

# High School Teachers With Significant Teaching Experience Support The Effectiveness Of Direct Instructional Strategies

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## ABSTRACT

*This research study was conducted to examine the effectiveness of direct instructional strategies regarding the achievement of students with ED. High school teachers with significant years of teaching experience in an urban setting support the effectiveness of direct instructional strategies. Teachers with 11-20 and 21-30 years of teaching experience documented their perceptions with increased support for direct instructional strategies compared to teachers with 1-10 years of experience. A quantitative research design model was the ideal method for data analyses. This study's data analyses were comprised of descriptive statistics, Levene's statistic, and analysis of variances (ANOVA). Results indicated a strong statistical difference between years of teaching experience and high school teachers' perceptions of the effectiveness of direct instructional strategies regarding the achievement of students with emotional disabilities. The researcher concluded further examination into progressive instructional implementation and school preference of effective instructional methods for the achievement of students with emotional disabilities is needed.*

**Keywords:** Direct Instruction; Scaffolding

## INTRODUCTION

Students with emotional disabilities (ED), historically, are among the least successful of all students (Bradley, Doolittle, & Bartolotta, 2008). In the current state of education, students with ED are still low achievers and demonstrate difficulties learning in a school setting. According to Lane, Barton-Arwood, Nelson, and Wehby (2008), students with ED report high dropout rates and fail minimum competency exams. Progressive considerations determine the instructional paradigm is a vital predictor of academic success or failure. An examination and analysis of teachers' perceptions regarding the achievement of students with ED is vital in providing schools and universities with different types of data. Current teachers with five-years or more teaching experience, support or dissent for the effectiveness of direct instructional strategies, could provide conceptualization or shaping towards a reconceptualization to a problem that is a national epidemic in education.

## REVIEW OF LITERATURE

Direct instruction (DI) is a continuum of didactic teacher-centered strategies. Teachers are the main facilitator of instruction prodding and shaping student understanding. Teachers approach learning as a service-orientated paradigm. That is, the teacher manages time and pace through a systematic process of events or domains within the edification of teaching.

Each domain requires prerequisite teaching events to move forward in the teaching process. Case in point, teachers should model instruction before the facilitation of guided practice and check for understanding before assigning any individualized instructional tasks. The process of teaching events provides clarity and structure within

the instructional process leading the way for students to make connections and comprehend lesson concepts and material thoroughly.

Becker et al. (1982) described DI as “a technologically based approach to remedying and presenting skills deficiencies” (p. 153). The program is based on principles. The principles are: (a) voluntary (i.e., operant) behavior is learned; (b) learning is dependent on the environment; (c) the teacher controls the environment and, thus controls voluntary behavior; (d) intelligent behavior is voluntary and therefore is learned and can be taught; and (e) the rate of learning is largely controlled by teaching technology (i.e., system).

Direct instruction programs espouse highly explicit lesson plans. Highly detailed lesson plans are constructed to assist students to learn increasingly more complex material (Donlevy, 2010). Scripted direct instruction programs offer organization, consistency, and management, along with a vision for teaching effectiveness. Teachers are: (a) intrinsically motivated and auto managed to follow the implementation of the lesson plan; (b) better suited to synthesize and evaluate scripted plans and (c) more adept to adjust new strategies and pedagogy (Peterson, 2011). This is contrary to the progressive paradigm shift in the field of pedagogy.

The components of DI include: (a) small group instruction; (b) oral responding in unison, which incorporates wait time and a respond signal to prevent higher performing students from answering before lower performing students; (c) diagnosing and correcting errors through six steps (i.e., praise, model, lead, test, firm up, delayed test); and (d) assessing formatively to utilize student data for informed instructional decision making (Carnine, Silbert, & Kameenui, 1997).

Scaffolding, a direct instructional strategy, is referred to as the guidance teachers provide students as they are learning new concepts. Teachers use the scaffolding principle by including instructional tasks that gradually and systematically require students to complete tasks with less prompting or fewer cues (Stein, Carnine, & Dixon, 1998). The examination of instructional curricula designed to teach students how to solve one-step mathematical operations and equations is an example of scaffolding. Teachers’ implementation strategy includes well-defined procedures or steps that will demonstrate how to solve the problems. As the student learns the concept, the teacher may transform the practice of instructional shaping to provide closed-ended questioning, furthering the student’s self-efficacy and capacity to reach higher sustained learning outcomes.

