

Off-Task Behavior in Kindergarten

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Classroom off-task behavior has been operationalized in several ways, with most studies incorporating this measure in a larger battery of classroom behaviors, typically aimed at identifying children with learning-related disorders (e.g. ADHD) (see Gaastra et al., 2016 for a meta-analytic review). Thus, it is difficult to tease apart how off-task behavior relates to both aspects of the classroom environment as well as child outcomes, especially for typically developing children. Some studies, however, have paid special attention to the measurement of off-task behavior, and determined the nature and context with which it occurs in elementary school (Godwin et al., 2015). The present study aims to establish a more in-depth and comprehensive view of the extent and nature of off-task behavior, as well as its predictability to child outcomes in Kindergarten.

In the current study, 130 Kindergarten children across 16 classrooms were observed for a single school day in the spring of their Kindergarten year. Researchers coded these observational videos using the Individualizing Student Instruction (ISI) coding system (Connor et al., 2009), which records the duration of time children spend in different instructional and non-instructional activities, as well as the context these activities occur in. The present study was specifically concerned with the duration of time children spend in the non-instructional activity termed “*off-task non-productive behavior*”. This study investigated 1) the extent and nature of off-task behavior for individual children, 2) the mechanism by which children return on-task (i.e. teacher redirects child, change in activity redirects child, child redirects themselves), and 3) whether individual differences in executive functioning and academic achievement (measured in the Fall) predict off-task behavior (measured in the Spring).

Descriptive analyses revealed that during roughly 3 hours of observational time, children spent on average 7.2% (13 minutes) of their time off-task, and 46% (83 minutes) of their time in non-instructional activities more generally. With regards to the context in which this behavior occurred, 65% appeared during child-managed instructional time (e.g. when students were tasked with working individually), 21% of off-task behavior occurred during transition time, 10% occurred during whole-class instructional time, and 4% occurred during other contexts (e.g. when the teacher was giving directions & when children were in peer-activities). There was also variability in the mechanism by which children returned on-task: 20% of the time the teacher redirected the child, 11% of the time the teacher redirected the class more generally (e.g. did not target a specific child), 13% of the time there was a change in activity which redirected the child, and 56% of the time the child redirected themselves.

In further examining these mechanisms by which children return on-task, teachers redirected students most often during child-managed activities (32%), whole-class instruction time (31%), and at the end of transition time when other children had finished transitioning (16%). Teachers rarely redirected children during the actual transition time (6%) or during peer-managed activities (2%). The remainder of teacher redirections occurred during other non-instructional activities such as game/free time & arts/crafts.

With other mechanisms of redirection, there was variability across contexts, however there were individual differences in patterns across these contexts. In order to investigate these differences, children who spent the least amount of time off-task (1/2 standard deviation below the mean e.g. < 7.5 mins; N=38) were compared to children who spent the most amount of time off-task (1/2 standard deviation above the mean e.g. > 19 mins; N= 36). Figures 1 & 2 illustrate individual group differences in type of redirection and context in which off-task behavior occurs.

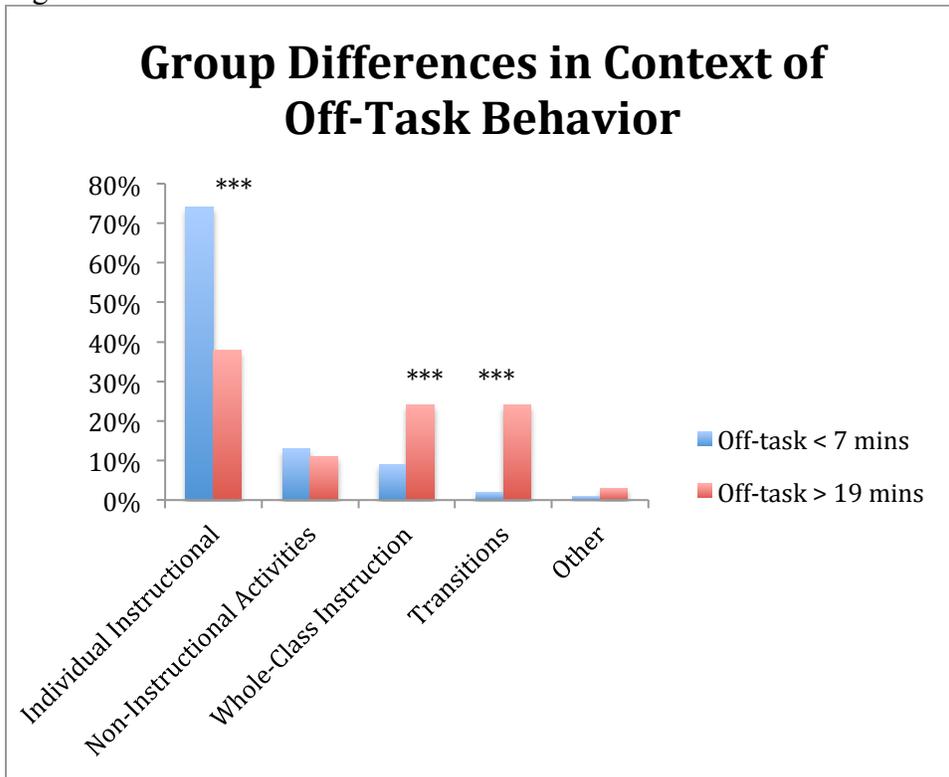
These same groups were utilized to examine differences in child outcomes such as academic achievement, executive functioning and other individual factors (with the addition of the ½ SD below < > ½ SD above group for descriptive purposes; N= 58). See Figures 3-6 for resulting group comparisons.

