IMPROVING CHILDREN'S SCHOOL READINESS VIA TEACHER COACHING

Can It Make a Difference?

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Executive Summary

This White Paper presents results of a community-based, multi-pronged initiative, *ready 4 success*, which was designed to improve the quality of language and literacy instruction in preschool classrooms and, in turn, children's language and literacy skills. The core components of the initiative included: (1) administration of an early-literacy screening tool, Get Ready to Read (GRTR; Whitehurst & Lonigan, 2001) to preschool children in fall and spring of the academic year; (2) teacher participation in workshops intentionally designed to address the elements of GRTR; and (3) provision of coaching to teachers using the results of the GRTR to identify and implement evidence-based instructional strategies that met the needs of the particular classroom.

In the 2013-2014 academic year, 61 different preschool centers participated in the initiative, consisting of 109 different classrooms. From these classrooms, 1,123 children were screened in the fall of the year, and 1,060 in the spring of the year, with 906 children screened at both time-points.

A total of 87 teachers in 43 classrooms participated in workshops and received ongoing coaching over the academic year. Children in these classrooms made significantly greater growth on the GRTR assessment over the academic year, with the largest effect seen in alphabet knowledge. Results show that this community-based project significantly improved preschool children's growth in language and literacy skills, and therefore enhanced their readiness for kindergarten and formal reading instruction.

Recommendations

For Policymakers

- Policymakers should promote investments in formally evaluated community-based initiatives that demonstrate improvements in children's school readiness.

- Policymakers should work to provide early-childhood educators with effective screening tools and on-site coaching as an empirically tested means for improving children's language and literacy skills.

For Practitioners

- Practitioners can use the Get Ready to Read screening tool as a means to identify children who need special supports for developing early language and literacy skills.

- Practitioners can seek out professional development opportunities that help to improve their knowledge about and use of practices that affect children's language and literacy development.

Professional Development and Early Childhood Education

Participation in early childhood education (ECE) is viewed as an important mechanism for improving young children's language and literacy skills and, in turn, enhancing their transition to formal reading instruction in the early primary grades. Children whose ECE teachers provide them with frequent, high-quality language- and literacy-focused learning opportunities show greater growth in these skills compared to children whose teachers do not (see Mashburn et al., 2008). For instance, when teachers read books with children regularly and include higher-level talk in these readings (e.g., asking children to predict what will happen), children show accelerated growth in language and literacy skills compared to children of teachers who do not provide these learning opportunities (Zucker, Cabell, Justice, Pentimonti, & Kaderavek, 2013).

Not all ECE teachers, however, provide children with sufficient opportunities across the classroom day to develop their language and literacy skills. One study of 124 pre-kindergarten classrooms (all affiliated with public schools) showed that one-half of ECE classrooms provided children with very limited opportunities to develop their language and literacy skills (Justice, Mashburn, Hamre, & Pianta, 2008). In that study, each classroom was observed using the Classroom Assessment Scoring System-Pre-K (CLASS; Pianta, La Paro, & Hamre, 2008), which is a standardized tool used to document instructional quality across three broad dimensions (emotional support, instructional support, and classroom management). Scores specific to language and literacy supports, corresponding to the Language Modeling and Literacy Focus scales of the CLASS instructional support dimension, showed that 54 percent and 44 percent of classrooms, respectively, scored in the low/poor range. Arguably, classrooms scoring in the low/poor range on such instruments as the CLASS likely are not providing children with sufficient opportunities to develop their language and literacy skills.

To this end, there is a need to support ECE educators in providing high-quality language- and literacy-focused supports in their classrooms to help children learn. Professional development (PD) is an umbrella term used to reflect myriad activities that are used to support teachers' learning and growth as professionals. PD activities often used in the ECE field include one-on-one coaching and mentoring, formal courses and workshops, and distance education (e.g., Hamre et al., 2010; Landry, Swank, Smith, Assel, & Gunnewig, 2006; Powell, Diamond, Burchinal, & Koehler, 2010). It is generally expected that teachers who participate in PD focused on language and literacy development will show improved quality of teaching (related to language and literacy instruction) and that their students will benefit in turn by showing enhanced language and literacy skills.