## **RESEARCH QUESTION**

Do years of experience in education impact high school teachers’ perceptions regarding the effectiveness of direct instructional strategies?

## **HYPOTHESIS**

- H<sub>0</sub>:** There is no difference in years of experience in education and high school teachers’ perceptions regarding the effectiveness of direct instructional strategies on the achievement of students with ED.
- H<sub>1</sub>:** There is a difference in years of experience in education and high school teachers’ perceptions regarding the effectiveness of direct instructional strategies on the achievement of students with ED.

## **PROCEDURE**

The research methodology employed was a quantitative non-experiential design. This study’s research focused on a central research question, which established the direction for the study. The central question is a broad question that asks for an exploration of the central phenomenon or concept of the study (Creswell, 2009).

The procedures were aimed to test the null and alternate hypothesis. The null hypothesis makes a prediction that in the general population no relationship or significant difference exists between groups on a variable (Creswell, 2009). The alternate hypothesis is simply the antithesis predicting a relationship or significant difference between groups on a variable.

The purpose was to gather differences between an independent and dependent variable. For this study, the dependent variable consisted of the high school teachers' perceptions for direct instruction. The independent variables were (a) 1-10-years, (b) 11-20-years of experience, and (c) 21-30-years of experience. Each group of years of experience (IV) were statistically analyzed alongside high school teachers' perceptions (DV) regarding the effectiveness of direct instructional strategies. The analysis of variances (ANOVA), the statistical procedure, was the most suitable statistical operation to produce inferential statistics for answering the research question. Moreover, descriptive statistics were imperative and meaningful in ascertaining conclusive applicability and sustainability towards the findings and conclusions.

## **POPULATION**

The intended population were high school teachers with experience educating students with ED in a school setting. Teachers with experience in an inner city and urban setting closely examined the achievement gap witnessed across the U.S. regarding successful, academic outcomes for students with ED. The population confirmed the assumptions to the generalizability and transferability of the results to similar contexts and problems for schools. The selection of the population was designed to provide scientifically driven data to schools from qualified teachers in education parallel to the national epidemic from generalized teacher and student statistics in background, contexts, and demographics, solely for improving the achievement of students with ED.

## **DELIMITATION**

The researcher included only high school teacher perception within the study's analyses of data. This delimitation proved to increase the study's reliability and internal validity. All staff members, including the administration and support staff, were participants in the study. However, this delimitation to include only high school teachers reduced additional assumptions or limitations. The option to include only high school teachers provided results from a sample with current and relevant teaching experience educating students with ED. A sample with similar participant characteristics could positively influence the study's measure of inter-observer reliability.

## **SAMPLE**

The sample consisted of 75 participants who are presently working for a magnet school in Chicago. The high school is a 2010 Renaissance Contract School. The Chicago Board of Education approved its existence in 2009 to become the first Chicago School of the Arts. Student enrollment is based on evaluation criteria set forth by the school. The high school offers a comprehensive curriculum with courses that are identified as college preparatory. A rigorous core of English, literature, math, science, and social studies are provided for all students.

## **RESEARCH INSTRUMENT**

A survey was administrated to the sample population. The survey consisted of demographic and Likert rating scale questions. The demographic questions served the purpose to describe the subgroups of respondents. A question indicating years of teaching experience was important for the purpose of this study. Along with demographical data, participants were asked to describe their perceptions about direct instructional strategies and their effectiveness regarding the achievement of students with ED. The rating scale was comprised of four response points or choices. The choices were 4 (Highly Effective), 3 (Effective), 2 (Somewhat Effective), and 1 (Least Effective).

## **RESULTS**

Table 1 shows descriptive statistics for years of teaching experience and direct instructional strategies. Thirty-three (44%) teachers with 1-10 years of teaching experience deemed that direct instructional strategies are within the moderate range of least effective ( $M = 1.30$ ). With a 95% confidence interval for mean of (1.14) and (1.47), teachers presumed that direct instructional strategies at the lowest measure are least effective and at the highest measure are within the moderate range of least effective, with a ( $SD = .47$ ) units away from the mean. Twenty-nine (39%) teachers with 11-20 years of teaching experience believed that direct instructional strategies are

within the low range of somewhat effective ( $M = 2.17$ ). With a 95% confidence interval for mean of (2.03) and (2.32), teachers assumed that direct instructional strategies at the lowest measure are somewhat effective and at the highest measure within the moderate range of somewhat effective, with a ( $SD = .38$ ) units away from the mean. Thirteen (17%) teachers with 21-30 years of teaching experience supposed that direct instruction strategies are within the moderate range of effective ( $M = 3.46$ ). With a 95% confidence interval for mean of (3.15) and (3.78), teachers demonstrated confidence that direct instructional strategies at the lowest measure are effective and at the highest measure within the high range of effective, with a ( $SD = .52$ ) units away from the mean.