Three main findings emerged from the analyses. First, children in general are more likely to go off-task when they are working individually, however children who are off-task more often display this behavior equally in other contexts (e.g. whole class instruction, transition time etc.). Second, children who go off-task more often are also more likely to be redirected by a change in activity or a specific teacher redirection as opposed to children who are not off-task as often who are more likely to get back on task on their own. Third, children who go off-task more often are also more likely to be male, score lower on one executive functioning measure (attention control)—and, interestingly—score significantly higher on one of the literacy measures compared to children who are off-task less often.

This has implications for which contexts may be more conducive for off-task behavior and how teachers could potentially redirect these behaviors. However, several limitations exist, primarily with the sample size of the two extreme subgroups as well as the fact that students are nested within classrooms and some teachers may not redirect child behavior as frequently as others, may spend more/less time in different contexts (child-managed vs. whole-class instruction), and may have different norms or expectations of how children should behave in the classroom. Likewise, some classrooms may have more children who are prone to go off-task, which may influence other children in the classroom. This study does not address the direction of these relations, although since assessments occurred prior to observations, one might suspect that poor attentional control leads to more off-task behavior, and children who enter Kindergarten with higher literacy skills may be bored with the instruction they are receiving, which may lead to children becoming off-task. Future studies should investigate these classroom instruction & teacher behavior expectation differences, as well as further dissect the relation between executive functioning/academic achievement and off-task behavior in the classroom.

