



**Il y a urgence d'agir, sans précipitation.**

*Mémoire déposé aux consultations de la Commission de la culture et de  
l'éducation sur le projet de loi n° 5 modifiant la Loi sur l'instruction publique et  
d'autres dispositions à l'égard des services de l'éducation préscolaire  
destinés aux élèves âgés de 4 ans*

**4 juin 2019**

L'Association québécoise des centres de la petite enfance (AQCPÉ) a pour mission d'exercer un leadership national sur l'ensemble des enjeux liés aux services éducatifs et de garde à l'enfance. Elle a initié la Commission et le Sommet sur l'éducation à la petite enfance, où la *Déclaration pour la reconnaissance du droit de chaque enfant à une éducation de qualité dès la naissance* a été adoptée par plus de 2 500 personnes et 31 organisations représentant plus de 2 millions de citoyens.

L'AQCPÉ est un réseau d'entreprises d'économie sociale représentant les intérêts de la majorité des centres de la petite enfance et bureaux coordonnateurs de la garde en milieu familial, partout au Québec.

### **Aux fins de ce mémoire**

La préparation à la rédaction de ce mémoire s'est menée en plusieurs étapes que nous jugeons essentielles. Chacune d'entre elles nous a permis d'aller plus loin dans notre réflexion.

Ainsi, au cours des derniers mois, nous avons :

- Lancé un sondage auprès de nos membres
- Tenu deux grands forums nationaux avec le réseau des CPE/BC
- Soutenu l'organisation de *La coopération au service des enfants*, un grand événement rassemblant 60 organisations à propos des maternelles 4 ans
- Mené deux tournées nationales des régions pour aller discuter avec nos membres à travers le Québec

Les pages qui suivent sont le fruit de ces démarches.

## Table des matières

|                                                                         |           |
|-------------------------------------------------------------------------|-----------|
| <b>Il y a urgence d'agir, sans précipitation.....</b>                   | <b>5</b>  |
| <i>Un leader rassembleur.....</i>                                       | <i>5</i>  |
| <i>À l'avenir, concentrons-nous sur aujourd'hui.....</i>                | <i>5</i>  |
| <i>Une idée comme ça.....</i>                                           | <i>6</i>  |
| <i>Une enfance globale.....</i>                                         | <i>7</i>  |
| <i>Dans l'orchestre, tous jouent de concert.....</i>                    | <i>7</i>  |
| <i>Ensemble, sans se perdre.....</i>                                    | <i>7</i>  |
| <i>Vive l'agenda libre!.....</i>                                        | <i>8</i>  |
| <i>L'expérience concrète.....</i>                                       | <i>8</i>  |
| <b>Une politique nationale de la petite enfance.....</b>                | <b>10</b> |
| <i>La base.....</i>                                                     | <i>10</i> |
| <i>Les objectifs principaux.....</i>                                    | <i>11</i> |
| <i>Quelques considérations qui nous paraissent incontournables.....</i> | <i>11</i> |
| <i>Pour y arriver.....</i>                                              | <i>11</i> |
| <b>Le projet de loi no 5.....</b>                                       | <b>13</b> |
| <i>Mêmes enfants.....</i>                                               | <i>13</i> |
| <i>Préserver nos garde-fous.....</i>                                    | <i>14</i> |
| <i>Une vraie complémentarité.....</i>                                   | <i>14</i> |
| <i>Allons plus loin.....</i>                                            | <i>15</i> |
| <b>Nos recommandations.....</b>                                         | <b>16</b> |
| <b>SOMMAIRE EXÉCUTIF.....</b>                                           | <b>18</b> |
| <b>Une politique nationale de la petite enfance.....</b>                | <b>18</b> |
| <i>La base.....</i>                                                     | <i>19</i> |
| <i>Les objectifs principaux.....</i>                                    | <i>19</i> |
| <b>Annexe.....</b>                                                      | <b>20</b> |
| <b>Introduction.....</b>                                                | <b>20</b> |
| <i>Les impacts positifs des investissements en petite enfance.....</i>  | <i>21</i> |
| <i>L'universalisme proportionné.....</i>                                | <i>23</i> |
| <i>La qualité.....</i>                                                  | <i>24</i> |
| <i>Un nécessaire bilan.....</i>                                         | <i>26</i> |

|                                             |    |
|---------------------------------------------|----|
| La vision.....                              | 28 |
| Pour concrétiser la vision d'ici 2027 ..... | 31 |

## **Il y a urgence d'agir, sans précipitation.**

Comme dans un hôpital.

Les patients arrivent en ambulance, et l'équipe doit garder son calme. Chacun a une tâche précise à accomplir, et c'est en travaillant ensemble, en complète cohérence, qu'elle arrive à les réchapper, un par un.

Parce que travailler dans l'urgence exige de garder la tête froide.

Ça prend du recul pour voir venir.

Nous croyons que, mettant à profit les enseignements d'une salle d'urgence, le gouvernement devrait être un leader.

### **Un leader rassembleur**

Depuis son élection, le gouvernement met la petite enfance au cœur de ses actions. Nous le rejoignons tout à fait là-dessus.

Un tout-petit a besoin d'un espace de liberté encadré, sécurisant, adapté.

Offrons-lui cet espace.

C'est maintenant qu'il faut se montrer à la hauteur.

C'est aujourd'hui que ça se passe.

La petite enfance est une période bouillonnante, foisonnante, effervescente.

Il n'y a pas de silos, pas d'ordre ni d'étapes pour un jeune enfant. Il n'y a qu'un tout, la vie.

De même, il ne suffit pas d'additionner des lois, des règlements, des moyens et des colonnes de chiffres pour en arriver à former un ensemble qui se tienne.

Il faut un unisson, qui rassemble tous les morceaux autour du leader, en un tout qui ait du sens. Un tout qui soit plus grand que la somme des parties.

C'est de cet unisson dont nous sommes venus vous parler aujourd'hui.

### **À l'avenir, concentrons-nous sur aujourd'hui**

Nous avons derrière nous un actif important. Nous le savons tous. Nous connaissons l'histoire.

Le Rapport Parent, la Politique familiale, le réseau des CPE/BC, le programme Sippe et le réseau des organismes communautaires famille.

Les compressions, les freins, les promesses et les déceptions.

Un développement trop souvent anarchique, sans direction, sans réflexion. Sans vision à long terme.

Nous en parlons à chaque fois que nous en avons l'occasion.

Nous n'irons pas là cette fois-ci.

Non, cette fois-ci, nous voulons nous concentrer sur aujourd'hui, pour demain.  
Comme un enfant qui vit entièrement le moment présent.  
Nous sommes venus faire le pari que nous sommes tous capables d'être à la hauteur.  
Nous sommes venus vous proposer une idée.

## Une idée comme ça

Parce que vous, parce que nous ne manquons pas d'ambition pour nos tout-petits.  
Parce que nous sommes tous là à vouloir sincèrement les soutenir, les aider, les accueillir.  
Parce que de toute façon, quand on fait un pas de côté pour bien y penser, c'est une avenue qui s'impose d'elle-même.

Comment nommer cette idée? Difficile, car nommer c'est déjà définir, c'est déjà restreindre un peu.

Tous les parents savent à quel point le choix d'un nom est une affaire délicate.

Certains tiennent à exprimer leur fantaisie ou leurs valeurs.

D'autres se laissent influencer par leurs amis.

D'autres encore attendent de voir la tête du poupon.

Nous hésitons aussi pour nommer cette idée.

Alors, nous avons dressé une liste des angles possibles.

Parcours, pas pamphlet  
Pacte, pas paperasse  
Possible, pas palabre  
Plein potentiel, pas polarisé  
Précis, pas paralysé  
Précoce, pas précipité  
Présent, pas passif  
Prévention, pas plus tard  
Primordial, pas politique

Quelque chose comme ça.

Il faudra bien faire un choix. Quand nous y serons, tous ensemble.

À ce stade-ci, son nom ne sert qu'à vous en parler.

Appelons-la pour l'instant une politique nationale de la petite enfance.

## **Une enfance globale**

Une politique nationale qui nous permettrait tous d'embrasser la réalité de chaque enfant dans ses multiples dimensions, avec cohérence, complémentarité et efficience.

Pas une politique nationale à mettre sur une tablette, à jeter par le prochain gouvernement, à oublier à la prochaine urgence.

Une politique nationale qui incarne une vision, protège les ressources et coordonne l'action des réseaux.

Réseau des CPE/BC, réseau scolaire, réseau de la santé, réseau des services sociaux.

Tous ensemble autour de l'enfant, bien au-delà mais pleinement conscients du choc des cultures d'un réseau à l'autre.

Avec le premier ministre qui bat la mesure, en chef d'orchestre.

## **Dans l'orchestre, tous jouent de concert**

Soyons aussi agiles et multitâches que l'enfant peut l'être quand, à chaque fois qu'il se lève debout, il repousse ses limites et apprend à grandir.

Car un enfant ne se concentre pas sur une seule chose : aujourd'hui, j'apprends à tenir un crayon. Demain, j'apprendrai à dire « non ». Après-demain, je développerai mes habiletés sociales.

Un enfant fait tout ça en même temps.

Non seulement il le fait en même temps, mais aussi ça se tient. Pendant qu'il explore une facette de son monde, il apprend tout en même temps, parce que oui, ça va tout ensemble.

La capacité de tenir sa cuiller tout seul. La fierté et la confiance. Le goût sur la langue. L'habileté nécessaire pour ne pas tout renverser. Pour tenir un jour un crayon.

Il en va de même pour nos CPE/BC, nos écoles, nos CLSC, nos travailleurs sociaux, et tous ceux qui accompagnent l'enfant, selon ses besoins.

Tout ça doit être cohérent, tout ça se fait tout en même temps, et tout ça va ensemble.

## **Ensemble, sans se perdre**

Il nous arrive tous de se laisser distraire : le budget, les échéances, les crises annoncées, les menaces perçues.

Il nous arrive aussi de tomber amoureux d'une idée, au point de se laisser aveugler par elle.

Il nous arrive de penser qu'on sait tout, comme un enfant peut parfois lever les yeux au ciel en disant « Je sais! ». Sauf que quand on sait, on n'apprend plus.

Il nous arrive tous de se braquer devant un changement : peur de perdre quelque chose, de rater sa cible, de se perdre en chemin.  
Malheureusement, nos réactions premières viennent souvent teinter tout le reste.

Mais à l'instar du tout-petit s'entêtant à grimper sur une chaise qui peut sembler haute pour lui, il est temps de faire preuve de concentration, de résilience et de détermination.  
Il faut rester curieux, humble et ouvert.  
Il ne faut pas perdre de vue notre objectif.

Et c'est pour ça qu'il faut réviser notre agenda.

## **Vive l'agenda libre!**

La pire erreur à faire pour la petite enfance serait de se laisser dicter un agenda par les exigences d'un seul projet.  
Non, il nous faut libérer nos agendas pour répondre correctement aux défis qui nous attendent.

Sans ralentir, mais sans se précipiter.

