November 2019

NeMTSS Research Brief

Explicit Instruction in Early Childhood Education

Abril Rangel-Pacheco, M.A. & Amanda Witte, Ph.D.

NEBRASKA CENTER FOR RESEARCH ON CHILDREN, YOUTH, FAMILIES & SCHOOLS

NeMTSS Implementation Support Team, University of Nebraska–Lincoln is funded by the Nebraska Department of Education (USDE IDEA, Part B-611 Grant). Contents do not necessarily represent the policy of NDE or USDE, and no endorsement should be assumed. Developed by UNL-CYFS MTSS Implementation Support Team.

Explicit Instruction in Early Childhood Education: An NeMTSS Research Brief

Key Points:

- Explicit instruction grew out of the research on Direct Instruction in the 1960s and evolved to include scripted lessons for a variety of academic areas. (Hughes, Therrien, & Benson, 2017). Direct instruction differs from explicit instruction in that direct instruction includes curriculum and instruction (e.g. Reading Mastery), whereas explicit instruction focuses solely on instruction delivery (i.e. how to teach, not what to teach).

- Both have a history of effectiveness, especially for students at risk or with a learning disability (Hughes, Therrien, & Benson, 2017).

- General components of explicit instruction include direct explanation, modeling, guided practice, independent practice, feedback, discussion and monitoring.

- There is no consensus in the literature about the optimal duration of explicit instruction, though in multiple studies with differing implementation periods, students receiving explicit instruction made meaningful academic gains, suggesting that regardless of the duration, explicit instruction can be beneficial to learning.

Explicit Instruction: An Overview

> Hughes, Therrien, and Benson (2017) define explicit instruction as:
> … a group of research-supported instructional behaviors used to design and deliver instruction that provides needed supports for successful learning through clarity of language and purpose, and reduction of cognitive load. It promotes active student engagement by requiring frequent and varied responses followed by appropriate affirmative and corrective feedback and assists long-term retention through use of purposeful practice strategies. (p.143)

Explicit instruction as it's known today grew out of the research on Direct Instruction in the 1960s and evolved over decades to include scripted lessons for a variety of academic areas and shows highly organized progression through curriculum content (Hughes, Therrien, & Benson, 2017). Direct instruction differs from explicit instruction in that direct instruction includes curriculum and instruction (e.g. Reading Mastery), whereas explicit instruction focuses solely on instruction delivery (i.e. how to teach, not what to teach).

The emergence of explicit instruction is thought to be attributed to a shift in the last few decades toward more direct teaching and research on academic instruction. Regardless of the differences between the two instructional approaches, both have a history of effectiveness, especially for students at risk or with a learning disability (Hughes, Therrien, & Benson, 2017) and the components of it are supported by the extensive research done by notable researchers like Hattie (2009) and Marzano (2000; 1998) and various others.

The Elements of Explicit Instruction

The studies reviewed for this summary provided their own conceptualization of what explicit instruction looks like, and although there was variety in the components of explicit instruction, the general themes of explicit instruction included variations of (a) direct explanation, (b) modeling, (c) guided practice, (d) independent practice, (e) feedback, (f) discussion and (g) monitoring (Reutzel, Child, Jones, and Clark, 2014). Hughes, Therrien, and Benson (2017) conducted a meta-analysis on the current literature surrounding explicit instruction and identified five essential instructional components included in at least 75% of the publications reviewed in their meta-analysis.

1. **Segmenting complex skills.**
    - The material is broken down into "chunks" that are taught separately in a logical sequence to reduce cognitive load (Archer & Hughes, 2011; Doabler et al, 2012). This also facilitates mastery of the first subskill before moving on so that at the end of the instructional chain all the subskills are practiced.
2. **Drawing student attention to important features of the content though modeling/think- alouds.**
    - Instructors provide students with clear, concise, and consistent demonstrations of how the skill or strategy is performed. Teachers use modeling/think-alouds to make key external and internal processes of what is being learned explicit by showing and telling (thinking aloud).
3. **Promoting successful engagement by using systematically faded supports/prompts.**
    - The instructor provides practice opportunities and promote student accuracy and confidence with physical, verbal, or visual prompts. The level/strength of prompts should be gradually withdrawn until students are ready to practice without prompts while still being monitored by the teacher.
4. **Providing opportunities for students to respond and receive feedback.**
    - Frequent student responses are elicited to increase student attention and engagement and provide teachers with information about how well students are understanding the material. Monitoring student responses allows teachers to provide affirmative or corrective feedback quickly and consider adjustments to instruction.
5. **Creating purposeful practice opportunities.**
    - Practice activities can be used for a variety of purposes using a variety of practice formats (e.g., distributed, cumulative, worked solutions) and in a variety of student arrangements (e.g., individual, paired, groups) and is most effective when followed by affirmative and corrective feedback.