Nonetheless, we must point out that the research is mixed on whether participation in PD will significantly influence teachers' instructional quality and, in turn, provide benefits to the children they teach. For instance, Powell and his colleagues investigated the effects of a semester-long PD program for Head Start teachers. The program featured teachers' participation in two intensive daylong workshops plus regular in-class coaching, all focused on improving the quality of teachers' language- and literacy-focused instruction (Powell et al., 2010). Study findings showed that teachers who participated in the PD provided higher-quality language and literacy instruction in their classrooms than teachers in a control condition; however, the PD had mixed effects with respect to how it impacted children's language and literacy skills. That is, teachers' participation in PD positively affected children's alphabet knowledge, but not their general language skills. Indeed, it is not clear why PD was influential to improving some child outcomes and not others. This same pattern of results – in which teachers' participation in PD affects some but not all desired child-level outcomes – is seen in many PD studies (e.g., Hamre et al., 2010; Landry et al., 2006).

Despite this mixed evidence, the provision of PD is often used within ECE organizations as a means to improve ECE educators' practices with respect to language and literacy instruction, typically as a route to enhancing children's skills. This is the case in Columbus, Ohio, in which a number of community-based organizations (via their involvement in Learn4Life Columbus, a cradle-to-career collective-impact organization) have come together to identify effective solutions for improving young children's school readiness. The need to improve children's school readiness was grounded in evidence showing that 25 percent to 40 percent of kindergarteners in Columbus City Schools (CCS) arrive to school with under-developed language and literacy skills. In turn, these children show an elevated risk for reading difficulties by the end of third grade (see Logan, Justice, & Pentimonti, 2014). Although school readiness as a term captures both academic and social preparedness for schooling, the data available regarding school readiness for children in CCS are focused specifically on the former, namely academic readiness and specific to the domains of language and literacy skill.

To address this community-level concern, Learn4Life Columbus – with input from its affiliate organizations – launched the multi-pronged initiative *ready 4 success*. The core components of the work include: (1) the use of a reliable and valid early literacy screening tool, Get Ready to Read (GRTR; Whitehurst & Lonigan, 2001), administered by individuals trained on the tool; (2) access to professional development sessions intentionally designed to address the elements of GRTR; and (3) access to coaching using the results of the GRTR to identify and implement evidence-based instructional strategies that met the needs of the particular classroom.

Aims of the Study

The present research was conducted to address two aims concerning the early language and literacy skills of children within Columbus, Ohio, and the contribution of *ready 4 success* efforts to enhancing these skills. Children's language and literacy skills are central to their preparedness for formal schooling, or school readiness; and, children who arrive to kindergarten with well-developed language and literacy skills are far more likely to be good readers by third grade than children with under-developed skills (see Logan et al., 2014). As previously noted, *ready 4 success* was launched within the city in an effort to improve young children's language and literacy skills (and overall school readiness) via provision of PD to early childhood educators. The data collected as part of the initiative are informative for learning more about the early language and literacy development of children within this urban setting as well as considering whether PD provision leads to changes in children's school readiness. The aims were twofold:

(1) To examine the language and literacy skills of preschoolers in the year before kindergarten, including the number of children considered to be at risk based on the GRTR screening, and

(2) To determine the extent to which coaching provided to the children's teachers lead to significant improvements in language and literacy skills over the preschool year.

Methods

Procedures

The data used in this project were collected as part of the *ready 4 success* initiative. This initiative was developed to screen children's language and literacy skills in the year before kindergarten, to provide preschool teachers with information about children's skills based on the screening results, and to provide targeted coaching to preschool teachers based on the needs of the children in their classrooms. Data come from the first full implementation of the project (2013-2014), in which students were screened in the beginning (October 7 – November 14) and the end (April 30 – May 31) of the school year.

Participants

In the fall of 2013-2014, preschool centers were recruited for participation in the initiative by personal invitation from the project leaders. In total, 61 different preschool centers participated in the initiative, consisting of 109 different classrooms. Teachers purposefully selected by their program directors were invited or volunteered to participate. Across all participating classrooms, 1,123 children were screened in the fall of the academic year, and 1,060 were screened in the spring of the year. In total, 906 children had screening results for both the fall and the spring of the year, representing the sample that was analyzed in this study. Students were 46 percent female, and a majority (56 percent) were African American; children who were white (21 percent), Hispanic (8 percent), and multi-racial (5 percent) also participated. About 12 percent of the sample was identified as learning English as a second language (n = 110, 140 missing responses), and 3.7 percent of students were reported to have a disability (n = 34, 99 missing responses).