Osons faire preuve d'audace et nous moquer des règles.  
Prenons exemple sur l'enfant, qui préfère jouer avec la boîte plutôt que le jouet.  
Qui a dit qu'il devait absolument faire ce qu'on attend de lui?  
Pourquoi se précipiter à remplir une promesse qui, elle, risque fort de ne pas tenir la sienne?  
Pourquoi ne pas explorer des zones inédites, à l'immense potentiel?  
Pourquoi ne pas s'inspirer des réussites du passé pour offrir un nouveau lendemain?  
Pourquoi ne pas faire ensemble, pour faire mieux?  
Pourquoi s'en tenir aux rêves, alors que nous vivons dans le concret?

## **L'expérience concrète**

Dans le réseau des CPE/BC, nous avons l'immense privilège d'être témoins, à chaque jour, du bouillonnement des enfants.

Il ne s'agit pas de concepts sur papier, ni de chiffres dans une base de données.  
Il s'agit de Béatrice, de Hubert, de Logan, de Léa, de Jacob, d'Emma.  
Il s'agit de tout-petits très concrets, que nous voyons tous les jours explorer leur potentiel, chacun à son rythme.

Il s'agit aussi de leurs parents dévoués, engagés, parfois épuisés.  
De leur famille, aux premières loges de cette grande aventure.

Des familles aux réalités multiples, aux besoins bien différents.

Loin des cubicules et des photocopieurs, notre réseau les accueille dans toute leur humanité, avec chaleur et bienveillance.

Nous savons à quel point il se passe de grandes choses, à chaque jour, dans toute cette effervescente banalité.

Nous savons à quel point ils sont bien chez nous, en train de se construire.

Et vous le savez aussi.

Profitions donc de l'expérience de notre réseau comme d'un tremplin pour faire encore mieux pour nos enfants.

Nous savons tous très bien où se trouve le problème.

Ce n'est pas tant un manque d'argent, ni un manque de ressources.

Ce n'est pas tant un manque de volonté, ni de compétences.

Ce qu'il manque, c'est cet unisson, cette politique nationale en petite enfance.

Cette partition que chaque réseau suivra pour produire un tout cohérent, une mélodie éducative, bienveillante pour les jeunes enfants et leurs parents.

Puisque pour les tout-petits, le gouvernement rêve grand, pourquoi se limiter à parler d'un moyen?

Puisque les réseaux reconnaissent que l'on a besoin de tout le monde, pourquoi ne pas agir en complémentarité?

Puisqu'on a besoin d'un cadre, d'une voie claire, pourquoi ne pas offrir un plan intégré, une politique nationale de la petite enfance?

## Une politique nationale de la petite enfance

« Il y en a qui disent : On ne sera pas capables. Je trouve que ce discours manque d'ambition, manque de volonté politique, ça manque d'audace et de fierté.<sup>1</sup> »

Nous sommes tout à fait d'accord avec le premier ministre.  
Nous devons être ambitieux et audacieux pour nos tout-petits.

C'est pourquoi aujourd'hui, nous lui proposons une idée : une politique nationale de la petite enfance – appelons-la ainsi pour les besoins de ce mémoire – qu'il portera lui-même, avec leadership et conviction.

Car cette politique nationale amènera tous les acteurs en petite enfance à travailler à l'unisson, en continuité et en complémentarité.  
Elle les amènera à s'entendre malgré les différences de culture d'un réseau à l'autre.  
Elle leur permettra d'accompagner chaque enfant, dès la naissance et tout au long de son parcours vers l'école, avec souplesse, agilité et pertinence.

### La base

Forts de notre connaissance du milieu, et nourris de nos échanges avec les partenaires, nous estimons que cette politique nationale devrait :

- Veiller à la cohérence et la complémentarité de nos actions en déployant une offre de services intégrée sur le territoire québécois
- Aller vers l'enfant plutôt qu'obliger les parents à chercher les ressources sans relâche
- Prioriser les enfants qui ne sont pas rejoints par un service éducatif à la petite enfance ou qui requiert une attention particulière
- Éviter le piège de développer deux places pour un enfant, mais plutôt s'assurer de mettre les ressources là où elles sont prioritaires
- Assurer de hauts standards de qualité de tous les milieux éducatifs, pour favoriser le développement optimal de chaque enfant

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<sup>1</sup> *Journal des débats de l'Assemblée nationale, 42<sup>e</sup> législature, 1<sup>re</sup> session, Vol. 45, No 2, 28 novembre 2018*, en ligne : <http://m.assnat.qc.ca/fr/travaux-parlementaires/assemblee-nationale/42-1/journal-debats/20181128/230623.html>

## **Les objectifs principaux**

1. Reconnaître le droit de chaque enfant, dès la naissance, à des services éducatifs de qualité
2. Favoriser l'égalité des chances par un accès universel à des services complémentaires et cohérents
3. Rejoindre les enfants qui ne fréquentent aucun service éducatif ou qui requièrent une attention particulière
4. Créer un écosystème favorisant la réussite éducative des enfants

## **Quelques considérations qui nous paraissent incontournables**

Cette politique nationale...

- Incarnerait une vision intégrée de tous les services éducatifs aux tout-petits
- Viserait à assurer la sécurité, le bien-être, la santé et le développement global de tous les enfants d'âge préscolaire du Québec
- Définirait un langage commun pour toutes les personnes qui interviennent auprès du jeune enfant
- Permettrait de suivre le développement de chaque enfant suivant un dossier unique attribué dès la naissance
- Relèverait du premier ministre et rendrait imputables tous les ministres et ministères quant aux résultats
- Prévoirait un programme éducatif commun pour tous les enfants de 0 à 5 ans
- Veillerait en continu aux besoins et préférences des parents en matière d'éducation préscolaire et adapterait les services en conséquence
- Dégagerait des ressources spécialisées pour accompagner l'enfant quel que soit le milieu qu'il fréquente
- Reconnaîtrait les acquis des réseaux existants et coordonnerait leurs actions de façon cohérente et complémentaire

## **Pour y arriver**

Nous rêvons, mais pas d'une utopie.

Nous savons que les éléments sont là pour que ce soit possible.

Un réseau de CPE/BC mobilisés, fort de son expérience et de la reconnaissance des parents.

Prêt à poursuivre sa mission essentielle avec les réseaux scolaire, communautaire et de la santé et des services sociaux.

Une société civile engagée, pleine d'idées, souhaitant travailler en complémentarité.

Des élus sensibles à la question du bien-être des tout-petits et engagés envers le bien commun.

Pour y arriver, il faudrait passer par ces étapes :

1. Poursuivre, tant que la politique nationale ne sera pas en vigueur, le développement des maternelles 4 ans en milieux défavorisés, tel que le prévoit actuellement la Loi
2. Poursuivre le développement des places en CPE et activer les plans de promotion en milieu familial
3. Mettre à jour les cartes régionales sur l'offre de services éducatifs à la petite enfance
4. Aller à la rencontre des parents pour connaître leurs besoins, leurs attentes
5. Convoquer l'ensemble des acteurs en petite enfance, les scientifiques, pour élaborer la politique
6. Déterminer l'approche éducative souhaitée en s'appuyant sur les données probantes
7. Définir la politique, le plan d'action, les ressources nécessaires

Le tout avec énergie, conviction et agilité pour offrir aux jeunes enfants une véritable égalité des chances.

## Le projet de loi no 5

Aux fins des présentes consultations, nous avons analysé la proposition sur la table. Outre notre idée de politique nationale, nous souhaitons vous soumettre notre point de vue sur le projet de loi no 5.

Voici donc nos propositions. Le ton est plus conventionnel; le fond est le même.

Naturellement, vous ne serez pas surpris de constater que nos commentaires s'appuient sur des principes essentiels qui soutiennent aussi l'idée de la politique nationale :

- La cohérence
- L'universalité
- La complémentarité
- La qualité

Ils s'inscrivent en continuité avec la vision que nous avons pour le Québec : un projet de société. Une vision que nous avons partagée, entre autres, lors de la Commission et le Sommet sur l'éducation à la petite enfance.<sup>2</sup>

De même, nos commentaires et propositions vont dans un même sens que le reste de notre propos.

### Mêmes enfants

Un enfant de 4 ans est le même, qu'il fréquente un CPE, un milieu familial ou une maternelle. Nous devons donc voir les services qu'ils lui sont offerts dans un environnement global. L'ensemble de nos actions, ainsi que de nos lois et règlements, doivent donc rejoindre cet objectif de parler à UN enfant, mais surtout dans une cohérence de nos législations.

Il ne faut donc pas seulement se faire écho et collaborer, mais carrément dire la même chose. Être enchâssés, intimement liés, et ce, à tous les niveaux.

La *Loi sur l'instruction publique*, la *Loi sur les services de garde éducatifs à l'enfance* et la *Loi sur l'instruction privée*, de même que les autres lois qui touchent à l'enfance et toute la réglementation afférente, doivent toutes être en cohérence dans le seul et unique intérêt de l'enfant.

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<sup>2</sup> À ce propos, vous trouverez en annexe un extrait de notre mémoire présenté à la Commission sur l'éducation à la petite enfance et qui peut éclairer encore davantage nos actuelles propositions.

## Préserver nos garde-fous

Dans le détail du projet de loi comme dans l'esprit général, il faut s'assurer que la petite enfance ne soit pas soumise à la seule bonne volonté des individus en présence. La loi est là pour nous rappeler ce que nous avons décidé, de façon collective, pour le bien-être des enfants.

Parce que nul n'est éternel, et que nous ne pouvons présumer du niveau d'engagement de ceux qui suivront. Dans l'intérêt des enfants, il faut avoir une loi qui soit sans jeu politique. Sans partisanerie. Sans agenda personnel.

Nous croyons donc primordial de maintenir les articles actuels de la *Loi sur l'instruction publique* qui réfèrent aux dispositions prévues quant aux différents processus de consultation, tels que la consultation du ministre de la Famille sur le développement des classes de maternelles 4 ans, de même que le pouvoir de recommandation des commissions scolaires.

De plus, nous souhaitons qu'y soient intégrés les comités consultatifs régionaux tels que prévus dans la *Loi sur les services de garde éducatifs*.<sup>3</sup> Les acteurs terrain connaissent bien les besoins de leur territoire et constituent des alliés essentiels au développement d'une offre de service intégrée.