Additional common components for explicit instruction identified by Hughes, Therrien, and Benson (2017) in over half of the analyzed literature were:

1. **Selecting critical content.**
    - Teachers select academic facts, strategies, concepts, and rules students need to know to be academically successful.
2. **Logically sequencing skills.**
    - Teachers teach easier skills before hard ones and separate in an instructional sequence similar skills or concepts to eliminate confusion.
3. **Ensuring students have prerequisite skills and knowledge.**

- Some background information or skills are taught or retaught prior learning a new skill prior to the beginning of a lesson.

4. **Providing clear statement of learner goals and expectations.**
    - When beginning a lesson, teachers should tell students explicitly the learning objectives and discuss how the information relates to previously learned information, why the skill is important to learn, and the behavioral expectations related to the lesson (e.g., contributing to discussion, taking notes)
5. **Present a wide range of examples and nonexamples.**
    - Providing students with a wide range of examples is important for reducing undergeneralization of an instructional rule/concept, while a wide range of nonexamples is important for reducing overgeneralization of an instructional rule/concept.
6. **Maintain a brisk pace.**
    - Brisk pacing increases content coverage and maintains student attention however, adequate “thinking time” can still be integrated. Lessening teacher digressions, classroom disruptions, and ensuring proper lesson preparation are also important to pacing the lesson.
7. **Present information in ways that help students understand how it is organized.**
    - Graphic organizers used before, during, and or/after the lesson can be particularly helpful for students to organize information and visualize relationships between concepts.

Delivery

There is a large amount of research that has been conducted on explicit instruction and curriculum delivery in various school subjects and across ages. However, only the studies most relevant to early childhood education are included in this summary.

Myers and Ankrum (2018) used an explicit instruction approach to vocabulary development through interactive read-alouds with kindergarteners in a US classroom and conducted three case studies to examine the vocabulary gains of two students with a learning disability and one without. In an interactive read-aloud (IRA) teachers read the text aloud while students actively engage in conversation by thinking within, beyond, and about the texts (Fountas and Pinell 2006) before, during, and after the reading (Meller et al, 2009).

The authors explained that during an IRA the students talk to partners at strategically planned locations (Santoro et al., 2008) to facilitate comprehension and oral language development (Drogowski 2008; Kindle, 2009). According to supportive evidence, vocabulary instruction embedded in an IRA can be effective in supporting vocabulary development (McGee and Schickedanz 2007; Wiseman 2011). This instruction involves the teacher leading a discussion of a word’s meaning by providing a child-friendly explanation, a synonym for the word, and several examples taken from the text and from student’s lives as well (Spencer et al. 2012). The teacher then allows students to talk about the word by relating it to the text and prior experiences, which allows students to transfer the learning to their expressive vocabulary (Myers & Ankrum, 2018). The words chosen for explicit instruction for this study were selected using Beck et al (2002) guidelines. Specifically, Tier Two vocabulary words were the focus of explicit instruction and discussions throughout the IRA.

The results of the study indicated that all three students learned the meanings of new vocabulary words and demonstrated competence. Further, students who initially hesitated to participate in the observed lessons, demonstrated greater participation throughout the succession of each IRA. Another note-worthy finding is that students exhibiting difficulty with word articulation continued to integrate new vocabulary throughout their peer discussions. See Myers and Ankrum (2018) for specific data collection measures and resources used.

Pesco and Devlin (2015) used an experimental design to examine the effects of a short period of explicit instruction on the narrative comprehension of 15 French-speaking kindergarteners, as measured by story retell and comprehension questions. Students were randomly assigned to either the explicit instruction group or alternative instruction group that served as the control. The students were given explicit instruction that utilized explanation, modelling of the identification of story components, guided practice, feedback, and the use of visuals to map story elements, depict causes and effects, and represent internal states. The results showed that the explicit instruction group had significantly higher scores on the retell task, but not on the comprehension questions compared to the control group. The researchers concluded that this brief duration of explicit instruction supported existing evidence demonstrating the benefits of explicit instruction on children's narrative skills.