Coaching

For the *ready 4 success* initiative, four coaches were hired to support the needs of this project. In total, 87 teachers from 43 different classrooms participated in coaching (about 40 percent of the classrooms enrolled in the larger initiative). The coaching was largely focused on helping teachers understand the results of the GRTR screening conducted in the fall of the year, and to be responsive to the screening-identified needs of the children in their classrooms. On average, coaches spent 17 hours providing coaching to teachers in each classroom (median = 14.5 hours, range 7-57 hours), and all contact with teachers was carefully logged to identify the specific topic addressed. Coaching most frequently focused on helping teachers to identify and practice ways to improve children's early literacy skills.

Teachers who received coaching were a subset of those enrolled in the larger initiative; the selection into coaching was largely based on self-selection of teachers. Of note, however, is that no teachers within the local school district, Columbus City Schools (CCS), were able to self-select to receive coaching. Though CCS was involved in some aspects of the initiative (i.e., children in CCS classrooms completed the screenings), the CCS administration decided their teachers would not receive coaching. Therefore, data for children in CCS (46 teachers and 553 children) were not included in analyses, which will be described shortly, in which we examined the effects of coaching on children's GRTR outcomes.

Measures

Children's language and literacy skills were assessed with the Get Ready to Read (GRTR; Whitehurst & Lonigan, 2001), a valid and reliable screening assessment. The GRTR was developed by the National Center for Learning Disabilities to screen 3- to 5-year-old children for early indicators of future reading risk. Administration time is about 5 minutes, and a 20-item version of the screener is available at no charge on the web (getreadytoread.org/screening-tools). In this work, we used an updated 25-item version of the GRTR (not available online), administered by trained project staff. The multiple-choice screening tool used in this study examines children's skills in five areas linked to future reading achievement:

- Print awareness: Knowledge of the forms and functions of print (8 items)
- Letter knowledge: Knowledge of letter names (5 items)
- Letter-sound knowledge: Knowledge of the sounds letters make (3 items)
- Phonological awareness: Knowledge of the segments of spoken language (6 items)
- Rhyming: Identification of pairs of rhyming words (3 items)

Children receive a total score from 0 to 25 points, which is used to differentiate children into three skill-level categories based on their age: below average, average, and above average. The GRTR website suggests that children who score in the below-average range may have a specific problem learning these early literacy skills or have not had much experience with activities that build literacy skills. Therefore, teachers should work with children in the below-average scoring category to provide activities designed to build these early literacy skills. In the present study, it was the goal of the coaching to help teachers provide such targeted skill-building activities to their students.