## Une vraie complémentarité

En plus d'être des garde-fous, les comités consultatifs régionaux jouent un rôle important dans le maintien d'une offre pertinente pour répondre aux besoins spécifiques de chaque localité. Par leur composition,<sup>4</sup> ils représentent un large spectre d'acteurs concernés par les services offerts aux jeunes enfants et leur famille, et ce, pour chaque territoire concerné :

- Une personne désignée par les **municipalités** régionales de comté
- Une personne désignée par les **centres intégrés de santé et de services sociaux**
- Une personne désignée par les **commissions scolaires**
- Une personne désignée par l'organisme le plus représentatif des **centres de la petite enfance**
- Une personne désignée par les **services de garde subventionnés**
- Une personne désignée par les **services de garde non subventionnés**
- Une personne désignée par les **BC**
- Une personne désignée par un **organisme de développement économique régional**

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<sup>3</sup> Les articles 103.5 et suivants et l'article 11.1 de la *Loi sur les services de garde éducatifs à l'enfance*, en ligne : [http://legisquebec.gouv.qc.ca/fr/showdoc/cs/S-4.1.1?langCont=en#se:103\\_6](http://legisquebec.gouv.qc.ca/fr/showdoc/cs/S-4.1.1?langCont=en#se:103_6)

<sup>4</sup> Telle que prévue à l'article 103.6 de la *Loi sur les services de garde éducatifs à l'enfance*.

- Une personne désignée par un **organisme communautaire famille**

Nous croyons que ces comités pourraient favoriser la complémentarité de l'ensemble des réseaux. Ils contribueraient aussi à notre garde-fou collectif.

Tous les acteurs sont déjà réunis. Ces gens-là se parlent déjà. Profitons-en.

Parce que les besoins des uns ne sont pas ceux des autres. Parce que chaque région a ses particularités. Parce que ce qui est vrai à Laval ne l'est peut-être pas à Chibougamau. Et aussi parce que l'argent, mais aussi la main-d'œuvre, l'expertise, la compétence ne poussent pas dans les arbres.

Assurons-nous de mettre les bonnes ressources aux bons endroits.

## **Allons plus loin**

Dans la même logique, nous vous suggérons aussi de modifier l'article 1 de la *Loi sur l'instruction publique* afin que celle-ci prévoie que nos décisions et que l'interprétation de la Loi soit toujours en lien avec la santé, la sécurité, le bien-être, le développement global et l'égalité des chances de nos tout-petits, et ce, toujours en complémentarité avec *Loi sur les services de garde éducatifs à l'enfance*.

En effet, l'article 1 d'une loi est son essence, son objectif, sa finalité. Et comme les enfants doivent être au cœur de nos décisions et de l'interprétation de cette loi, ces considérations doivent se retrouver dans l'article 1.

Voici d'ailleurs, pour rappel, le libellé de l'article 1 de la *Loi sur les services de garde éducatifs à l'enfance* :

« La présente loi a pour objet de promouvoir la qualité des services de garde éducatifs fournis par les prestataires de services de garde qui y sont visés en vue d'assurer la santé, la sécurité, le développement, la réussite éducative, le bien-être et l'égalité des chances des enfants qui reçoivent ces services, notamment ceux qui présentent des besoins particuliers ou qui vivent dans des contextes de précarité socio-économique.

Elle a également pour objet de favoriser le développement harmonieux de l'offre de services de garde en tenant compte des besoins des parents, ainsi que de leur droit de choisir le prestataire de services de garde. »

## Nos recommandations

### La politique nationale de la petite enfance

- Que soit reconnu le droit de chaque enfant, dès la naissance, à des services éducatifs de qualité.
- Que le gouvernement s'engage à implanter une politique nationale de la petite enfance au Québec, et ce, dans la prochaine année.
- Que le gouvernement convoque l'ensemble des acteurs en petite enfance et les scientifiques pour élaborer la politique nationale.
- Que le réseau des maternelles 4 ans soit déployé en totale complémentarité avec le réseau des CPE/BC.
- Que l'approche éducative en petite enfance soit déterminée en s'appuyant sur les données probantes.
- Que le gouvernement aille à la rencontre des parents pour connaître leurs besoins et leurs attentes.
- Que le gouvernement élabore des actions afin de rejoindre les enfants qui ne fréquentent aucun service éducatif ou qui requièrent une attention particulière.
- Que le gouvernement crée un écosystème favorisant la réussite éducative des enfants en prévoyant la collaboration et la cohérence des actions de tous les acteurs impliqués.
- Que, sur la base de la politique nationale, soit poursuivi le développement des places en CPE et en milieu familial.

### Le projet de loi 5

- Que l'âge d'admissibilité à l'éducation préscolaire demeure fixé à 5 ans à la date déterminée dans le régime pédagogique et que les maternelles 4 ans conservent un statut particulier dans la Loi, compte tenu de la nécessaire complémentarité de l'offre de services en petite enfance.
- Que soient inclus à l'article 1 de la *Loi sur l'instruction publique* les paragraphes suivants à partir du 4<sup>e</sup> alinéa :  
  
« Les services offerts aux enfants admissibles à l'éducation préscolaire doivent être offerts en adéquation avec leur développement global ainsi que

d'assurer la santé, la sécurité, le développement, la réussite éducative, le bien-être et l'égalité des chances des enfants qui reçoivent ces services, notamment ceux qui présentent des besoins particuliers ou qui vivent dans des contextes de précarité socio-économique.

Elle a également pour objet de favoriser le **développement harmonieux de l'offre de services de garde et d'éducation préscolaire** en tenant compte des besoins des parents, ainsi que de leur droit de choisir le prestataire de services de garde ou d'éducation préscolaire. »

- Que soient retirés les articles 2, 3, 4, 5 et 7 du projet de loi no 5, qui prévoient la modification des articles 37.2, 224.1, 241.1, 447 et 472 de la *Loi sur l'instruction publique* afin de préserver les garde-fous.
- Que soit maintenues, dans la *Loi sur l'instruction publique*, la complémentarité, la discussion et l'échange avec le ministère de la Famille et les commissions scolaires, notamment à l'article 461.1 :

« En outre, le Ministre peut fixer des objectifs et des limites quant à l'organisation de ces services éducatifs par une commission scolaire.

La consultation prévue par le deuxième alinéa vise à s'assurer de la complémentarité entre les services éducatifs de l'éducation préscolaire organisés en vertu du présent article et les services de garde éducatifs à l'enfance régis par la *Loi sur les services de garde éducatifs à l'enfance* (chapitre S-4.1.1). »

- Que soient intégrés, à la *Loi sur l'instruction publique*, les comités consultatifs sur l'offre de services de garde éducatifs à l'enfance, tels que prévus aux articles 103.5 et suivants et à l'article 11.1 de la *Loi sur les services de garde éducatifs à l'enfance*, de manière à arrimer les besoins réels des parents avec le développement des maternelles 4 ans sur le territoire.

## SOMMAIRE EXÉCUTIF

La pire erreur à faire pour la petite enfance serait de se laisser dicter un agenda par les exigences d'un seul projet.

Pourquoi se précipiter à remplir une promesse qui, elle, risque fort de ne pas tenir la sienne?

Non, il nous faut libérer nos agendas pour répondre correctement aux défis qui nous attendent.

Sans ralentir, mais sans se précipiter.

Nous savons tous très bien où se trouve le problème.

Ce n'est pas tant un manque d'argent, ni un manque de ressources.

Ce n'est pas tant un manque de volonté, ni de compétences.

Ce qu'il manque, c'est un unisson, une politique nationale en petite enfance.

Cette partition que chaque réseau suivra pour produire un tout cohérent, une mélodie éducative, bienveillante pour les jeunes enfants et leurs parents.

## Une politique nationale de la petite enfance

« Il y en a qui disent : On ne sera pas capables. Je trouve que ce discours manque d'ambition, manque de volonté politique, ça manque d'audace et de fierté.<sup>5</sup> »

Nous sommes tout à fait d'accord avec le premier ministre.

Nous devons être ambitieux et audacieux pour nos tout-petits.

C'est pourquoi aujourd'hui, nous lui proposons une idée : une politique nationale de la petite enfance – appelons-la ainsi pour les besoins de ce mémoire – qu'il portera lui-même, avec leadership et conviction.

Car cette politique nationale amènera tous les acteurs en petite enfance à travailler à l'unisson, en continuité et en complémentarité.

Elle les amènera à s'entendre malgré les différences de culture d'un réseau à l'autre.

Elle leur permettra d'accompagner chaque enfant, dès la naissance et tout au long de son parcours vers l'école, avec souplesse, agilité et pertinence.

Une politique nationale qui nous permettrait tous d'embrasser la réalité de chaque enfant dans ses multiples dimensions, avec cohérence, complémentarité et efficience.

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<sup>5</sup> *Journal des débats de l'Assemblée nationale, 42<sup>e</sup> législature, 1<sup>re</sup> session, Vol. 45, No 2, 28 novembre 2018*, en ligne : <http://m.assnat.qc.ca/fr/travaux-parlementaires/assemblee-nationale/42-1/journal-debats/20181128/230623.html>

Pas une politique nationale à mettre sur une tablette, à jeter par le prochain gouvernement, à oublier à la prochaine urgence.

Une politique nationale qui incarne une vision, protège les ressources et coordonne l'action des réseaux.

Réseau des CPE/BC, réseau scolaire, réseau de la santé, réseau des services sociaux.

Tous ensemble autour de l'enfant, bien au-delà mais pleinement conscients du choc des cultures d'un réseau à l'autre.

Avec le premier ministre qui bat la mesure, en chef d'orchestre.

## **La base**

Forts de notre connaissance du milieu, et nourris de nos échanges avec les partenaires, nous estimons que cette politique nationale devrait :

- Veiller à la cohérence et la complémentarité de nos actions en déployant une offre de services intégrée sur le territoire québécois
- Aller vers l'enfant plutôt qu'obliger les parents à chercher les ressources sans relâche
- Prioriser les enfants qui ne sont pas rejoints par un service éducatif à la petite enfance ou qui requiert une attention particulière
- Éviter le piège de développer deux places pour un enfant, mais plutôt s'assurer de mettre les ressources là où elles sont prioritaires
- Assurer de hauts standards de qualité de tous les milieux éducatifs, pour favoriser le développement optimal de chaque enfant

## **Les objectifs principaux**

5. Reconnaître le droit de chaque enfant, dès la naissance, à des services éducatifs de qualité
6. Favoriser l'égalité des chances par un accès universel à des services complémentaires et cohérents
7. Rejoindre les enfants qui ne fréquentent aucun service éducatif ou qui requièrent une attention particulière
8. Créer un écosystème favorisant la réussite éducative des enfants

## Annexe

Pour appuyer notre propos, et puisque nous avons de la suite dans les idées, nous vous plaçons en annexe un extrait du mémoire que nous avons présenté à la Commission sur l'éducation à la petite enfance, en 2016.

Vous y trouverez nos principes, notre vision et les arguments qui les soutiennent.

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### Introduction

De la vision insufflée par le Rapport Parent en 1963-1964 à la Commission sur l'éducation à la petite enfance en 2016, en passant par la rédaction de la politique familiale *L'enfant au cœur de nos choix* en 1997, le Québec se questionne et se positionne sur l'importance de l'éducation depuis plus de 40 ans. L'éducation, oui, mais pour qui, pourquoi et comment? Comme nous le verrons, il n'est pas suffisant d'investir en service de garde. Il est impératif que ces services soient éducatifs et de très grande qualité.