Word count: 950

Figure 1

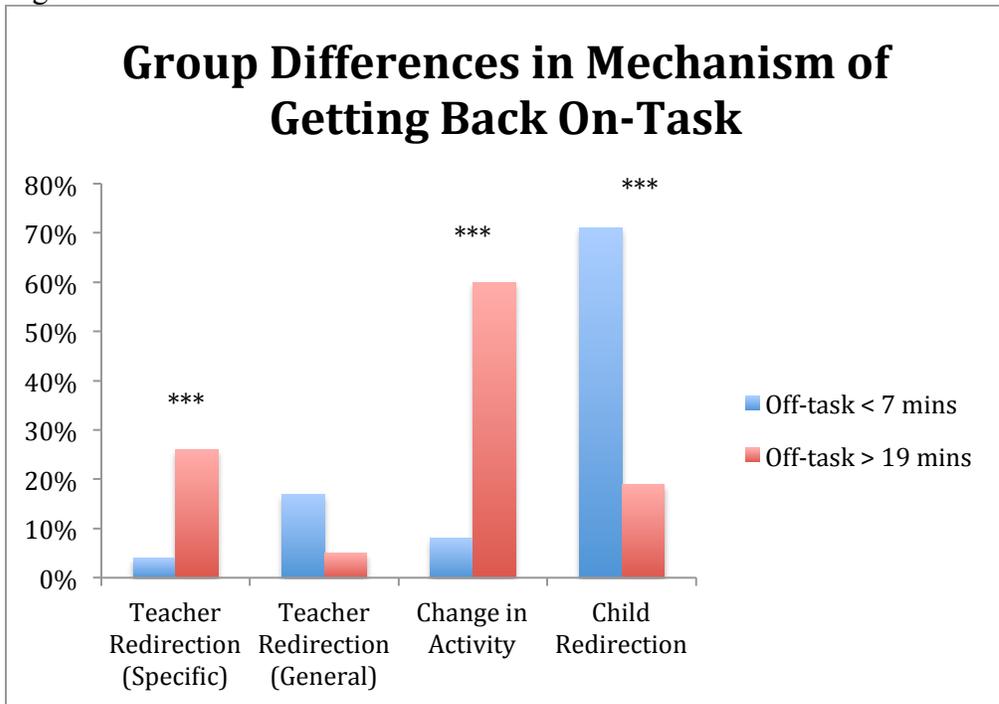


*** $p < .001$

** $p < .01$

* $p < .05$

Figure 2

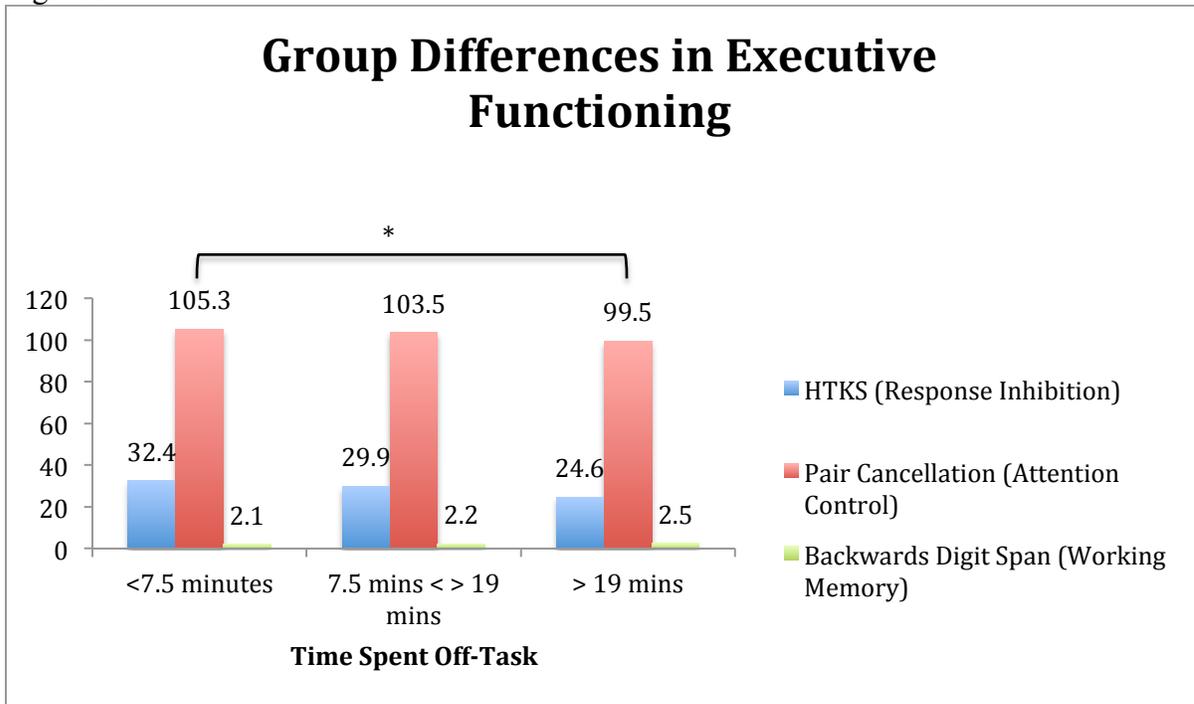


*** $p < .001$

** $p < .01$

* $p < .05$

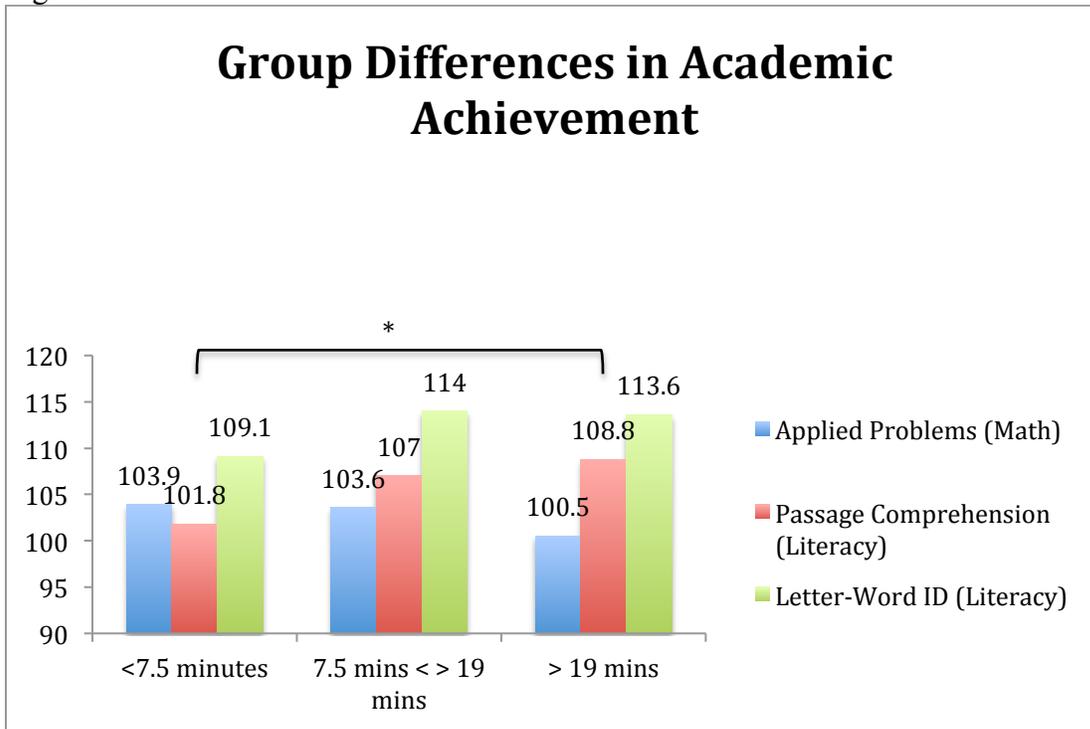
Figure 3



Children in the least off-task group scored significantly higher in the executive functioning measure of attentional control than children in the most off-task group. There was also a marginally significant difference on the measure of response inhibition ($p=.07$)

*** $p<.001$
** $p<.01$
* $p<.05$

Figure 4



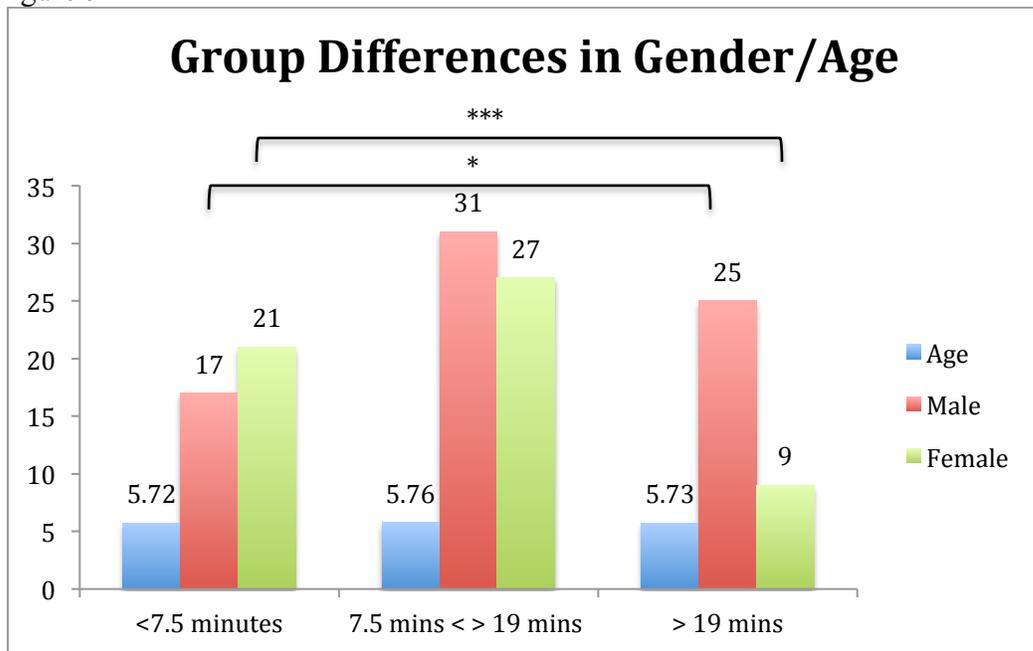
Children in the most off-task group scored significantly higher in Passage Comprehension than children in the least off-task group.

*** $p < .001$

** $p < .01$

* $p < .05$

Figure 5



Females were significantly less likely to be in the most off-task group and males were more likely to be in the most off-task group (compared to the least off-task group)

*** $p < .001$

** $p < .01$

* $p < .05$

References

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- Godwin, K.E., Almeda, M.V., Seltman, H., Kai, S., Skerbetz., Baker, R.S., & Fisher, A.V. (2016). Off-task behavior in elementary school children. *Learning and Instruction*, 44, 128-143.