Western Springs School District 101
Kindergarten Analysis
Executive Summary
2014-2015

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1. Review of Literature on Impact of Full-Day Kindergarten vs. Part-Day Kindergarten

Studies Reviewed:


Quick Synopsis:

DeCicca, P. (2007)
- Longitudinal study measured the impact of FDK using standardized test scores in math and reading as children progressed from kindergarten to first grade.
- Full-day kindergarten had positive and practically important effects on early human capital formation; however, differences were short-lived, and almost no longer noticeable by the end of first grade.
- Compared students by race group and found that “among white children” benefits of part-day kindergarten (PDK) and full-day kindergarten (FDK) were “strikingly similar.” Findings, in fact (on math and reading pre/post assessments) were not statistically different. [See Table 1, p. 71]
- Although gains are more observable in full-day boys vs. girls, these gains “decline substantially over the course of an additional year so that they may now lack practical significance.”

● Explored perspectives of FDK vs. PDK from a “developmental approach” rather than isolating academic skills solely. Suggested many existing studies only consider academic change scores vs. careful estimation of trajectories of individual growth and child development.

● Noted an important aspect of families’ lives, often left out in body of research, was the cognitive stimulation parents provided for their children. Children from disadvantaged households tended to experience less consistent, supportive and cognitively stimulating caregiving than those from middle- and upper-class families.

● FDK was associated with greater growth in reading and math from fall to spring of kindergarten. Initial academic benefits diminished soon after kindergarten. Gains faded-out sometime between first and third grades.

● Concluded with findings that “child and family characteristics played noteworthy roles in why full-day benefits exist[ed] and in why these advantages faded relatively quickly” (i.e. Students from disadvantaged families may have less exposure at home than do those from advantaged backgrounds.) Some research pointed to students from disadvantaged families being more frequently exposed to lesser quality school programming than their advantaged peers.


● Study of large economically disadvantaged students from a southwestern school district found that students enrolled in FDK had greater literacy growth than PDK peers.

● Concluded that students, from economically disadvantaged backgrounds enrolled in full-day classes with small student enrollments, may have most successes.

● Study showed that students enrolled in FDK were more likely to engage in learning activities typically reserved for first grade (reading aloud, writing letters and numbers), but time allocated for some key learning activities was quite similar to PDK (small group instruction, individual work).

● Some indication noted that students who experience FDK were more likely to have “less self-control, poorer interpersonal skills, and more internal and external behavioral issues” than PDK counterparts.

● Findings showed that in relatively small-sized classrooms (less than 20 students) literacy acquisition rates doubled that of PDK peers. This advantage was maintained to a similar degree up to class sizes of 20-24. In relatively large classes (>24), acquisition rates were relatively higher among PDK students.

● Examination of student growth trajectories revealed large status differences between students in special populations and their counterparts upon entry to kindergarten. In particular, non-Hispanic White/Asian and English were one-half of a standard deviation in front of non-Asian and language minority students. Literacy acquisition rates also widened this initial gap over the year. Although hard to pinpoint, unmeasurable factors may be blamed for these differences (teacher/parent expectations, peer effects, familial educational resources).


● Review of literature that took 299 unduplicated references of literature on the topic of full-day kindergarten and examined and summarized the quality of such existing (1998-2008) studies.

● Developed a metric for “causal” quality vs. “correlative” quality (Levels 1-4 established, with Level 1 being “causal” quality) and determined where studies fell and what conclusions could be made.

● Ultimately, no studies passed Levels 1 or 2, and only 11 remaining studies passed “Level 3” quality. (Please note that all previously summarized studies were a part of this review.) [See Table 1, p. 9]

● Contended that it is very hard to develop a study that does not allow a comparison of learning outcomes to be influence by any other factor that the programs being studied.
● Thus, current research, as of this study, did not (i.e. cannot) “provide strong evidence to judge the effects of these programs on student learning.”