En 1997, la politique familiale a permis la création du premier système de services de garde éducatifs subventionnés pour les enfants de 0 à 5 ans. Non seulement cette mesure a-t-elle favorisé le retour de plus de 70 000 femmes sur le marché du travail,<sup>6</sup> mais aussi a-t-elle permis de sortir plusieurs personnes de la pauvreté, en particulier les familles monoparentales dirigées par une femme, où le taux de faible revenu est passé de 60 % en 1997 à 40 % en 2007.<sup>7</sup>

En plus de faciliter la conciliation travail-famille-étude, la politique familiale présente des objectifs d'égalité des chances entre les enfants et de soutien au développement global de chacun.

« Dans une société de plus en plus industrialisée et technique, l'éducation est un élément essentiel du bien-être; c'est dans la mesure où chacun pourra se développer pleinement, aussi bien sur le plan intellectuel et moral que sur le plan physique, qu'il sera ensuite capable de donner sa mesure dans la société, d'y mener une vie fructueuse pour lui-même et pour les autres. De nos jours, aucun enfant ne doit se voir refuser la possibilité de s'instruire et de développer pleinement ses dons et ses aptitudes ; cela s'applique aussi bien aux filles qu'aux garçons, autant aux pauvres qu'aux riches, aussi bien aux enfants handicapés qu'aux enfants sans problèmes particuliers. Il y va non seulement de l'intérêt de l'enfant lui-même et de son avenir, mais aussi de l'intérêt de la société. »

*Rapport Parent, tome 3, vol. 2, p. 220*

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<sup>6</sup> FORTIN, Pierre, Luc GODBOUT, et Suzie ST-CERNY, *L'impact des services de garde à contribution réduite du Québec sur le taux d'activité féminin, le revenu intérieur et les budgets gouvernementaux*, Chaire de recherche en fiscalité et en finances publiques, Université de Sherbrooke, avril 2012, p. 13, en ligne : [http://www.usherbrooke.ca/chaire-fiscalite/fileadmin/sites/chaire-fiscalite/documents/Cahiers-de-recherche/Etude\\_femmes\\_travail.pdf](http://www.usherbrooke.ca/chaire-fiscalite/fileadmin/sites/chaire-fiscalite/documents/Cahiers-de-recherche/Etude_femmes_travail.pdf)

<sup>7</sup> *Le revenu au Canada - 2007*, Statistique Canada, no 75-202X au catalogue. Seuil de faible revenu, base de 1992.

De la création des premières 30 000 places, à la fin des années 90, aux 290 000 enfants<sup>8</sup> fréquentant maintenant un service de garde éducatif subventionné ou financé par le crédit d'impôt, quel bilan pouvons-nous tracer de ces 20 premières années?

## **Les impacts positifs des investissements en petite enfance**

La littérature scientifique contemporaine est formelle. Des sommités mondiales en psychoéducation comme Richard Tremblay de l'Université de Montréal (Nobel de criminologie 2016), en politique sociale comme Janet Currie de l'Université de Princeton, ou en économie de l'éducation comme James Heckman de l'Université de Chicago (Nobel d'économie 2000), ont démontré que les premiers âges de la vie étaient les plus importants pour le développement de l'enfant, et que la rentabilité économique et sociale de l'investissement public en éducation préscolaire dominait celle de tous les autres investissements en éducation, qu'il s'agisse du primaire, du secondaire, du collégial ou de l'universitaire.

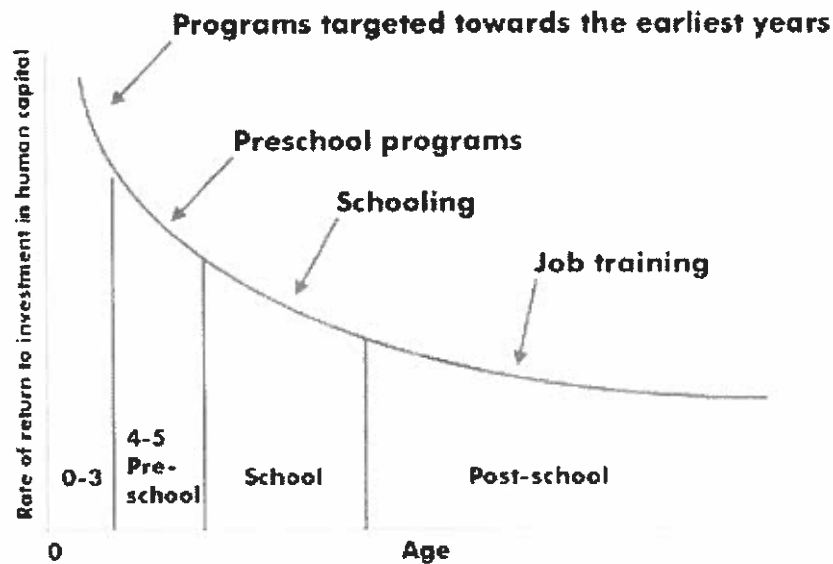
Le graphique suivant permet de visualiser le lien établi, selon les travaux de Heckman, entre le rendement des investissements publics en éducation et l'âge d'une personne. On constate que plus l'intervention est effectuée de manière précoce, plus son efficacité est élevée. Les effets bénéfiques de l'investissement sont les plus significatifs dans la période de la petite enfance. C'est pour cette raison que Heckman recommande que les États passent d'une logique de redistribution après le fait (guérir) à une logique de prédistribution (prévenir). Selon lui, la prévention en bas âge est de loin plus équitable et plus efficiente économiquement. C'est pourquoi les politiques publiques devraient refléter l'importance des familles et fournir le soutien nécessaire pour assurer le développement optimal de chacun des enfants.

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<sup>8</sup> L'ensemble du réseau des services de garde éducatifs à la petite enfance comptait exactement 289 421 places au 30 septembre 2016. Ministère de la Famille, *Création de places en services de garde*, en ligne : <https://www.mfa.gouv.qc.ca/fr/services-de-garde/portrait/places/Pages/index.aspx>

Figure 1

Courbe de Heckman sur le rendement des investissements publics selon



l'âge<sup>9</sup>

Les effets de ces interventions sont positifs pour tous les enfants, mais sont plus importants auprès de ceux issus de milieux défavorisés ou présentant des défis particuliers. Heckman a démontré, en s'appuyant sur des données de la National Institute for Early Childhood Education Research, que chaque 1 \$ investi dans la petite enfance permet plus tard des économies pouvant aller jusqu'à 7 \$ dans les services comme la santé, l'éducation, la sécurité et la justice. Il est en effet économiquement plus efficace de prévenir les problèmes liés au développement humain que de tenter d'y remédier.<sup>10</sup> Il en déduit que ces investissements permettent d'aplanir les inégalités sociales.<sup>11</sup>

Au cours des dernières années, de multiples études nationales et internationales ont démontré la rentabilité sociale et économique d'investir dans des services éducatifs à la petite enfance. L'équipe de recherche *Qualité éducative des services de garde et petite enfance*, composée de chercheurs et professeurs provenant des universités de Montréal, Laval, Toronto, ainsi que du Québec à Montréal et en

<sup>9</sup> HECKMAN, James, The Case for Investing in Disadvantaged Young Children, dans le collectif *Big Ideas for Children: Investing in Our Nation's Future*, 2012, en ligne :

<http://heckmanequation.org/content/resource/case-investing-disadvantaged-young-children>

<sup>10</sup> HECKMAN, James, Invest in early childhood development: Reduce deficits, strengthen the economy, 2012, en ligne : <http://heckmanequation.org/content/resource/invest-early-childhood-development-reduce-deficits-strengthen-economy>

<sup>11</sup> HECKMAN, James, The Case for Investing in Disadvantaged Young Children, dans le collectif *Big Ideas for Children: Investing in Our Nation's Future*, 2008, en ligne :

<http://heckmanequation.org/content/resource/case-investing-disadvantaged-young-children>

Outaouais, en fait mention dans son mémoire déposé dans le cadre des consultations entourant le projet de loi 27 portant sur la *Loi sur l'optimisation des services de garde éducatifs à l'enfance subventionnés*. Des études du Council of Australian Governments (2008), du Council of the European Union (2009), de la Commission européenne (2001), de l'OCDE (2006), du Unicef Innocenti Research Center (2008), de l'UNESCO (2007), de la World Bank (2006)<sup>12</sup> ainsi que de nombreuses autres recherches sont unanimes sur le fait que l'éducation à la petite enfance constitue « un investissement social rentable sur plusieurs plans, notamment pour la réduction de la pauvreté et l'augmentation du nombre de mères sur le marché du travail, ainsi que pour le développement de leurs enfants et la réduction des inégalités sociales ». <sup>13</sup>

Dans un dossier sur l'investissement en petite enfance du Centre d'excellence pour le développement du jeune enfant, plusieurs chercheurs précisent l'importance, voire la nécessité d'investir dans des structures sociales de grande qualité visant à soutenir les familles dans la création d'une relation significative avec leur enfant et d'assurer que des lieux d'accueil et d'éducation offrent des environnements relationnels et éducatifs de grande qualité.

« Les principes de base de la neuroscience indiquent qu'il est plus efficace et moins coûteux d'assurer des conditions favorables au développement des jeunes enfants que de tenter de remédier ultérieurement aux conséquences qui découlent d'une enfance difficile. C'est pour cette raison qu'une démarche qui accorde tout autant d'importance au développement affectif, social, cognitif et langagier est à privilégier pour préparer adéquatement tous les enfants à réussir sur les plans scolaire, professionnel et communautaire. »<sup>14</sup>

Pour que cet investissement social soit rentable, il est primordial que les États se dotent de structures sociales et éducatives qui soient à la fois universelles, accessibles et de qualité.

## **L'universalisme proportionné**

La question de l'universalité est un concept complexe. Des études récentes démontrent que l'on devrait plutôt parler « d'universalisme proportionné ». Celui-ci renvoie « à des programmes, des services et des politiques qui sont universels,

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<sup>12</sup> BIGRAS et al., *Mémoire portant sur le projet de loi 27 sur l'optimisation des services de garde éducatifs à l'enfance subventionnés*, Commission des relations avec les citoyens, Assemblée nationale du Québec, 16 janvier 2015, p.3.

<sup>13</sup> *Idem*.

<sup>14</sup> SHONKOFF JP. Investir dans le développement des jeunes enfants pour établir les bases d'une société prospère et durable. Dans : Tremblay RE, Boivin M, Peters RDeV, eds. *Encyclopédie sur le développement des jeunes enfants* [sur Internet]. Montréal, Québec: Centre d'excellence pour le développement des jeunes enfants et Réseau stratégique de connaissances sur le développement des jeunes enfants; 2010 : 1-6. En ligne : <http://www.enfant-encyclopedie.com/documents/ShonkoffFRxp.pdf>

mais selon une échelle et une intensité proportionnelle au degré de défavorisation. »<sup>15</sup> Les mesures mises en place en petite enfance doivent donc être rendues accessibles à l'ensemble des enfants, mais présenter une intensité dans leurs actions afin de permettre aux clientèles ayant des besoins accrus de recevoir un soutien plus particulier. On croit trop souvent qu'il est plus judicieux de privilégier des services, des programmes ou des politiques qui ciblent les clientèles issues de milieux défavorisés.