Damhuis, Segers, and Verhoeven (2014) investigated the sustained effects of explicit instruction on the breadth and depth of kindergarteners' vocabularies while taking their general and verbal short-term memory into account. Two randomly assigned, experimental groups of 12 and 15 children learned two sets of 17 words counterbalanced to be taught first explicitly or implicitly. Seventeen words were taught via definition during storybook reading for 10-15 minutes on four consecutive days within the same week for two weeks, with groups of 3-4 children. Their results showed explicit instruction prompted more in-depth vocabulary knowledge compared to the implicit instruction condition and control group, which sustained over time. Compared to the implicit instruction condition and control group, low short-term memory in children tended to facilitate the breadth of vocabulary in the long run when provided explicit instruction.

While many of the studies focused on reading or vocabulary instruction, there was one study that looked at social and emotional learning. Ashdown and Bernard (2012) conducted a study utilizing explicit instruction in a social and emotional learning skills curriculum called the You Can Do It! Early Childhood Education Program (YCDI) with 99 preparatory and grade 1 students and four teachers. One preparatory and one grade 1 class were randomly assigned to receive the YCDI curriculum and were each compared to a control group of the same grade that did not receive the curriculum. The researchers found that the YCDI curriculum had a significant positive effect on levels of social-emotional competence, reduction in problem behaviors, and increase in reading achievement.

Duration

In reviewing the current literature on explicit instruction, there was no clear description of the optimal duration, and all studies had various implementation periods. Pesco and Devlin (2015) organized their explicit instruction into five 30-minute sessions held over a three-week period, While Damhuis, Segers, and Verhoeven (2014) used explicit instruction for 10-15 mins a day during vocabulary instruction for 4 days every week over the course of two weeks.

Taking a longer approach, Baker, Sanroro, Biancarrosa & Baker (2015) evaluated explicit instruction during IRAs during two week thematic units that included six to seven 30 minute lessons over the course of 19 weeks and found that compared to the control group, the students who received explicit instruction with the greatest fidelity experienced better outcomes compared to their counterparts. Similarly, Denton, Fletcher, Taylor, Barth, and Vaughn (2014) took a longer approach and evaluated explicit instruction delivery for 45 minutes, 4 days per week, for 23-25 weeks. Phillips, Ingrole, Burris, and Tabula (2017) implemented daily 30-minute lessons over 16 weeks for a total of 80 lessons, however this study did not provide student outcomes because it focused on teacher fidelity only.

Based on the studies reviewed, it seems like regardless of the duration, the use of explicit instruction facilitated greater gains compared to control groups. There was no evidence to support a minimum or maximum duration limit of explicit instruction, however, Baker, Sanroro,

Biancarrosa & Baker (2015) suggest that explicit instruction should be implemented across grades consistently to ensure high quality of instruction for students.

Aligning Instruction to Teaching Strategies GOLD Objectives

Teaching Strategies GOLD is an observation-based assessment system that helps educators create developmental profiles of students and their learning based on the Teaching Strategies Objectives. The Teaching Strategies Objectives are research-based objectives that cover 10 areas of development and learning organized within the areas of Social-Emotional, Physical, Language, Cognitive, Literacy, and Mathematics (Teaching Strategies, 2019). According to Teaching Strategies (2019) the developmental profiles generated using the GOLD assessment system can be used to scaffold and individualize each child's learning. The Teaching Strategies Objectives therefore are general benchmarks and guidelines of development and learning for children based on research investigating predictors of school success. As stated earlier, explicit instruction is a set of instructional methods and behaviors aimed at enhancing the learning and retention of material (Hughes, Therrien, & Benson, 2017). Based on the literature supporting explicit instruction, it seems like the instructional framework of explicit instruction could potentially help students learn material needed in order to reach the Teaching Strategies Objectives, however there is no research literature to substantiate this.

Fidelity

Hammond and Moore (2018) conducted a study to measure the effects of explicit instruction training in elementary school teachers. The researchers sought to find whether explicit instruction strategies could be implemented in teacher training and whether the strategies made it into the instructional practices of those teachers over time. Their results showed that teachers who participated in the explicit instruction training had increased self-efficacy, increased positive views about the training, and maintained the use of explicit instruction in their teaching practices. The results of this study suggest that incorporating a system of explicit instruction training and fidelity checks into the evaluation of teachers may be beneficial for adherence to the explicit instruction framework. However, two major limitations of this study should be noted: (1) there was no control group to serve as a comparison which means the gains teachers made cannot be causally determined, and (2) the creation of a system solely to train teachers in explicit instruction, systematically observe their adherence to the framework, and provide frequently feedback could increase the workload in the professionals delivering those services and potentially be costly.

