonhypnotic control condition, it is impossible to separate the effects of induction and suggestion.

Donk, Vingoe, Hall, and Doty (1970) separated the effects of hypnosis and suggestion for faster reading. College volunteers took a speed pretest. Then, the students were sorted

into a control group and three experimental groups. All received the same posthypnotic suggestions for reading efficacy: “increase speed while maintaining comprehension,” “remain calm and relax throat and tongue muscles,” “expand visual perception and make images of words in the text.” Similar suggestions are commonly given in high school and college reading improvement programs, without a hypnotic induction (Flippo & Caverly, 2009). But each group received a different induction.

Group 1 received an alert induction (Vingoe, 1968). This procedure, without mentioning sleep or drowsiness, leads the participants into an alert state. The 7–10-minute procedure is planned to produce a mind–body disassociation, using suggestions for mental alertness concurrently with body relaxation.

Group 2 received a Barber-type (Barber, 1962) induction. This procedure is similar to a traditional induction but without any mention of eye closure or sleepiness. There were no suggestions for enhanced alertness, as in Group 1.

Group 3, traditional hypnosis, received a traditional hypnotic induction from the Stanford Hypnotic Susceptibility Scale, Form A (Weitzenhoffer & Hilgard, 1959) and then the posthypnotic suggestions for reading efficacy.

Group 4, control group, simply chatted with the experimenter for the same period of time involved in the other experimental procedures. The experimenter was careful not to discuss any part of the experiment other than the efficacy suggestion.

The results support the use of nondrowsy induction. Increase in reading speed for Group 1 and Group 2 were significant ($p < .05$). Neither the traditional induction nor the control group made a significant gain. Also, there were no changes in comprehension scores for any group.

Thus, it seems that the posthypnotic suggestions for faster reading was effective when given to students after an alert induction, without mention of sleepiness, drowsiness, or eye closure. Hypnotic suggestion may be helpful to increase simple learning (Liebert et al., 1965), and well-practiced skills such as the eye movements involved in reading speed (Donk et al., 1970). However, what about more complicated processes such as reading comprehension?

A search of the hypnosis literature produced no relevant reports on academic achievement for several years. However, one seemingly unrelated study by Bányai and Hilgard (1976) may have stimulated a resurgence in the use of alert, eyes-open hypnosis.

Bányai suspected that the sleeplike appearance of hypnotic subjects was an artifact of the induction suggestions. To test her hypothesis, she developed a physically active-alert induction, modified from the Stanford Hypnotic Susceptibility Scale, Form B (Weitzenhoffer & Hilgard, 1959). Fifty subjects rode a stationary bicycle set for high resistance. On alternate days, they received either a traditional or active-alert, eyes-open induction while pedaling. The mean scores on hypnotizability (for alert, $M = 4.94$; for traditional, $M = 5.16$) did not differ significantly. Objectively, subjects showed the effects of active-alert hypnosis by peddling faster. Highly responsive subjects reported altered states in both inductions. Bányai concluded that the sleeplike hypnosis

appearance was a result of the induction method, not of an intrinsic characteristic of hypnosis. Active-alert hypnosis was a valid phenomena. Bányai, Zseni, and Túry (1993) and later Capafons (1999) demonstrated the value of alert hypnosis as a technique in psychotherapy.

Influenced by Bányai and Hilgard (1976), Wark (1989) showed in a pilot demonstration that with sufficient training, students could learn to improve attention and comprehension in alert, eyes-open hypnosis. Wark and LaPlante (1991) carried out a randomized controlled trial. Subjects were 62 successful college students, with stable reading ability. To control for test practice effects, students were randomly assigned to groups without pretest. Any differences on the comprehension test would be attributable to training, rather than to familiarity with the test. The students learned the *lever induction*, so-called because they levered up their mental focus and attention while relaxing their body. (For a script, see Hammond, 1990, p. 449, or Wark, 1989.)

After the induction, students learned basic suggestions to improve reading comprehension. There were several important components to the suggestions. One was to increase attention to kinesthetic and visual aspects of the task (“Notice the letters on the page. They seem dark and distinct”). Another part of the suggestion was designed to increase cognitive activity of imagery and memory (“Notice that every sentence suggests images and ideas that flow up from page to mind, directly and easily”). Last, there were instructions to enhance motivation and enjoyment (“It will become easier and easier to enter an alert hypnosis and enjoy study”).