● Posed important questions to be considered when reviewing any study either “for” or “against” full-day programming (p. 11):
  a. Are results derived from the same student population?
  b. Are the result summarizing the same outcomes?
  c. Are students’ instructional experiences comparable?

NEW Reviewed Articles:

● Mixed methods study that examined impact of FDK on social, emotional and developmental factors of students, as well as academic achievement

● Results suggested that students in a small rural community benefited both academically and developmentally from FDK experience.

● Found no “statistically significant differences” between academic achievement of control group and full-day group.

● Qualitative elements of the study (parents’, administrators’ and teachers’ perceptions) affirmed positive impact of FDK on students’ social-emotional growth and proclivity for future success in school in first grade

● Result of study “imply that instruction and student learning benefit from the luxury of time.”

http://academic.emporia.edu/esrs/vol43/carnes.pdf

● Research inconclusive on longer-term impacts of FDK. Academic gains large disappear by end of first grade or end of second grade

● Some research finds that children in FDK have more behavior problems than do children in HDK.

● Recent meta-analysis found that kindergartners in FDK were more likely to have good attendance, self-confidence, and the ability to work and play with others, but less likely to have a positive attitude toward school.

● Since 1977, percentage of kids enrolled in FDK has nearly tripled, increasing from 28-77 percent between 1977-2013.

2. NEW SEL Developmental Reference Charts:
Pro-Ed Chart
Yardsticks Developmental Continuum

3. NEW D101 Kindergarten Academic Outcomes/Learning Targets By Core Content Area:

MATHEMATICS

M.K.1 Students will build number sense by using number names and the counting sequence.
M.K.1.1 Identify written numbers to 31 when presented out of order. (WS)
M.K.1.2 Count backwards by 1s from 20 with support of the number line. (WS)
M.K.1.3 Count to 100 by 1s. (K.CC.1)
M.K.1.4 Count forward from a given number within the known sequence, instead of having to begin at 1. (between 1 and 100). (K.CC.2)
M.K.1.5 Count to 100 by 10s. (K.CC.1)
M.K.1.6 Write numbers 0-20. (K.CC.3)
M.K.2 Students will count to tell the number of objects and compare sets of objects. (1 to 1 correspondence)
M.K.2.1 Sort and group objects in a collection up to 10 by a common, given attribute and count to answer, “How many?” (K.CC.4a, K.MD.3, K.CC.5)
M.K.2.2 Count to answer, “How many?” given a number of objects from 1-10, arranged in a line, circle or rectangular array. (K.CC.4b, K.CC.5)
M.K.2.3 Tell the number of objects if one more were added, given a number of objects from 1-10. (K.CC.4c)
M.K.2.4 Match a number of objects with a written numeral, 0-10 (with 0 representing a count of no objects). (K.CC.3, K.CC.4a)

M.K.3 Students will identify and create two and three dimensional shapes and differentiate between them.
M.K.3.1 Identify and name squares, circles, triangles, rectangles and hexagons and use informal language to describe their similarities and differences, regardless of size and orientation. (K.G.2, K.G.4)
M.K.3.2 Draw or build simple shapes (circle, square, triangle, rectangles, hexagons). (K.G.5)
M.K.3.3 Combine simple shapes (circles, squares, triangles, rectangles, hexagons) to form larger shapes. (K.G.6)
M.K.3.4 Identify objects in the environment using names of two-dimensional shapes and three-dimensional shapes and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. (K.G.1)
M.K.3.5 Sort shapes as two-dimensional (“flat”) or three-dimensional (“solid”). (K.G.3)
M.K.3.6 Identify and name spheres, cubes, cones and cylinders and use informal language to describe their similarities and differences, regardless of size and orientations. (K.G.2, K.G.4)
M.K.3.7 Identify objects in the environment using names of three-dimensional shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to. (K.G.1)