Denton, Fletcher, Taylor, Barth, and Vaughn (2014) hired 14 tutors and trained them to use explicit instruction during a reading as an intervention for first grade students. The tutors were coached and closely supervised by the researchers throughout the study. Prior to the study, the tutors received 4.5 days of training and two additional full day training sessions during the school year, totaling about 39 hours of formal training. However, it should be noted that the tutors in this study were taught two different interventions and this training time includes the time it took to teach them both, so it is unclear what the total training time for explicit instruction was. Project coordinators observed three live explicit instruction lessons to verify fidelity and implementation during the school year and used scoring protocols designed to reflect key features of the intervention. The key features were (a) implements according to the script, (b) provides correct explicit modeling, (c) provides individual independent practice, (d)corrects errors appropriately, (e) provides extra practice on problem items, and (f) assures that students are on task. Adherence was coded by rating each instructional session on a 3-point Likert-type

scale (1 being the lowest and 3 being the highest). Average program adherence score was .95 (proportion of a “perfect” score for that lesson).

Phillips, Ingrole, Burris, and Tabula (2017) investigated predictive factors of explicit instruction fidelity in 39 pre-school teachers over the course of 16 weeks. The researchers implemented a 1 ½ day workshop the provided curriculum overview, and “how-to” modules that described the instructional design and modelled the delivery. The teachers then practiced 13 activity formats with feedback. After the first few weeks of implementation, the teachers had a half-day “troubleshooting” workshop to provide guidance on logistical, conceptual, and linguistic aspects of implementation. They had an additional professional development day midyear to provide further training in language-scaffolding and vocabulary review strategies.
Teacher surveys measured enthusiasm for the instructional materials and perceived adequacy of the professional development support.

To measure adherence, teachers completed weekly log sheets on which they indicated their completion of daily lessons and the specific activities for the lesson. Teachers were asked to complete this daily for the 16 weeks, for a total of 80 possible lessons. Additionally, using the teacher logs and field notes from weekly observations conducted by mentors (certified teachers and other professionals with advanced degrees and extensive early childhood education experience appointed and supervised by the first author) each teacher was rated on their global consistency of implementation using a 1-5 rating scale (1= teacher missed an entire weeks of lessons, 5= teacher’s implementation was virtually complete). To measure the quality of instruction, teachers were observed weekly by the mentors during implementation time and were scored on a 1-5 rating scale (1= poor quality, 5= high quality). Scores were averaged across completed weeks to produce a final observed-quality composite. Measures on other implementation-related metrics like preparedness (having materials ready to go), classroom management (chaotic vs organized classroom) and receptivity (resistant/skeptical vs avidly supportive of explicit instruction) were also recorded. On average, teachers implemented 14 of 16 weeks. Over 80% completed at least 13 weeks, indicating high adherence from most teachers. Additionally, results indicated that significant predictors of adherence and quality of implementation were classroom management, advance preparation, and receptivity to the instructional strategies. Teacher education was not a significant predictor.

References

Altun, D. (2018). The Efficacy of Multimedia Stories in Preschoolers' Explicit and Implicit Story Comprehension. Early Childhood Education Journal, 46(6), 629–642. https://doi.org/10.1007/s10643-018-0916-8

Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching.* Guilford Press.

Ashdown, D., & Bernard, M. (2012). Can Explicit Instruction in Social and Emotional Learning Skills Benefit the Social-Emotional Development, Well-being, and Academic Achievement of Young Children? Early Childhood Education Journal, 39(6), 397–405. https://doi.org/10.1007/s10643-011-0481-x

Baker, D. L., Santoro, L., Biancarrosa, G., & Baker, S. K. (2015). Effects of quality of instruction on student vocabulary and comprehension during read alouds. Society for Research on Educational Effectiveness. http://libproxy.unl.edu/login?url=https://search-proquestcom.libproxy.unl.edu/docview/1773215508?accountid=8116

Bowne, J. B., Yoshikawa, H., & Snow, C. E. (2016). Experimental impacts of a teacher professional development program in early childhood on explicit vocabulary instruction across the curriculum. *Early Childhood Research Quarterly, 34*, 27–39. https://doi.org/10.1016/j.ecresq.2015.08.002

Denton, C. A. Fletcher, J.M. Taylor, P.M., Barth A.E. & Vaughn, S. (2014) An experimental evaluation of guided reading and explicit interventions for primary-grade students at risk for reading difficulties. *Journal of Research on Educational Effectiveness, 7*(3), 268-293, https://doi.org/10.1080/19345747.2014.906010

Damhuis, C. M. P., Segers, E., & Verhoeven, L. (2014). Sustainability of breadth and depth of vocabulary after implicit versus explicit instruction in kindergarten. International Journal of Disability, Development and Education, 61(3), 194-211. https://doi.org//10.1080/1034912X.2014.932562

Doabler, C. T., Cary, M. S., Jungjohann, K., Clarke, B., Fien, H., Baker, S., et al. (2012). Enhancing core mathematics instruction for students at risk for mathematics disabilities. *Teaching Exceptional Children, 44*(4), 48– 57.