Results

Aim 1

The first aim was to examine the language and literacy skills of preschoolers in the fall and spring of the academic year, and to identify the number of children considered to be at risk based on the GRTR assessment at each time-point. A simple gain-score was also calculated for each child by subtracting fall from spring scores. Figure 1 shows, on average, that children gained about 5 points on the GRTR screening over the academic year (SD = 3.91, range -6 to 17). The correlation between fall and spring scores (r = .67, p < .001) indicates stability of GRTR scores over the year. That is, children who had higher scores in the fall tended to have higher scores in the spring.
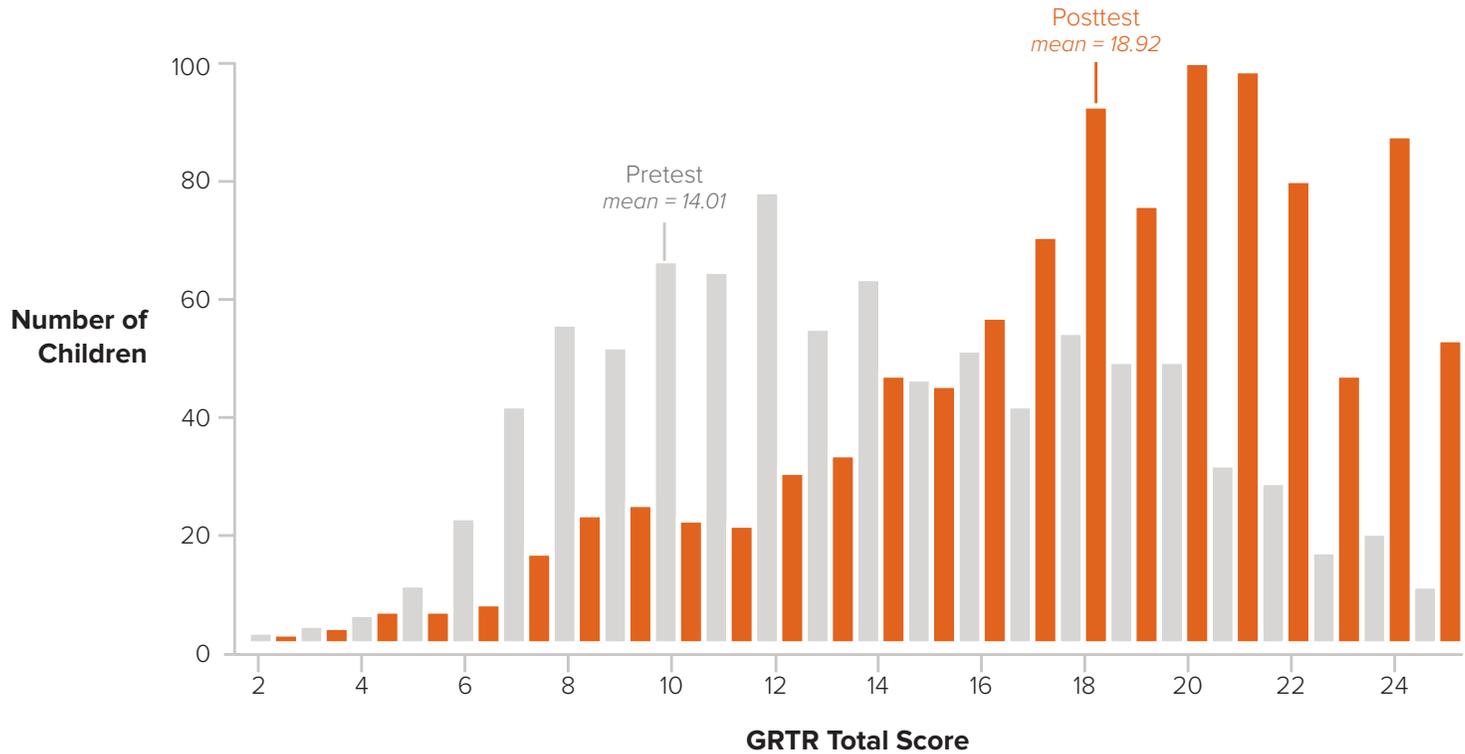

Figure 1. *GRTR Total Scores at Pretest and Posttest*

On this figure, the GRTR scores run along the x-axis and the height of each bar corresponds to the number of children who received that particular score on the test at either the pretest (white) or posttest (orange). These graphs show the change in scores from the fall to spring time-points, and that the children scored higher at the second time-point.
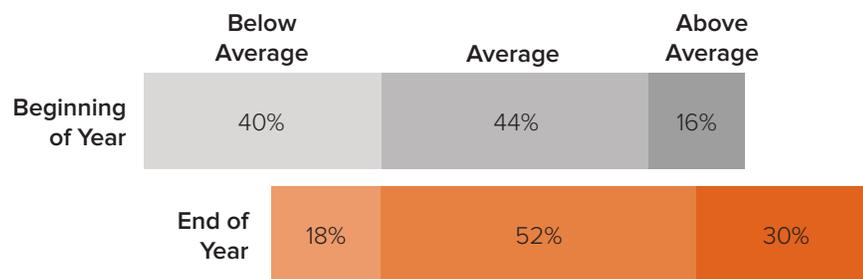
	Below Average	Average	Above Average
Beginning of Year	40%	44%	16%
End of Year	18%	52%	30%

Figure 2. *Comparison of Pretest and Posttest Groupings on GRTR*

In the fall of the year, 40 percent of children had below-average scores, 44 percent had average scores, and 16 percent had above-average scores. In comparison, in the spring of the year, 18 percent of children had below-average scores, 52 percent had average scores, and 30 percent had above-average scores.