M.K.4 Students will compose, decompose and compare numbers up to 10 and record their results using diagrams or numbers.
M.K.4.1 Decompose numbers less than or equal to 10 into pairs in more than one way and record the answer with a drawing or equation. (K.OA.3)
M.K.4.2 Compare two written numbers between 1 and 10. (K.CC.7)
M.K.4.3 Identify whether the number of objects in one group is greater than, less than or equal to the number of objects in another group (by counting, matching etc.). (K.CC.6)
M.K.4.4 For any number from 1-9, find the number that makes 10 when added to the given number by using objects and drawings, and record the answer with a drawing or equation. (K.OA.4)

M.K.5 Describe and compare measurable attributes.
M.K.5.1 Describe several measurable attributes of a single object (such as length and weight). (K.MD.1)
M.K.5.2 Compare two objects with a measurable attribute in common to see which object has “more of”/ “less of” that attribute and describe the difference. For example, directly compare heights of two block towers and describe one tower as taller/shorter. (K.MD.2)
M.K.6 Students will compose, decompose and compare numbers 11 to 19 and record their results using diagrams or numbers.
M.K.6.1 Compose and decompose teen numbers into a group of one ten and ones using manipulatives and record with a drawing or equation. For example, $18 = 10 + 8$ (K.NBT.1)
M.K.6.2 Count to answer, “How many?” given a number of objects from 11-20, arranged in a line, rectangular array, circle, or scattered configuration. (K.CC.4b, K.CC.5)
M.K.6.3 Tell the number of objects if one more were added, given a number of objects from 11-20. (K.CC.4c)

M.K.7 Solve problems with and without manipulatives which use addition and subtraction within ten.
M.K.7.1 Represent addition and subtraction with manipulatives, fingers, acting out situations, verbal explanations, etc. (K.OA.1)
M.K.7.2 Define addition as putting together or adding to. (K.OA)
M.K.7.3 Solve addition word problems, up to 10, using manipulatives, visual aids (number lines, ten frames, etc.) or drawings. (K.OA.2)
M.K.7.4 Define subtraction as taking apart or taking from. (K.OA)
M.K.7.5 Solve subtraction word problems, up to 10, using manipulatives, visual aids (number lines, ten frames, etc.) or drawings. (K.OA.2)
M.K.7.6 Add and subtract with fluency within 5 without manipulatives or visual aids (number lines, ten frames, etc.). (K.OA.5)

ENGLISH LANGUAGE ARTS

Strand: Conventions
Outcome: LA.K.1 Students will apply Kindergarten level capitalization, punctuation, usage, and spelling to writing.
Targets:
LA.K.1.1 Use a capital letter at the beginning of their own name. (L.K.1a)
LA.K.1.2 Use finger spaces between words.
LA.K.1.3 Use a period. (L.K.2b)
LA.K.1.4 In various pictures and writing, use frequently occurring nouns and verbs. (L.K.1b)
LA.K.1.5 Spell simple words phonetically or by copying from given resources. (L.K.2d)

Strand: Writing
Outcome: LA.K.2 Students will write with focus and details in pictures or words.
Targets:
LA.K.2.1 Write a narrative piece using pictures and words. (W.K.3)
LA.K.2.2 Verbally brainstorm topic ideas. not assessed (W.K.8)
LA.K.2.3 Writes one sentence that stays on topic.
LA.K.2.4 Add details to pictures (realistic colors, background, clothes/facial features). (W.K.5)
LA.K.2.5 Use words that match pictures. (W.K.1, W.K.2, W.K.3)
LA.K.2.6 Compose an opinion piece in which a personal opinion is shared and explained. (W.K.1) not assessed
LA.K.2.7 Compose informative text in which students name what they are writing about and supply some supporting information. (W.K.2) not assessed
Outcome: LA.K.3 Students will use Kindergarten level handwriting.
Targets:
LA.K.3.1 Hold the pencil using a tripod or quadropod grasp.
LA.K.3.2 Write from left to right on a page. (RF.K.1a)
LA.K.3.3 Write from top to bottom of a page. (RF.K.1a)