**Table 1: Descriptive Statistics for Years of Teaching Experience & Direct Instructional Strategies**

	N	M	SD	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
1-10 years	33	1.30	.467	.081	1.14	1.47
11-20 years	29	2.17	.384	.071	2.03	2.32
21-30 years	13	3.46	.519	.144	3.15	3.78
Total	75	2.01	.893	.103	1.81	2.22

Table 2 denotes statistical measurements of the Levene's Statistic of Homogeneity of Variances (HOV). Levene's statistic ( $F = 6.21, p = .003$ ) indicates the variances are statistically significant. A higher value of the Levene's statistic proposes more assumed significance, validating the distinction that the variances are equal. The Levene's statistic of 6.21 is a low estimate, which concurrently postulated a  $p$ -value with less than perfect significance. A  $p$ -value higher than the alpha level of .05 could lead to unreliable statistical outcomes. With the variances statistically analogous, the next procedure is to conduct an analysis of variances (ANOVA). A statistically significant Levene's statistic is a preliminary analysis for concluding stronger inferences towards hypothesis testing.

**Table 2: Test of Homogeneity of Variances**

Levene Statistic	df1	df2	Sig.
6.215	2	72	.003

Table 3 shows the analysis of variances between three groups of measure. The three independent means (variables or groups) were 1-10-years, 11-20 years, and 21-30 years. The ANOVA generated statistical data deciphering whether to reject or retain the null hypothesis. The results [ $F(2, 72) = 112.1, p < .005$ ] indicated a high  $F$  statistic value and a statistical significant  $p$ -value. Thus, proving that the null hypothesis should be rejected and confirming that high school teachers' perceptions and years of experience are significantly different. The ANOVA statistics indicated principal representation, furthering the assumption that, as high school teachers accumulate more teaching experience, they perceive that direct instructional strategies are more effective.

**Table 3: ANOVA**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	44.648	2	22.324	112.100	.000
Within Groups	14.338	72	.199		
Total	58.987	74			

**CONCLUSION**

After assessing respondent opinions, the study concluded that the two variables (IV, groups of years of teaching experience; and, DV, high school teacher's perception for direct instruction) are significantly different. Therefore, the assumption can be made that years of teaching experience does impact high school teachers' perceptions regarding the effectiveness of direct instructional strategies. Each grouping variable of years of teaching experience recorded significant differences with increased scales of measurement from least effective to within the high range of effective; an increase of at least one Likert scale increment of measurement.

**RECOMMENDATION**

The current progressive paradigm in K-12 education promotes the obverse instructional delivery to the implementation of direct instructional strategies. As indicated in this study, the opinions of high school teachers

with significant teaching experience do support the effectiveness of direct instructional strategies. Continual professional development in the area of implementation and pedagogy for teachers with more accrued teaching experience is recommended to blend a vast level of experience with current research trends. Teachers with considerable teaching experience should be encouraged to attend and participate in the most recent professional development workshops or conferences.

#### **AUTHOR INFORMATION**

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#### **REFERENCES**

1. Becker, W. C., Engelmann, S., Carnine, D. W., & Maggs, A. (1982). Direct Instruction technology: Making learning happen. In P. Karoly & J. J. Steffen (Eds.), *Improving children's competence: Advances in child behavioral analysis and therapy volume one*. Lexington, MA: D.C. Heath.
2. Carnine, D. W., Silbert, J., & Kameenui, E. J. (1997). *Direct instruction reading* (3<sup>rd</sup> ed.). Upper Saddle River, NJ: Prentice Hall.
3. Creswell, W. J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage.
4. Donlevy, J. (2010) Direct Instruction: Structured programs for student success. *International Journal of Instructional Media*, 37(3), 225-226
5. Peterson, P. E. (2011). Eighth-grade students learn more through direct instruction. *Education Next*, 11(3). Retrieved from <http://search.proquest.com/docview/1237831867?accountid=458>
6. Stein, M., Carnine, D., & Dixon, R. (1998). Direct instruction: Integrating curriculum design and effective teaching practice. *Intervention in School & Clinic*, 33(4), 227.

**NOTES**