The data were also analyzed with respect to the percentage of children who were identified as below average, average, or above average based on their GRTR score at the fall and spring time-points (see Figure 2). The percentage of children considered below-average based on the GRTR screener significantly decreased from fall to spring (t(905)= 13.20, p < .001); likewise, the percentage of children considered above-average significantly increased from fall to spring (t(905) = 9.26, p < .001).

Aim 2

The second aim was to determine whether the coaching provided to children's teachers led to improvements in children's language and literacy skills during preschool. This analysis was conducted on the subset of students whose teachers had the opportunity to self-select into coaching, and thus excluded those children who were enrolled in CCS preschool programs. Analyses involved 354 children, corresponding to 100 children whose teachers did not receive coaching and 254 whose teachers did receive coaching. A regression analysis was used to predict children's gain on the GRTR from fall to spring as a function of whether their teachers received coaching (0 = No Coaching; 1 = Coaching). Gain was calculated by subtracting each child's beginning-of-year GRTR total score from their end-of-year score.

Results of the regression analysis indicated that children whose teachers received coaching had greater gains on the GRTR over the academic year compared to children whose teachers did not receive coaching. In total, children whose teachers did not receive coaching gained 3.1 points on the GRTR during the school year, compared to 4.4 points for those who did receive coaching, a statistically significant difference (p = .01). This effect size (d = .33) is similar in size to the effect we see in the published literature on literacy-focused interventions, as described in the empirical literature (see Shanahan & Lonigan, 2010).
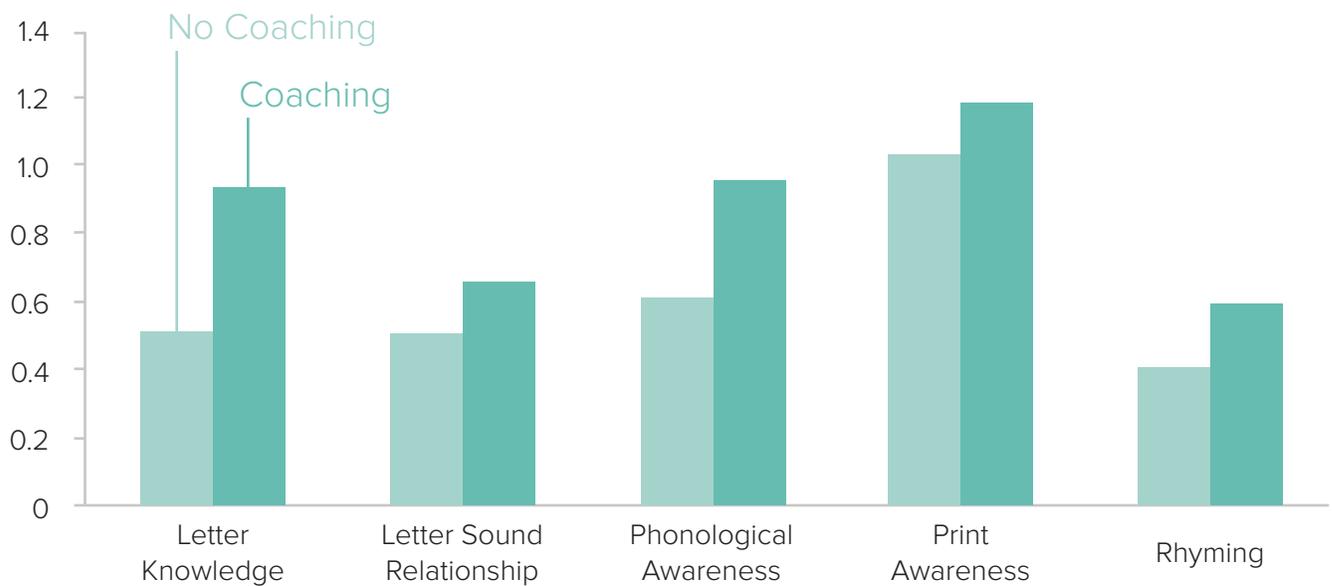
Figure 3. *Gains for Children on the GRTR Subtests as a Function of Teachers' Receipt of Coaching*

The lighter bars represent children of teachers who did not receive coaching, and darker bars represent children of teachers who did receive coaching. The height of the bars corresponds to average number of points of gain made from fall to spring.