The students entered alert hypnosis, gave themselves the basic suggestion, read in trance, and then exited the hypnosis. The process is designed so that the suggestions were active during reading and study. The groups met for 45 minutes per day for 5 days, took the weekend off, and then met for five more sessions. During the last session, the students took a standardized reading comprehension test (Raygor, 1970) while in alert hypnosis.

Group 1 members gave themselves standardized suggestions. Group 2 members gave themselves highly personalized suggestions. Group 3 members, waiting list control, took the reading test on the same day as did members of Groups 1 and 2, and then began their instruction in alert hypnosis.

After training, students in the two treatments demonstrated reading comprehension that was significantly better than that of students in the waiting list ($p < .01$). Further, there was no difference between the two types of suggestions for reading improvement. The study shows that readers can learn to enter an eyes-open hypnosis and either use standardized or personal suggestions to improve their comprehension.

Wark (1996) continued the research and investigated the use of alert hypnosis to help students improve their overall academic achievement. In an undergraduate course titled “Becoming a Master Student Using Self-Hypnosis,” grade point average (GPA) data were gathered for the quarter before the students took the course, the quarter during which they applied alert self-hypnosis, and the quarter after when they were no longer in the course. The students were administered the Creative Imagination Scale (CIS) with

an induction (Wilson & Barber, 1978) as an introductory exercise to acquaint them with hypnosis. During the course, they learned the skills of inducing alert self-hypnosis and building their own hypnotic suggestions. All of the students in the study learned together, each as their own control.

After the class ended, the students were divided into three groups on the basis of the CIS: low (CIS 0–20), medium (CIS 21–28), and high (CIS 29+). The cutting scores were chosen from the CIS norms published by Wilson and Barber (1978) and confirmed by Siuta (1987).

Across all 60 students over 3 years, the mean GPA increased significantly from the quarter before the course ($M = 2.21$, $SD = 0.65$), to the quarter during which they used alert hypnosis ($M = 2.77$, $SD = 0.64$), $p = .01$. Thus, alert hypnosis was an effective intervention to increase GPA.

In the quarter after, when the students were not monitored, overall GPA regressed. However, analysis showed that that the high-CIS students changed much less. The overall change in GPA from before learning alert hypnosis to after learning alert hypnosis for the high-CIS students ($M = 0.79$, $SD = 0.81$) was significant ($p = .014$). Figure 1 shows what happened. All of the students made a gain in GPA while taking the course; most regressed after. However, the high-CIS students continued to use their new skills going forward. Hypnosis was an effective mechanism for increasing educational gain for those with some hypnotic talent.

Schreiber (1997) reported improving college course grades with hypnosis. A class of 30 educational psychology students was compared with two different control sections from the same course. Students in the randomly selected experimental section were

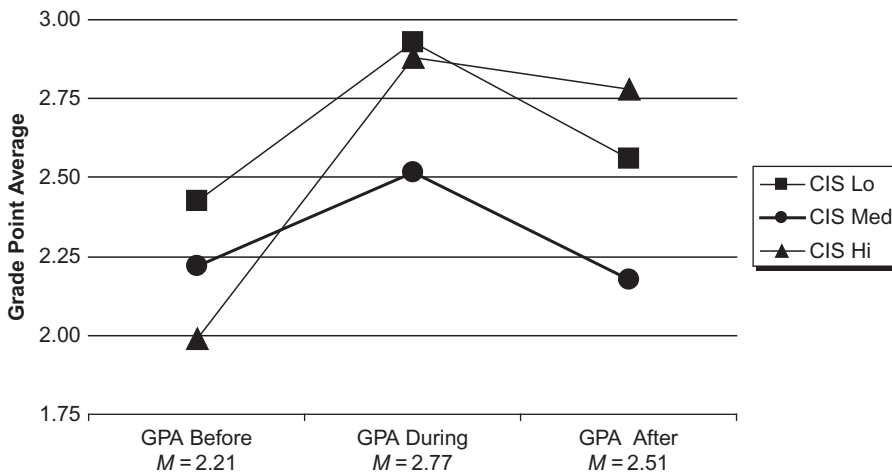


FIGURE 1 Grade point average (GPA) before, during, and after instruction in alert hypnosis to improve academic performance. CIS = Creative Imagination Scale.

induced into hypnosis two times per week for 20 minutes, starting after the midquarter exam. Students in two control sections received sessions of 20-minute verbal motivation talks. Although all of the classes earned similar scores on the midterm examination, on the final exam the grade for the hypnosis group was significantly higher than the gain for either control group ($p < .01$). Later, the results were replicated at the same institution with a different sample in a similar randomized control study by Schreiber and McSweeney (2004).