« [...] les solutions ciblées peuvent rejoindre les enfants les plus vulnérables de faible statut socioéconomique de façon plus intensive, et peuvent donc possiblement améliorer le sort de ces derniers. Bouchard et Duval rapportent, en 2012, que les enfants présentant des vulnérabilités n'ont pas besoin d'interventions différentes des autres enfants, mais que l'accompagnement qui leur est offert doit être fait de manière précoce, intense et continue. »<sup>16</sup>

De plus, puisqu'il y a un plus grand nombre d'enfants vulnérables dans la classe moyenne, la majorité des enfants vulnérables ne sont pas touchés par les programmes ciblés pour les milieux défavorisés.

En outre, les services ciblés n'éliminent pas les obstacles qui réduisent l'accessibilité. Par conséquent, des obstacles, comme la stigmatisation associée à certains services, continuent d'affecter des familles. « À eux seuls, les services ciblés ne permettent pas, dans l'ensemble, de réduire le gradient social et n'améliorent pas le sort des enfants de toute la population. »<sup>17</sup> Il importe donc de mettre en place des mesures qui soient universelles et de travailler activement à réduire les barrières qui en freinent l'accessibilité. Ce travail ne peut se faire sans que les freins liés aux structures et aux systèmes soient réduits pour permettre ensuite aux acteurs locaux et régionaux de limiter les barrières associées aux réalités locales.

## La qualité

La qualité des mesures mises en place revêt aussi un caractère important et ne peut être évacuée. Mais qu'est-ce qu'une mesure de qualité en petite enfance? Les recherches menées dans les dernières décennies indiquent que « les relations stables, bienveillantes et empreintes de tendresse ainsi que les expériences enrichissantes vécues pendant les premières années ont des bienfaits durant

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<sup>15</sup> HUMAN EARLY LEARNING PARTNERSHIP, *Universalisme proportionné, synthèse 2011*. Traduit par l'Agence de santé et de services sociaux de Lanaudière. Avril 2013

<sup>16</sup> BOUCHARD, Caroline et DUVAL, Stéphanie, *Soutenir la préparation à l'école et à la vie des enfants issus de milieux défavorisés et des enfants en difficulté*, Ministère de la Famille, 2013, p. 103, en ligne : <https://www.mfa.gouv.qc.ca/fr/publication/documents/preparation-ecole.pdf>

<sup>17</sup> *Idem*.

toute la vie sur l'apprentissage, le comportement et la santé physique et mentale. »<sup>18</sup>

Pour que les lieux d'accueil et d'éducation en petite enfance puissent jouer pleinement leur rôle et assurer la qualité de leur intervention, il importe donc de s'assurer que les personnes ressources aient les moyens nécessaires pour mettre en place des environnements relationnels et physiques de grande qualité. Cela ne peut se faire sans avoir des intervenants bien formés qui disposent de temps et d'espace pour accompagner l'enfant dans une diversité d'expériences et d'explorations. En possédant une bonne connaissance du développement de l'enfant et en observant l'évolution de celui-ci, les intervenants en petite enfance seront en mesure de valoriser des situations d'apprentissage qui sont riches pour le développement du jeune enfant. « La construction du cerveau dépend de l'interaction entre les facteurs génétiques de l'enfant et les facteurs environnementaux, soit le soutien que ce dernier reçoit de son entourage (Bouchard, 2008a; Toga et al, 2006). Ainsi que l'affirme Feyfant (2011), la façon dont on nourrit et on traite le cerveau de l'enfant joue un rôle crucial dans les processus de développement et d'apprentissage.

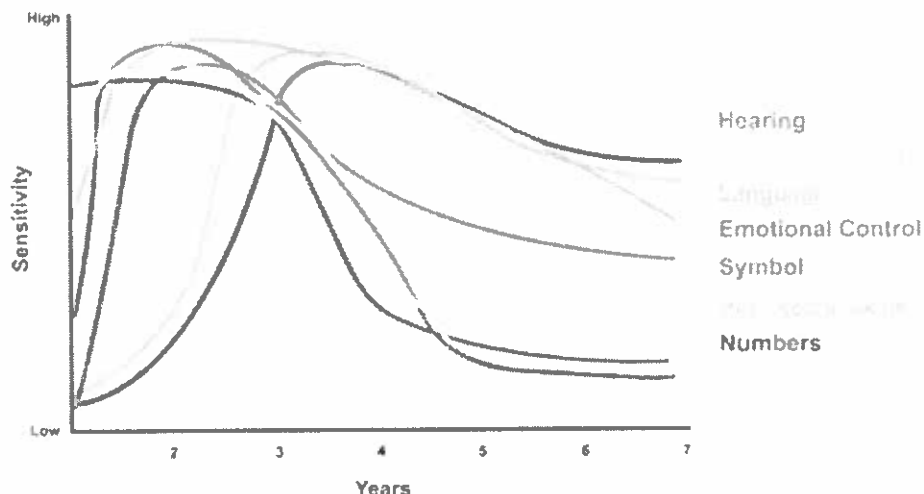
Le schéma suivant<sup>19</sup> illustre les périodes sensibles pour certaines parties du cerveau. Par exemple, le graphique indique que les parties qui régissent l'audition et la vision (lignes bleu foncé et jaune) sont très sensibles à la naissance. Par ailleurs, d'autres circuits neuronaux, tels que ceux liés aux compétences sociales (ligne bleu pâle), s'avèrent très sensibles vers l'âge de 3 ans. On peut donc y voir l'importance de choisir des interventions précises à des moments propices du développement de l'enfant.

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<sup>18</sup> SHONKOFF, JP. *op. cit.*

<sup>19</sup> DUVAL, S. et BOUCHARD, C. *Soutenir la préparation à l'école et à la vie des enfants issus de milieux défavorisés et des enfants en difficultés*. Ministère de la Famille, 2013, en ligne : <https://www.mfa.gouv.qc.ca/fr/publication/documents/preparation-ecole.pdf>

Figure 2  
Périodes sensibles du développement du cerveau<sup>20</sup>



## Un nécessaire bilan

Entre la vision d'une éducation accessible et universelle pour tous énoncée dans le Rapport Parent, les données de recherche récentes et les cibles et mesures de la politique familiale, où en est le Québec quant au concept de l'éducation à la petite enfance? Plus encore, où souhaitons-nous être dans 20 ans? Ces questions revêtent un caractère important pour toute société qui aspire au plein épanouissement de chacun et, en corollaire, à son essor social et économique. Celles-ci doivent donc être au cœur d'une réflexion collective et constante sur cet enjeu pour l'ensemble des acteurs de la société.

L'analyse exhaustive des conditions nécessaires à l'atteinte des objectifs d'égalité des chances et de soutien au développement optimal de chacun est un exercice qui exige de prendre le temps et de travailler avec rigueur. Malheureusement, plusieurs enjeux essentiels et complexes se heurtent aux agendas politiques et au calendrier électoral. Ainsi, en affirmant, comme nous le faisons, que les données probantes nous permettent dès maintenant de connaître les conditions requises pour assurer la qualité des services éducatifs à la petite enfance, force est de constater que les programmes politiques sont sujets à des tensions qui ne trouvent pas toujours leurs sources dans les fondements de la science. Ainsi donc, que la politique familiale du Québec ait réussi à survivre au passage du temps et des gouvernements successifs pourrait inspirer confiance. Or, comme nous aurons l'occasion de le démontrer, cette politique a été rudement mise à mal depuis le début du siècle. Qu'un gouvernement remette en cause ouvertement les

<sup>20</sup> *Idem.*

fondements d'une politique est une chose; que cette politique publique soit remise en question sans débat public en est une autre.

Ayant invité à plusieurs reprises le Gouvernement du Québec à entreprendre cette discussion,<sup>21</sup> et constatant qu'aucune discussion dédiée exclusivement à ces questions n'était amorcée, l'AQCPE a lancé la Commission sur l'éducation à la petite enfance, en conviant l'ensemble de la société à y participer. Nous sommes heureux que notre appel ait été entendu par les partenaires, organisations, réseaux, parents, professionnels et citoyens. Cela témoigne, selon nous, de l'importance de l'éducation dans notre société et du désir d'en faire une réelle priorité. De plus, nous soulignons également le soutien de Sébastien Proulx, ministre de l'Éducation, du Loisir et du Sport et ministre de la Famille, qui n'a pas hésité à donner son appui à cette démarche citoyenne non partisane.

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<sup>21</sup> À ce propos, voir notamment Louis Senécal, président-directeur général de l'AQCPE, à l'occasion des consultations de la Commission des finances publiques sur le projet de loi n° 28, le 26 janvier 2015, à Québec.

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## La vision

C'est donc avec enthousiasme que nous déposons le présent mémoire. Celui-ci précise la vision de l'AQCPE quant à l'éducation à la petite enfance au Québec ainsi qu'un certain nombre de principes, d'objectifs et de conditions de succès au plein déploiement du système d'éducation à la petite enfance qui a été amorcé il y a 20 ans. Par cette vision, nous souhaitons contribuer à l'atteinte du but que nous nous étions fixés en 1997 : que l'enfant, que tous les enfants soient au cœur de nos choix.

### **Vision de l'AQCPE**

Que d'ici 2027 :

- Tous les Québécois aient accès, dès leur naissance et jusqu'à leur arrivée à l'école, à des services éducatifs à la petite enfance qui soient accessibles et universels;
- La qualité de ces services éducatifs à la petite enfance réponde aux plus hauts standards de qualité reconnus;
- Les services éducatifs à la petite enfance soient considérés comme le premier maillon du continuum de l'éducation et qu'ils contribuent significativement à la réussite éducative tout au long de la vie.
- Le financement public des services éducatifs à la petite enfance de qualité soit stable et pérenne dans le temps.

Cette vision est inspirée largement des recommandations des experts entendus à la Commission sur l'éducation à la petite enfance. Ainsi, plusieurs chercheurs ont mis en lumière des résultats de recherche indiquant que l'idée d'investir tôt dans la vie d'un enfant est à la fois très profitable pour lui, mais aussi, plus largement, pour l'ensemble de la société.

La vision proposée par l'AQCPE est aussi cohérente avec les recommandations émises par différentes organisations internationales. Prenons par exemple l'Organisation de développement et de coopération économiques (OCDE), qui souligne l'importance d'investissements publics significatifs en éducation à la petite enfance :

« Un financement public pérenne est essentiel pour améliorer la qualité des programmes d'éducation préprimaire et favoriser leur développement. Prévoir un budget adéquat permet de recruter du personnel compétent et qualifié, à même de stimuler le développement cognitif, social et affectif des enfants. L'investissement dans des structures et leur équipement contribue également au développement d'environnements d'apprentissage et

d'épanouissement centrés sur l'enfant. Dans les pays qui ne prévoient pas un financement public suffisant pour assurer la qualité et la capacité d'accueil, certains parents sont plus susceptibles d'inscrire leurs enfants en bas âge dans des structures privées, ce qui représente un coût élevé (OCDE, 2011b), alors que d'autres préféreront garder leurs enfants eux-mêmes, ce qui peut tenir les parents à l'écart du marché du travail (OCDE, 2011a).<sup>22</sup> »

De son côté, l'UNICEF insiste sur la nécessité d'agir tôt pour assurer l'égalité des chances à tous les enfants.