**Strand : Phonemic Awareness**
Outcome: LA.K.4 Students will orally discriminate sounds, rhymes and syllables.
Targets:
LA.K.4.1 Orally identify and reproduce beginning sounds of words. (RF.K.2d)
LA.K.4.2 Orally identify and reproduce ending sounds of words. (RF.K.2d)
LA.K.4.3 Orally identify a set of rhyming words. (RF.K.2a)
LA.K.4.4 Orally blend together three letter words. (RF.K.2c)
LA.K.4.5 Segment single syllable words and add or delete individual sounds in one syllable words. not assessed (RF.K.2d, RF.K.2e)

**Strand : Comprehension**
Outcome: LA.K.5 Students will use Kindergarten level comprehension strategies when reading and listening to grade level fiction and nonfiction texts. (RL.K.10, RI.K.10)
Targets:
LA.K.5.1 Orally predict the outcome. (not assessed)
LA.K.5.2 Orally retell stories and key details using illustrations and text. (RL.K.2, RI.K.2, RL.K.7, RI.K.7)
LA.K.5.3 Orally recall a story sequence when prompted.
LA.K.5.4 Orally answer questions about events in the text. (RL.K.1, RI.K.1, SL.K.2)
LA.K.5.5 Identify characters, setting, or major events/topics in a single story. (RL.K.3, RI.K.3)
LA.K.5.6 Orally make a connection between characters and texts. (RL.K.9, RI.K.9)
LA.K.5.7 Identify book title, book cover, title page, back cover, and type of text (e.g. nonfiction, fiction). (RL.K.5, RI.K.5)
LA.K.5.8 Define the role of the author and illustrator. (RL.K.6, RI.K.6)
LA.K.5.8 Choral and echo read simple passages with teacher support. not assessed (RF.K.4)

**Strand : Phonics/Word Analysis**
Outcome: LA.K.6 Students will use Kindergarten phonics skills to decode words. (RF.K.3)
Targets:
LA.K.6.1 Identify all upper and lowercase letters of the alphabet. (RF.K.1d)
LA.K.6.2 Orally produce the most common sound for each consonant. (RF.K.3a)
LA.K.6.3 Orally produce the short vowel sounds for each of the five vowels. (RF.K.3b)
LA.K.6.4 Orally produce the most common digraphs (sh, ch, th, ck, qu, ng).
LA.K.6.5 Orally produce the most common vowel teams (ai, oa, ie, ee, oi).
LA.K.6.6 Classify letters as a vowel or consonant.
LA.K.6.7 Decode onesyllable words using strategies such as; picture clues, sound it out, and word families. (RF.K.3)

Outcome: LA.K.7 Students will use Kindergarten word analysis skills and content clues to determine unknown words.
Targets:
LA.K.7.1 Read 25 words on the sight word list. (RF.K.3c)
LA.K.7.2 Orally produce or segment a compound word.
LA.K.7.3 Orally give the meaning of a word using context clues. (L.K.4, RL.K.4)
LA.K.7.4 Sort common words/pictures and objects into categories and describe how they are related. (L.K.5a)
Strand: Speaking and Listening
Outcome: LA.K.8 Students will apply Kindergarten speaking and listening skills in collaborative conversations, discussions, and presentations.
Targets:
LA.K.8.1 Use rules for discussion (i.e. listening, taking turns, continuing discussion). (SL.K.1)
LA.K.8.2 Ask questions to clarify, get more information, or seek help. (SL.K.3)
LA.K.8.3 Follow rules for presentations and sharing time (i.e. speak loudly and clearly, use visuals, describe familiar events, people, and places). (SL.K.4, SL.K.5, SL.K.6)

SCIENCE
Course Purpose: Students will evaluate patterns in local weather to determine, prepare for, and respond to severe weather. Students will investigate the cause and effect of push and pull to change the speed or direction of an object. Students will compare the needs of plants and animals and the relationship between needs and habitat.