Schreiber and Schreiber (1998) compared the effects of hypnosis with simple relaxation. The design was similar to the previous studies, involving a traditional hypnosis group that received the suggestions that they “would be relaxed and have excellent concentration and complete recall of their course material.” The students in the relaxation group “were taught how to tense muscle groups of the body and then how to relax them to build concentration skills and recall of coursework” (p. 85).

There was no difference between the groups on their midterm examination score. On the final exam, the hypnosis group did better than did the muscle relaxation group ($p < .05$). Hypnosis plus simple direct suggestions was more effective than relaxation instructions.

De Vos and Louw (2006) reported the content of suggestions designed to affect study skills. Second-year volunteer college students in a psychology class were divided into two experimental groups and two control groups, meeting for eight sessions. Group 1 received relaxed, traditional, eyes-closed hypnosis plus skills training. Group 2 received active-alert, eyes-open induction plus the same skills. Although the inductions were different, the suggestions to both experimental groups were the same. Over the course of Sessions 2 through 8, the students received instruction in (a) cognitive restructuring to replace negative thoughts with positive self-dialogue; (b) using the clenched fist technique (Stein, 1963) to accentuate positive emotions in imagined test or exam situations; (c) simulated exposure (Heimberg, 1994) to academic situations (studying, listening, or writing exams) in which they used cognitive restructuring and clenched fist techniques to maintain control; and (d) practice in self-hypnosis skills, either relaxed or active alert. Group 3 received progressive relaxation training for eight sessions, to be comparable to the physical relaxation of the hypnosis groups. Group 4 was identified but not exposed to any intervention.

Changes in final exam grades by students in the relaxed hypnosis ($M = +3.2$) and alert hypnosis ($M = +1.9$) were positive and significantly greater than the losses by students in the relaxation only ($M = -3.8$) or control group ($M = -3.0$) at $p < .01$. Mental training, plus hypnosis, relaxed or alert, works to help students increase achievement.

Discussion

This review indicates that in the years since Liebert et al.’s (1965) work, alert hypnosis with appropriate suggestions has been shown to affect simple learning and real-world

academic performance. The results are summarized in Table 1. With sufficient training, students can use self-hypnosis to enhance complex cognitive activity: objectively measured reading comprehension (Wark & LaPlante, 1991), and academic performance (De Vos & Louw, 2006; Schreiber, 1997; Schreiber & McSweeney, 2004; Schreiber & Schreiber, 1998; Wark, 1996).

The research shows that a variety of different hypnotic suggestions were effective. Some were direct suggestions for hypnotic phenomena. That is, students were told what to do: be more alert (Liebert et al., 1965) or read faster (Donk, 1970). In other studies, students received suggestions on how to do it: changing posture, breathing, attending to letters (Oetting, 1964), noticing the visual characteristics of the text (Wark, 1996), attending to the image stimulated by what is read (Donk et al., 1970) or engaging in cognitive retraining and practicing anxiety reducing simulation (De Vos & Louw, 2006).

In addition, it is likely that students made personal reframes of these suggestions. Wark (1989) collected examples of suggestions that students gave themselves after an alert induction:

- “The ideas I read fit together like a jigsaw puzzle.”
- “I am reading in a deep tank of water, beyond the reach of interruption. The author is there with me, to answer any questions I may have.”
- “I am driving to the top of a high mountain. I am behind the wheel of a fast sports car. Every time the book changes ideas I change direction. I go smoothly and rapidly up the mountain learning the material.”

In summary, the review indicates that hypnosis can be effective when used either with traditional inductions and posthypnotic suggestions, or with alert eyes-open inductions and personally managed self-hypnosis during learning. Training in alert eyes-open self-hypnosis and personal suggestions means that students can be less dependent on the teacher or therapist. They can use hypnosis for any subject, any time, and any place. That answers the concern raised in Oetting’s (1964) study that the independence and creativity of the students may become lost in the hypnosis relationship. The solution was an active-alert induction, in which the student is encouraged and trained to give a self-designed suggestion to read or study, and then carry it out.

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