To better understand the gains children made during the year, we next examined the gain made by students on each subtest of the GRTR, with results presented in Figure 3. Effect sizes for the differences between children whose teachers received coaching and those who did not ranged from small (.09) for print awareness, to medium (.31) for letter knowledge. These results suggest that coaching provided to teachers resulted in additional benefit for students in all five areas examined on the GRTR screener.

Conclusions

Several limitations should be considered when interpreting the results presented here. First, this study was quasi-experimental in nature, such that the assignment of teachers to receive or not receive coaching was not randomized. We cannot make claims of causality, such that teachers' receipt of coaching caused children to increase their GRTR scores. It may be that teachers who self-selected to receive coaching differed in fundamental ways from teachers who did not self-select to receive coaching, and these fundamental differences are the reason we see differences in children's GRTR scores for coached and non-coached teachers.

Second, the data represent complex interrelations: Each center had multiple classrooms, each classroom had multiple teachers and potentially a director who could choose to participate in coaching, and each classroom had several children. With data like these, children's GRTR scores are likely impacted by all of these different influences, meaning the observations are not independent of one another. For example, two children in the same classroom or center may be more similar to one another than two children in different centers. When this is the case, it can result in differences between groups appearing larger than they truly are (called a Type 1 statistical error). In this study, the levels of influence were not always clear, and as such the analyses we presented did not account for them. This decision could mean that the positive effects of coaching we report reflect a Type 1 statistical error (that is, a false positive).

Despite these limitations, the results presented here are important in several key ways:

First, this work serves as an exemplar with respect to the use of data-driven instruction (in this case, coaching) to address children's school-readiness needs in a community-based project. A valid and reliable screener was administered to preschool-aged children, and the results were translated by coaches and teachers into responsive instruction, which appeared to enhance children's learning.

Second, this work also strives to show how empirical research can be translated into community efforts. Prior research conducted in Texas has indicated that the quality of preschool instruction and, in turn, children's language and literacy skills, can be improved via provision of coaching (see Landry, Anthony, Swank, & Monseque-Bailey, 2009). The work of the *ready 4 success* initiative highlights how research findings such as these can be translated to serve a community's children.

Finally, this work also shows the importance of evaluation for ensuring that community investments are effective in achieving their desired ends and for signaling when investments should be sustained. The *ready 4 success* initiative sought to use an empirically supported coaching model as coupled with a valid and reliable screening tool to improve children's school readiness in Columbus, Ohio. The analyses presented here suggest that this investment in screening and coaching is a sound one that warrants ongoing investments. Indeed, the results presented here suggest the potential for screening and coaching to increase the number of children in Columbus who arrive to school ready for the rigors of formal reading instruction.

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Author Note

About the Crane Center for Early Childhood Research and Policy (CCEC)

Established in 2013, the Crane Center for Early Childhood Research and Policy (CCEC) is housed within The Ohio State University's College of Education and Human Ecology. The Schoenbaum Family Center and Crane Center for Early Childhood Research and Policy formed a partnership in 2014 to improve children's well-being through research, practice, and policy.

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2015 SYMPOSIUM ON CHILDREN
THE STATE OF PRE-K: EDUCATING YOUNG DUAL-LANGUAGE LEARNERS

CCEC OCT 23 | 2015

The Crane Center for Early Childhood Research and Policy (CCEC) hosts an annual Symposium on Children to tackle a pressing issue related to children's well-being, broadly defined. By bringing together top researchers, practitioners, and policymakers in the field to provide current thinking and findings on the issue, we are able to identify what we know and help shape future directions for research, practice, and policy.

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WHEN: 12—5 P.M. | OCT 23, 2015
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SCHEDULE OF EVENTS

12—1 p.m.	Registration, Poster Session, Opening Remarks, Lunch
1—3 p.m.	Presentations
3—3:15 p.m.	Break
3:15—4 p.m.	Discussion Panel
4—5 p.m.	Reception

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