Outcomes and Targets:
S.K.1. Students will evaluate patterns in local weather to determine, prepare for, and respond to a variety of weather conditions. (K-ESS2-1, K-PS3-1, K-PS3-2, K-ESS3-2, K-ESS3-3)
  S.K.1.1. Describe what can be seen when looking out the window and identify which of these observations relate to the weather.
  S.K.1.2. Record weather observations to identify weekly and monthly patterns.
  S.K.1.3. Identify the three types of clouds (cumulus, cirrus, stratus) based on physical characteristics.
  S.K.1.4. Explain how each type of cloud indicates the weather.
  S.K.1.5. Describe the effects of sunlight on soil, rocks, and water.
  S.K.1.6. Design a structure that reduces the warming effect of sunlight.
  S.K.1.7. Define severe weather and generate multiple examples. (tornado, blizzard, thunder, lightning, flood, hail, wind)
  S.K.1.8. Show an appropriate safety response after identifying different types of severe weather.

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A Place Where Children Thrive
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S.K.2. Students will modify the speed or direction of an object using pushes and pulls. (K-PS2-1, K-PS2-2)
S.K.2.1. Demonstrate push and pull using a variety of objects found in the environment.
S.K.2.2. Compare how different strengths of pushes and pulls affect an object.
S.K.2.3. Design a set up to demonstrate how to change the speed or direction of a moving object and analyze the success.

S.K.3. Students will demonstrate the relationship between the needs of plants and animals and their habitat. (K-LS1-1, K-ESS3-1, K-ESS2-2)
S.K.3.1. Classify and sort animals into five animal groupings (mammal, reptile, fish, bird, and amphibian).
S.K.3.2. Define oviparous and viviparous animals.
S.K.3.3. Compare wants and needs.
S.K.3.4. Identify the survival needs of animals.
S.K.3.5. Compare human habitats to animal habitats.
S.K.3.6. Compare two habitats (incubator and brooding box) for oviparous animals.
S.K.3.7. Record observations of oviparous animals interacting with their habitat to meet their needs.
S.K.3.8. Identify the essential parts of plants (roots, stem, leaves, flower).
S.K.3.9. Identify the survival needs of plants through observation. (water, sunlight)*
S.K.3.10. Identify, through photography, local examples of how plants interact with their environment to meet their needs.
S.K.3.11. Represent the relationship between the needs of different plants and animals and the places they live by creating an illustration. (ex: koalas and gum trees, pandas and bamboo) (K-ESS3-3 was selectively abandoned.)

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SOCIAL STUDIES

Course Purpose: Students will analyze similarities and differences of people within their community, the ways they relate to each other, and the ways they demonstrate citizenship.

SS.K.1 Students will examine characteristics and roles of self and family to describe their own families.

SS.K.1.1 Illustrate and describe characteristics of self and others (e.g., differences in gender, height, and color of skin, eyes, hair).
SS.K.1.2 Illustrate/list family members (i.e. immediate and extended).
SS.K.1.3 Describe duties and responsibilities within the family.

SS.K.2 Students will examine characteristics and roles of community members in order to locate them within the community.

SS.K.2.1 Illustrate a school or community leader.
SS.K.2.2 Identify a map and a globe and discuss how these tools are used to find nearby and distant locations.
SS.K.2.3 Locate objects and places on a map of the home, school, or community.
SS.K.2.4 Identify a school or community personnel member a student could go to for help or safety.

SS.K.3 Students will describe their responsibility to follow the rules in order to be a good citizen at home and school.

SS.K.3.1 Give examples of rules in their home and school.
SS.K.3.2 Illustrate one home and school rule.
SS.K.3.3 Explain why families and schools have rules.

SS.K.4 Students will identify American symbols in order to demonstrate ways of honoring the
United States.

SS.K.4.1 Identify and locate the American flag in a classroom.

SS.K.4.2 Memorize the Pledge of Allegiance and discuss the meaning.

SS.K.4.3 Identify and demonstrate the rules and etiquette of citizenship (e.g., stand for the flag, hand over heart).


4. NEW D101 Explore Test Performance Compared to the Township 2009-10 through 2014-15
Science Explore Results D101 vs. Township

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Composite Explore Results D101 vs. Township

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