« Ce qui arrive – ou n'arrive pas – à un enfant dans les premières années de sa vie est capital, à la fois pour son bien-être immédiat et pour son avenir. S'il a pris un bon départ dans la vie, cet enfant aura plus de chances de grandir en bonne santé, de développer ses capacités de langage et d'apprentissage, d'aller à l'école et de mener une existence productive et épanouissante. (...) Nous devons garantir à chaque enfant un bon départ dans la vie – car en plus de leur avenir, c'est celui de leurs communautés, de leurs nations et du monde entier qui est en jeu.<sup>23</sup> »

Dans un même ordre d'idée, l'UNESCO précise que si la petite enfance est une période de développement fulgurant de la personne, c'est aussi un moment où celle-ci est très vulnérable, d'où la nécessité d'en prendre un soin particulier.

« Dès le plus jeune âge, le développement et l'apprentissage des enfants sont favorisés par leurs interactions avec des êtres humains attentionnés dans des environnements sûrs, protecteurs et stimulants. Les expériences des jeunes enfants durant les premières années de la vie – bien avant qu'ils ne commencent l'école – constituent la base des apprentissages ultérieurs. Bien que la petite enfance soit une période offrant un grand potentiel de croissance et de développement, c'est aussi une période où les enfants sont particulièrement fragiles et vulnérables.<sup>24</sup> »

Or, si la vision de l'AQCPE s'inspire de grands principes universellement reconnus, elle s'inscrit dans un projet concret et réaliste. Ainsi, prenant appui sur des valeurs d'équité, d'inclusion et d'unicité, ces services éducatifs à la petite enfance poursuivraient les objectifs suivants :

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<sup>22</sup> OCDE (2016), « Indicateur C2 : En quoi les systèmes d'éducation de la petite enfance se différencient-ils dans le monde? », dans *Regards sur l'éducation 2016 : Les indicateurs de l'OCDE*, Éditions OCDE, Paris, p. 327.

<sup>23</sup> UNICEF, *Petite enfance, Introduction*, en ligne : <https://www.unicef.org/french/earlychildhood/>

<sup>24</sup> UNESCO, *Un bon départ, Éducation et protection de la petite enfance, Rapport mondial de suivi sur l'EPT*, Éditions UNESCO, 2007, p. 12, en ligne : <http://unesdoc.unesco.org/images/0015/001500/150022F.pdf>

- a) Favoriser le développement global de tous les enfants, et ce, quel que soit leur profil socioéconomique, et contribuer à ce qu'ils vivent des premières expériences de socialisation positives;
- b) Soutenir et valoriser les parents dans l'exercice de leur rôle parental et les reconnaître à titre de premiers éducateurs de leur enfant;
- c) Favoriser la réussite éducative des enfants et faciliter leur transition entre le service éducatif à la petite enfance et l'école;
- d) Assurer la complémentarité et la cohérence entre les différents services offerts aux enfants et aux familles.

**Pour permettre l'émergence de ce réseau novateur, il ne suffit pas d'admettre que le réseau actuel de service de garde éducatif a une valeur éducative; il est impératif de mettre en place des conditions de succès ainsi que des mesures de suivi et de contrôle qui assureront l'atteinte des objectifs fixés, et ce, par l'ensemble des prestataires de services.**

## **Pour concrétiser la vision d'ici 2027**

Même si la mise en place du réseau de services éducatifs à la petite enfance, telle que définie dans la politique familiale, semble avoir été retardée ou limitée, les expériences terrain et les connaissances à jour nous indiquent la pertinence des choix qui ont été faits en 1997. Pour permettre la concrétisation de la vision, voici les pistes d'action proposées par l'AQCPE :

- 1) Recenser les barrières d'accès et mettre en place des mesures qui permettent de favoriser la fréquentation d'un service éducatif à tous les enfants, dont ceux issus de milieux défavorisés;
- 2) Avoir une vision claire et partagée du continuum de l'éducation dès la naissance et tout au long de la vie;
- 3) Avoir un programme éducatif commun et obligatoire appuyé sur les dernières données de recherche en matière d'éducation à la petite enfance;
- 4) Mettre en place des conditions qui permettent d'agir sur certains déterminants de la qualité tels que :
  - a) Un ratio d'éducatrice formée de 3/3 pour l'ensemble des titulaires de permis;
  - b) L'obligation, pour les éducatrices et les RSG, de détenir un diplôme d'études collégiales en technique d'éducation à l'enfance ou un diplôme universitaire portant sur le développement de l'enfant et les approches pédagogiques;
  - c) Un programme de développement professionnel obligatoire d'au moins 12 heures par année;
  - d) Un accès à du soutien pédagogique et à des activités de réflexion avec des pairs;
  - e) Des éducatrices sensibles aux besoins des enfants, capables d'assurer un climat positif dans le groupe et d'offrir un soutien adapté à tous les enfants au plan de ses apprentissages;
  - f) Des ratios éducatrices-enfant bas (1 pour 5 avec les 18 mois et moins, 1 pour 7 avec les 19-24 mois, 1 pour 8 pour les 25-48 mois et 1 pour 10 avec les 49-60 mois);
  - g) Du temps pour planifier ses interventions et rétroagir sur sa pratique.
- 5) Mettre en place un programme d'évaluation obligatoire, appuyé sur les plus hauts standards, et commun à l'ensemble des prestataires de services;

- 6) Assurer l'uniformité des obligations entre les différents prestataires de services de manière à permettre la cohérence entre les acteurs du réseau;
- 7) Reconnaître le rôle central des parents dans la prise de décision du service éducatif pour l'ensemble des corporations;
- 8) Réintégrer le principe d'universalité afin d'assurer l'équité entre les enfants et les familles et de maintenir une intervention précoce de qualité pour tous les enfants;
- 9) Définir les rôles et les responsabilités des différents intervenants qui accueillent et soutiennent l'enfant et sa famille afin d'assurer la complémentarité et la cohérence entre les actions;
- 10) Améliorer le programme de soutien pour les enfants présentant des besoins particuliers et s'assurer que ceux-ci puissent être accueillis dans le service éducatif de leur choix;
- 11) Faciliter l'accès pour les enfants issus de milieux défavorisés ou les enfants provenant de familles à faibles revenus en leur assurant la gratuité;
- 12) Favoriser la fréquentation atypique afin de répondre adéquatement aux besoins des familles;
- 13) Favoriser la référence d'un enfant pour une place réservée par des organismes autres que provenant du réseau de la santé et des services sociaux;
- 14) Assurer la pérennité du financement des services éducatifs de qualité supérieure.

## **ALLOCUTION DE LA PRÉSIDENTE DU CONSEIL DEVANT LA COMMISSION DE LA CULTURE ET DE L'ÉDUCATION DE L'ASSEMBLÉE NATIONALE**

Je suis Maryse Lassonde, Présidente du Conseil supérieur de l'éducation et suis accompagnée de M<sup>mes</sup> Christina Vigna, secrétaire générale et Marina St-Louis, agente de recherche au Conseil.

Monsieur le Président de la Commission,  
Monsieur le Ministre  
Mesdames et messieurs les députés membres de la Commission,

Depuis maintenant 55 ans, le Conseil est un observateur attentif des changements qui surviennent au sein de la société en éducation.

Dans sa fonction de conseil auprès du ministre et en tant qu'organisme indépendant de consultation et de réflexion en vue du développement d'une vision globale et prospective de l'éducation, le Conseil s'est prononcé à maintes reprises sur l'importance de la qualité et l'accessibilité des services offerts aux enfants et sur la nécessité de s'adapter à leurs besoins.

La réalisation du présent mémoire s'appuie sur les écrits antérieurs du Conseil, mais aussi sur la littérature scientifique récente et les délibérations de ses instances concernées par le sujet soit la Commission de l'éducation préscolaire et de l'enseignement primaire et la table du Conseil.

Avant de partager avec vous les deux principaux messages du mémoire déposé devant la Commission, je tiens à préciser que les propos du Conseil ne cherchent pas à trancher le débat actuel sur la question des maternelles 4 ans et des services de garde éducatifs à l'enfance. La contribution du Conseil s'efforce plutôt de mettre en avant les besoins et caractéristiques des enfants de 4 ans ainsi que les enjeux liés à la qualité et à l'accessibilité des services qui leur sont offerts.

### **DEUX MESSAGES PRINCIPAUX SE DÉGAGENT DE NOTRE MÉMOIRE**

Le **premier** est un message dans lequel le Conseil accueille favorablement l'intention du législateur d'intervenir tôt auprès des enfants tout en saluant l'intention poursuivie de mieux prendre en compte les besoins des tout-petits.

Le **second** est un message reflétant une certaine inquiétude liée à la qualité des services offerts, à la transition vers la maternelle 4 ans et à la conciliation travail-famille-études.

Permettez-moi de clarifier notre position à ces égards.

**Au niveau des bénéfices**, rappelons que l'*Enquête québécoise sur le développement des enfants à la maternelle* (EQDEM) de 2017 montre qu'un peu plus d'un enfant sur quatre présente une vulnérabilité dans au moins un des cinq domaines de développement suivants : « santé physique et bien-être », « compétences sociales », « maturité affective », « développement cognitif et

langagier » et « habiletés de communication et connaissances générales ». Cette proportion tend à augmenter avec le degré de défavorisation dans lequel les enfants grandissent (Simard, Lavoie et Audet, 2018; Simard, Tremblay, Lavoie et autres, 2013). Des services éducatifs de qualité peuvent avoir des effets bénéfiques sur le développement des enfants, particulièrement pour les populations vulnérables (Giguère et Desrosiers, 2010; Guay, Laurin, Bigras et autres, 2015; Observatoire des tout-petits, 2018). Intervenir tôt peut réduire les écarts et favoriser l'égalité des chances.

Dans ce contexte, le Conseil reconnaît que l'accès à une maternelle 4 ans en fonction de la seule distribution géographique de la pauvreté comporte des limites intrinsèques. En effet, la vulnérabilité ne saurait se limiter au milieu économique où vit la famille. L'universalité permettrait également à certaines familles de ne pas craindre un effet de stigmatisation (MELS, 2015) et en outre, il apparaît que les familles à faible revenu ont moins tendance à recourir à des services éducatifs (Guay et autres, 2015). De plus, l'universalité de la maternelle 4 ans assurerait le droit de tout enfant de recevoir des services éducatifs personnalisés sans égard à la présence de handicap ou de troubles comportementaux. Enfin, l'universalité de ce service est également soutenue par une volonté sous-jacente du gouvernement du Québec d'intervenir tôt auprès des enfants qui semblent présenter des vulnérabilités.