Drogowski, P. P. (2008). Teaching through the year with read-alouds for the primary age. School *Library Media Activities Monthly, 24*(10), 27–28

Fountas, I. C., & Pinnell, G. S. (2006). *Teaching for comprehending and fluency: Thinking, talking, and writing about reading,* K-8. Heinemann.

Hammond, L., & Moore, W. M. (2018). Teachers taking up explicit instruction: The impact of a professional development and directive instructional coaching model. Australian Journal of Teacher Education, 43(7), 110-133.

Hattie, J. (2009). *Visible learning: A synthesis of 800+ meta-analyses on achievement.* Routledge.

Hughes, C. A., Morris, J. R., Therrien, W. J., & Benson, S. K. (2017). Explicit Instruction: Historical and Contemporary Contexts. Learning Disabilities Research & Practice (Wiley-Blackwell), 32(3), 140–148. https://doi.org/10.1111/ldrp.12142

Kelley, E. S. (2017). Measuring Explicit Word Learning of Preschool Children: A Development Study. *American Journal of Speech-Language Pathology,* 26(3), 961–971. https://doi.org/10.1044/2017_AJSLP-16-0074

Kindle, K. J. (2009). Vocabulary development during read-alouds: Primary practices. *The Reading Teacher, 63*(3), 202–211.

McGee, L. M., & Schickedanz, J. A. (2007). Repeated interactive read-alouds in preschool and kindergarten. *The Reading Teacher,* 60(8), 742–751.

Meller, W. B., Richardson, D., & Hatch, J. A. (2009*). Using read-alouds with critical literacy literature in K-3 classrooms. Young Children, 64*(6), 76–78.

Myers, J.M. & Ankrum, J.W. (2018) Explicit Vocabulary Instruction in Kindergarten: Case studies of students with and without language Disorders. *Early Childhood Education Journal, 46*, 683. https://doi.org/10.1007/s10643-018-0896-8

Pesco, D., & Devlin, C. (2015). The effects of explicit instruction on French-speaking kindergarteners' understanding of stories. *Child Language Teaching & Therapy, 31*(2), 195–206. https://doi.org/10.1177/0265659014548518

Phillips, B. M., Ingrole, S.A., Burris, P.W. & Tabulda, G. (2017) Investigating predictors of fidelity of implementation for a preschool vocabulary and language curriculum. *Early Child Development and Care,* 187(3-4), 542-553, https://doi.org/10.1080/03004430.2016.1251428

Reutzel, D., Child, A., Jones, C., & Clark, S. (2014). Explicit Instruction in Core Reading Programs. The Elementary School Journal, 114(3), 406-430. https://doi.org/10.1086/674420

Santoro, L. E., Chard, D. J., Howard, L., & Baker, S. K. (2008). Making the very most of classroom read-alouds to promote comprehension and vocabulary. *The Reading Teacher, 61*(5), 396–408.

Spencer, E. J., Goldstein, H., & Kaminski, R. (2012). Teaching vocabulary in storybooks: Embedding explicit vocabulary instruction for young children. *Young Exceptional Children, 15(*1), 18–32.

Teaching Strategies GOLD®. (2019). Retrieved from https://teachingstrategies.com/solutions/assess/gold/

Wiseman, A. (2011). Interactive read alouds: Teachers and students constructing knowledge and literacy together. Early Childhood Education Journal, 38(6), 431–438.

Recommended Citation:

Rangel-Pacheco, A. & Witte, A. L. (2019). *Explicit Instruction in Early Childhood Educaion: An NeMTSS Research Brief.* Nebraska Multi-tiered System of Support (NeMTSS).

Authorship Information:

Abril Rangel-Pacheco, M.A.
School Psychology Doctoral Student
Graduate Research Assistant
Nebraska Center for Research on Children, Youth, Families and Schools
University of Nebraska–Lincoln
arangel-pacheco2@huskers.unl.edu