Voilà pour les bénéfices.

**Passons aux enjeux** dont le premier identifié par le Conseil concerne *la qualité*.

Au Québec, deux études récentes apportent un éclairage sur la qualité des maternelles 4 ans. La première, menée par l'équipe de Japel (2017) a examiné en 2014-2015 la qualité de l'environnement éducatif en maternelle 4 ans (demi-temps et temps plein) sur un échantillon de 304 enfants. Il s'en dégage que « la qualité de l'environnement éducatif est généralement très basse avec des lacunes marquées en ce qui a trait au mobilier et à l'aménagement des lieux, aux soins personnels, à la stimulation du langage et du raisonnement, aux activités offertes, aux interactions et à la structure du service » (p. 14). La seconde étude menée par April et autres (2018) auprès de 415 enfants rapporte des résultats plus positifs bien qu'il ait été difficile de trouver un soutien à l'apprentissage de qualité élevée dans les écoles échantillonnées.

Rappelons que récemment, soit en 2019, le Fonds des Nations Unies pour l'enfance indiquait que la qualité du service éducatif peut exercer une influence sur le développement de l'enfant. Or, le Conseil perçoit des enjeux de qualité au regard du ratio, du programme éducatif et de la formation initiale et continue du personnel.

Concernant le ratio, même si, *a priori*, aucun consensus n'a été établi quant à l'effet de la taille du groupe sur la réussite, leur effet chez les jeunes enfants et ceux qui sont plus vulnérables que les autres est de plus en plus documenté et se révélerait positif (OCDE, 2018, Connolly et Haeck, 2018). Dans cette optique, les ratios actuels en classe et au service de garde en milieu scolaire nous apparaissent préoccupants, particulièrement dans les milieux socioéconomiquement défavorisés, même avec le soutien à mi-temps d'une ressource qui accompagne le personnel enseignant.

En ce qui concerne le programme éducatif, bien qu'il soit de plus en plus admis que le développement du langage apparaît comme un prédicteur de la réussite ultérieure (Tremblay et autres, 2018), ce développement ne se fait pas isolément. Le Conseil souscrit à l'approche de développement global où *toutes* les dimensions ont leur importance pour le développement de l'enfant. Le Conseil rappelle d'ailleurs que, dans une perspective d'éducation inclusive, tout doit être mis en œuvre pour permettre à l'enfant de développer son plein potentiel, quel que soit ce potentiel (CSE, 2017). Le Conseil insiste également sur le fait que l'apprentissage au préscolaire doit être basé sur le plaisir, la découverte et le jeu, élément essentiel et constitutif des droits fondamentaux de l'enfant (Nations Unies).

Évidemment, afin de soutenir la qualité des processus, la formation initiale et continue de l'ensemble du personnel intervenant auprès des enfants doit pouvoir mener à des interactions de qualité basées sur la connaissance du développement des enfants de cet âge. Au niveau universitaire, afin de bien considérer les particularités du préscolaire, il importe d'augmenter le nombre de cours portant particulièrement sur celui-ci et d'instaurer un stage obligatoire à cet ordre d'enseignement (CSE, 2012).

Le deuxième enjeu porte sur la question de *la transition vers la maternelle 4 ans*.

Pour être harmonieuse, la transition doit se baser, entre autres, sur la collaboration entre les différentes personnes intervenant auprès des enfants et sur la préparation de l'école à recevoir l'enfant et sa famille. Quant à l'organisation des services, elle doit notamment pouvoir favoriser cette collaboration. Le Conseil observe toutefois que la complémentarité des services et la concertation entre le réseau de la santé et des services sociaux et le réseau de l'éducation posent des défis dans plusieurs milieux. L'arrivée des enfants de 4 ans pourrait exercer une pression supplémentaire sur le réseau scolaire si le réseau de la santé et des services sociaux interrompt les services spécialisés au moment où l'enfant entre à l'école.

Par ailleurs, le Conseil se questionne sur les répercussions qu'un déploiement universel des maternelles 4 ans peut avoir sur la pérennité d'autres services qui contribuent à répondre aux besoins spécifiques des populations vulnérables, comme le service d'animation Passe-Partout.

Enfin, le dernier enjeu concerne la *conciliation travail-études-famille*.

La fréquentation de la maternelle 4 ans implique le recours aux services de garde en milieu scolaire et à la garde estivale pour nombre de familles étant donné que l'école offre des services éducatifs gratuits à l'intérieur de plages horaires restreintes.

Or, le Conseil est d'avis que la contribution financière requise des parents pour ces services peut constituer un frein à leur accès. Il constate également que la présence des services de garde en milieu scolaire n'est pas encore garantie dans tous les établissements, particulièrement hors de la région de Montréal. Il semble en outre que les activités offertes par les camps de jour ou les terrains de jeu des municipalités ne sont pas toujours adaptées aux besoins des enfants de 4 à 6 ans.

Ainsi, pour toutes ces raisons et considérant les réalités variables d'un milieu à l'autre, le Conseil convie le législateur à offrir la maternelle 4 ans en fonction des besoins et des demandes des milieux et selon les ressources professionnelles, matérielles et financières disponibles. Il recommande d'accompagner les milieux dans un déploiement progressif des maternelles 4 ans et de mettre en œuvre les conditions relatives :

- à la qualité structurelle (taille du groupe, formation du personnel, aménagement de l'espace, etc.)
- à la qualité des processus (qualité des interactions entre l'intervenant et l'enfant, soutien par le jeu, relation avec les parents, etc.)
- à un accès équitable au service de garde en milieu scolaire et à des services de garde estivaux de qualité afin de favoriser la conciliation travail-études-famille
- à l'augmentation du recours à ces services par les populations vulnérables et à la mise en place de services appropriés à leurs besoins spécifiques
- et, enfin, à l'amélioration continue de la qualité de ces services.

## **EN RÉSUMÉ**

Si le Conseil reconnaît l'intention de certains objectifs de ce projet de loi, il soulève des questions sur les enjeux inhérents à un déploiement universel des maternelles 4 ans, que ce soit quant à la qualité des services, à la transition vécue et à la conciliation travail-études-famille.

Par ailleurs, le Conseil tient à rappeler que l'État, en tant que responsable de l'éducation considérée comme bien commun, doit faire en sorte que les services dispensés soient accessibles et de qualité.

Le Conseil insiste sur l'importance pour le gouvernement du Québec de mettre en place des mesures qui visent à assurer une concertation entre les services offerts par le ministère de l'Éducation et de l'Enseignement supérieur, le ministère de la Famille et le ministère de la Santé et des Services sociaux afin de rendre accessibles les ressources professionnelles, matérielles et financières nécessaires au développement du plein potentiel de chaque enfant.

Monsieur le Président,  
Monsieur le Ministre,  
Mesdames et messieurs les députés membres de la Commission,

**JE VOUS REMERCIE DE VOTRE ATTENTION !**



# Effects of the Tennessee Prekindergarten Program on children's achievement and behavior through third grade

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## ABSTRACT

This report presents results of a randomized trial of a state prekindergarten program. Low-income children ( $N = 2990$ ) applying to oversubscribed programs were randomly assigned to receive offers of admission or remain on a waiting list. Data from pre-k through 3rd grade were obtained from state education records; additional data were collected for a subset of children with parental consent ( $N = 1076$ ). At the end of pre-k, pre-k participants in the consented subsample performed better than control children on a battery of achievement tests, with non-native English speakers and children scoring lowest at baseline showing the greatest gains. During the kindergarten year and thereafter, the control children caught up with the pre-k participants on those tests and generally surpassed them. Similar results appeared on the 3rd grade state achievement tests for the full randomized sample – pre-k participants did not perform as well as the control children. Teacher ratings of classroom behavior did not favor either group overall, though some negative treatment effects were seen in 1st and 2nd grade. There were differential positive pre-k effects for male and Black children on a few ratings and on attendance. Pre-k participants had lower retention rates in kindergarten that did not persist, and higher rates of school rule violations in later grades. Many pre-k participants received special education designations that remained through later years, creating higher rates than for control children. Issues raised by these findings and implications for pre-k policy are discussed.

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In 2015, 67% of U.S. children 4 years old and not in kindergarten were enrolled in preschool programs (McFarland et al., 2017). As in years past, higher income families were more likely to enroll their children in some form of center-based care than low-income families, and low-income children were more likely to be enrolled in public programs such as Head Start and state-funded prekindergarten programs. Many states have been prompted to increase funding for pre-k programs in order to serve a greater number of high-risk children (Parker, Workman, & Atchison, 2016) and most states currently offer some form of voluntary pre-k that is available to children from low-income families (Barnett et al., 2017).

State funding targeted to children from low-income families implies goals beyond merely providing daycare. For example, Mississippi began state funding of pre-k in 2014 after lobbying by Mississippi First about the role pre-k can play "... in closing the achievement gap while raising achievement for all

learners" (<http://www.mississippifirst.org/education-policy/pre-kindergarten/>). In 2014–2015, the U.S. Department of Education allocated millions of dollars to states to expand pre-k, citing a white paper asserting that high quality early education narrows achievement gaps, boosts adult earnings, and results in savings of \$8.60 for every \$1 spent (Executive Office of the President of the United States, 2014). With such high expectations, it is especially important for policy to be informed by research on the effects of state-funded pre-k.

## 1. Pre-k effects at kindergarten entry

One relevant body of evidence demonstrates that state pre-k programs generally improve such aspects of children's readiness for kindergarten as letter recognition and print awareness (Gormley, Gayer, Phillips, & Dawson, 2005; Wong, Cook, Barnett, & Jung, 2008). Most of what is known about these immediate pre-k effects comes from age-cutoff regression-discontinuity designs (RDD). Though not without potential biases (Lipsey, Weiland, Yoshikawa, Wilson, & Hofer, 2015), this design has the twofold advantage of being recognized as a relatively strong design while also being easily applied to any program with an age cutoff for admission. Chil-

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dren with birthdays on one side of the cutoff are admitted; those on the other side must wait until the following year. The outcomes of interest can be measured after the admitted group completes pre-k, and the group in waiting is just beginning, and then compared with statistical adjustments for the age difference.

The age-cutoff RDD was first used in an evaluation of the Tulsa pre-k program that found positive effects (Gormley et al., 2005). A number of similar age-cutoff RDD studies have been conducted since and have almost universally found positive effects (Wong et al., 2008). A recent example is the age-cutoff RDD study of the program in Boston carried out by Weiland and Yoshikawa (2013) that has received attention for its very positive findings. A disadvantage of the RDD, however, is that it does not allow investigation of pre-k effects after entry into kindergarten because, by then, the control group has also completed pre-k.

These studies demonstrate that state-funded pre-k programs can produce positive effects on various target outcomes prior to kindergarten entry. However, questions about the nature of the effects have been raised. This research has focused on basic pre-reading skills, but the influence of pre-k programs on other outcomes pertinent to children's cognitive and behavioral development, such as complex language skills, mathematics, self-regulation, and social skills, is less clear (Gormley et al., 2005; Jackson et al., 2007). Skills of this latter sort may be more critical for children's long-term performance in school and beyond and thus make better targets for pre-k intervention (Bailey, Duncan, Odgers, & Yu, 2017).

## 2. Long-term pre-k effects

State investments in pre-k are most often justified by the expectation of long-term effects (e.g., Executive Office of the President of the United States, 2014; Heckman, 2006). This expectation derives mainly from longitudinal research that reported positive outcomes on school completion, employment, marriage stability, criminal behavior, and the like for two model programs – Perry Preschool, mounted in the 1960s, and Abecedarian, begun in the 1970s. Both programs served a small number of children in a single location, and neither has been fully replicated in contemporary publicly funded programs. Indeed, the political feasibility of implementing them at scale is doubtful. These programs would cost more than any state currently allocates – \$20,000 per child per year in today's dollars to implement Perry and \$16,000–\$40,000 for Abecedarian (Minervino & Pianta, 2014).

Attempts to evaluate longer-term effects of state-funded pre-k programs implemented in more recent times have been problematic. Random assignment of children to conditions in which some attend pre-k and others do not, or matching on relevant cognitive, family, and demographic baseline variables, requires that the research sample be identified prior to the beginning of the pre-k year. However, because state pre-k is voluntary, there are few situations in which families intending to enroll their children can be identified in advance and persuaded to participate in random assignment or provide adequate baseline data for matching those who follow through with enrollment and those who do not.

As a result, the largest group of studies of longer-term state pre-k effects compares outcomes for children identified sometime after the pre-k year who did and did not attend pre-k (e.g., Andrews, Jargowsky, & Kuhne, 2012; Gormley, Phillips, & Anderson, 2018; Huang, Invernizzi, & Drake, 2012; Peisner-Feinberg, Mookrova, & Anderson, 2017). These post hoc studies lacking both random assignment and true baseline measures collected prior to the pre-k year are quite vulnerable to selection bias from initial differences on unobserved variables. In short, why did some parents take advantage of a voluntary pre-k program while others did not, and how is

that related to family and child characteristics that might influence later outcomes? The demographic variables collected in later years with which these samples are typically matched are unlikely to be sufficient to account for all the relevant differences between children whose parents made and sustained the effort to have them attend pre-k and those who did not.

Another distinct group of studies of longer-term effects of state-funded pre-k programs uses difference-in-difference (DD) methods that examine student outcomes before and after states or counties increased pre-k implementation compared to differences over the same period for areas with no analogous pre-k expansion. The challenge for these studies is to isolate the difference made by variation in pre-k implementation from other influential factors occurring in the same locations over the same period. To do so, they rely on complex statistical models, but those do not always yield robust results. Fitzpatrick (2008), for example, used a DD design to investigate the effects of the Georgia universal pre-k program that grew from participation rates of 14% in 1995 to 55% in 2008. Some analysis models showed positive effects on 4th grade NAEP reading and math scores while others did not. Similar effects that were generally positive, but sensitive to the selection of comparison states, were reported by Cascio and Schanzenbach (2013) for the Georgia and Oklahoma programs. In contrast, DD analyses with extensive data on the More at Four pre-k program in North Carolina showed effects on 3rd grade state achievement scores that were robust to a range of model variations, though the authors acknowledged that the resulting estimates were too large to plausibly represent direct pre-k effects and hypothesized that there must be spillover to nonparticipating children (Ladd, Muschkin, & Dodge, 2014).

The overarching theme in research on long-term effects of state pre-k programs is one of methodological challenge. When dealing with a voluntary program with children's participation always a matter of self-selection by parents, it is difficult for researchers to ensure that they are comparing outcomes for pre-k participants and nonparticipants who are similar in all ways that matter prior to their differential pre-k experience. The result is an uneven and inconclusive research literature. As the experts assembled by the Brookings Institute who recently reviewed virtually all the research on the effects of state pre-k programs reported, "Convincing evidence on the longer-term impacts of scaled-up pre-k programs on academic outcomes and school progress is sparse, precluding broad conclusions" (Phillips et al., 2017, p. 9).

In this context, the Head Start Impact study (Puma, Bell, Cook, & Heid, 2010; Puma et al., 2012) warrants attention. While not a study of state pre-k, it is the only previous randomized study of a public pre-k program. This study began in 2002 with a national sample of 5000 children who applied to 84 programs expected to have more applicants than spaces. Children were randomly selected for offers of admission with those not selected providing the control group. The 4-year-old children admitted to Head Start made greater gains across the pre-k year than nonparticipating children on measures of language and literacy, although not on math. However, by the end of kindergarten the control children had caught up on most achievement outcomes; subsequent positive effects for Head Start participants were found on only one achievement measure at the end of 1st grade and another at the end of 3rd grade. There were no statistically significant effects on social-emotional measures at the end of the pre-k or kindergarten years. A few positive effects appeared in parent reports at the end of the 1st and 3rd grade years, but teacher and child reports in those years showed either null or negative effects.

The positive short-term effects found in the Head Start study are consistent with those found for state pre-k programs. The mixed and null effects found thereafter in this methodologically strong study, however, raise questions about the expectation of substantial long-term benefits that has largely motivated investments in

public pre-k. Nonetheless, the Head Start study is only one randomized control study whereas a body of such research is needed to fully inform policy on public pre-k. The current study contributes a second randomized study to that body of research, one specifically evaluating a state-funded pre-k program.

### 3. Tennessee Voluntary Pre-k Program

In 1996, the Tennessee legislature funded 10 pilot pre-k programs for children of parents below the federal poverty level (TN Comptroller of the Treasury, 2009). Two years later, the program was expanded and the qualifications were relaxed to include families eligible for the federal free or reduced price lunch (FRPL) programs. By 2008–2009, when the current evaluation began, annual funding had reached \$83 million, supporting 938 classrooms and more than 18,000 children, and has remained at about that level (\$87 million in 2015–2016; Parker et al., 2016).

Tennessee has funded its pre-k program as a separate enterprise housed in the TN State Department of Education (TND OE). Local districts apply for funding for pre-k classrooms and receive an amount based on the state's Basic Education Program formula with the remaining costs covered by local funds (Tennessee Alliance for Early Education, 2008). The program is limited to 4-year-old children eligible for kindergarten the following year with families qualifying for FRPL the top priority. A minimum instructional time of 5½ hours per day 5 days a week must be provided in classes of no more than 20 students by a state-licensed teacher endorsed for early childhood education and paid on the same scale as K–12 teachers. A CDA or early childhood associate degree is preferred for educational assistants assigned to each classroom, but not required (TND OE, 2013). The program must use an approved curriculum from a list provided by TND OE (TND OE Office of Early Learning, 2014).

TND OE attempted to follow the few guidelines available for a quality pre-k program, particularly those from the National Institute of Early Education Research (NIEER, nd). Requirements for programs are laid out in the *Scope of Services* (TND OE, 2013) and meet 9 of the 10 standards advocated by NIEER. Districts are given latitude within the parameters of those requirements, however, and there is considerable diversity in local implementations. In this regard, the Tennessee Voluntary Pre-K Program (VPK) is not atypical of state pre-k programs generally, operating with some mandated structure based on accepted standards, but neither tightly controlled nor shaped and guided by an overarching vision widely understood and embraced throughout the state. The research on its effectiveness reported here should inform policy makers in states with similar programs, and has already done so for Tennessee policy makers. The guiding questions for this research are as follows.

1. Does participation in VPK improve early literacy, language, and math skills, and classroom behavior by kindergarten entry the following year (immediate effects)?
2. Does participation in VPK provide advantages that carry forward to enhance academic performance in later grades by improving achievement and reducing grade retention, absenteeism, disciplinary infractions, and special education placement (longer-term effects)?
3. Are there demographic subgroups of children who benefit more from participation in VPK?

### 4. Method

This study is part of a larger VPK evaluation with two major components: a randomized control trial (RCT) implemented in selected oversubscribed sites, and an age-cutoff RDD applied to a probability

sample of VPK classrooms across Tennessee. The RDD component was designed to assess variation in classroom characteristics and achievement gains; those results will be reported separately and are not discussed here. However, because the RDD was based on a statewide probability sample, those data were used to create weighting functions for statistical analysis to adjust the RCT effect estimates to represent those expected if they were generalized to the statewide population of participating programs and children.

The RCT reported here was designed to evaluate the effects of VPK participation on a range of educationally relevant outcomes through 3rd grade. The *full randomized sample* of participants in the RCT includes children randomly assigned to receive an offer of admission to VPK or not. These children have been followed in the state education database with attention to attendance, retention in grade, special education designations, disciplinary actions, and state achievement test scores. However, state data provide a limited picture of children's academic performance and classroom behavior during the years prior to 3rd grade when state achievement tests are first administered. The state data were therefore supplemented with data collected by the research team from a subset of children in the full sample with parental consent. These children constitute the *intensive substudy sample* and the data they provided allow the immediate effects of VPK to be assessed. Prior reports have described the components of the overall study and presented findings from earlier stages of the project (Lipsey, Farran, Bilbrey, Hofer, & Dong, 2011; Lipsey, Hofer, Dong, Farran, & Bilbrey, 2013).

#### 4.1. Full randomized sample

In school year 2008–2009, when this study began, VPK had capacity for only 42% of the eligible children in Tennessee (Grehan et al., 2011) and many programs received more applicants than they could accommodate with some children necessarily denied admission. Prior to school years 2009–2010 and 2010–2011, personnel in the TN Office of Early Learning (OEL) surveyed programs about the spaces available in their classrooms and the number of applications they had already received. Based on that information and the experience of the OEL Director with VPK application trends, programs likely to be oversubscribed were identified, informed by OEL that they were eligible for the randomization, and asked if they would participate in the study.

Most of those programs agreed to participate and sent their applicant lists to the research team to be sorted into random order and returned. Program staff were asked to fill their pre-k seats in the order that children appeared on these randomized lists. The procedure was refined for the second cohort to ask program staff to attempt to contact a parent at least three times on different days and times to offer admission. Only if they were unable to contact a parent after these attempts or the parent declined the offer, were they to go to the next child on the list whose parents had not yet been contacted. Once the slots in a given program were filled, the remaining children became a waiting list. If a child offered admission did not show up for the program when school started, the next child on the waiting list was offered that place. Any children not offered admission after that point became eligible for the control group of VPK nonparticipants.

Across two cohorts (school years 2009–2010 and 2010–2011) this procedure generated 150 randomized applicant lists (R-Lists), not all of which were active for the purposes of the study. Active R-Lists involved full VPK classrooms (not blended with children supported by other sources), were actually used to sequence admission offers, and included at least one VPK eligible child who attended a VPK classroom in the R-List program or another VPK program and at least one eligible child who did not attend any VPK classroom. These criteria identified 111 active R-Lists from 79 programs in 29 school districts that included 3131 VPK eli-

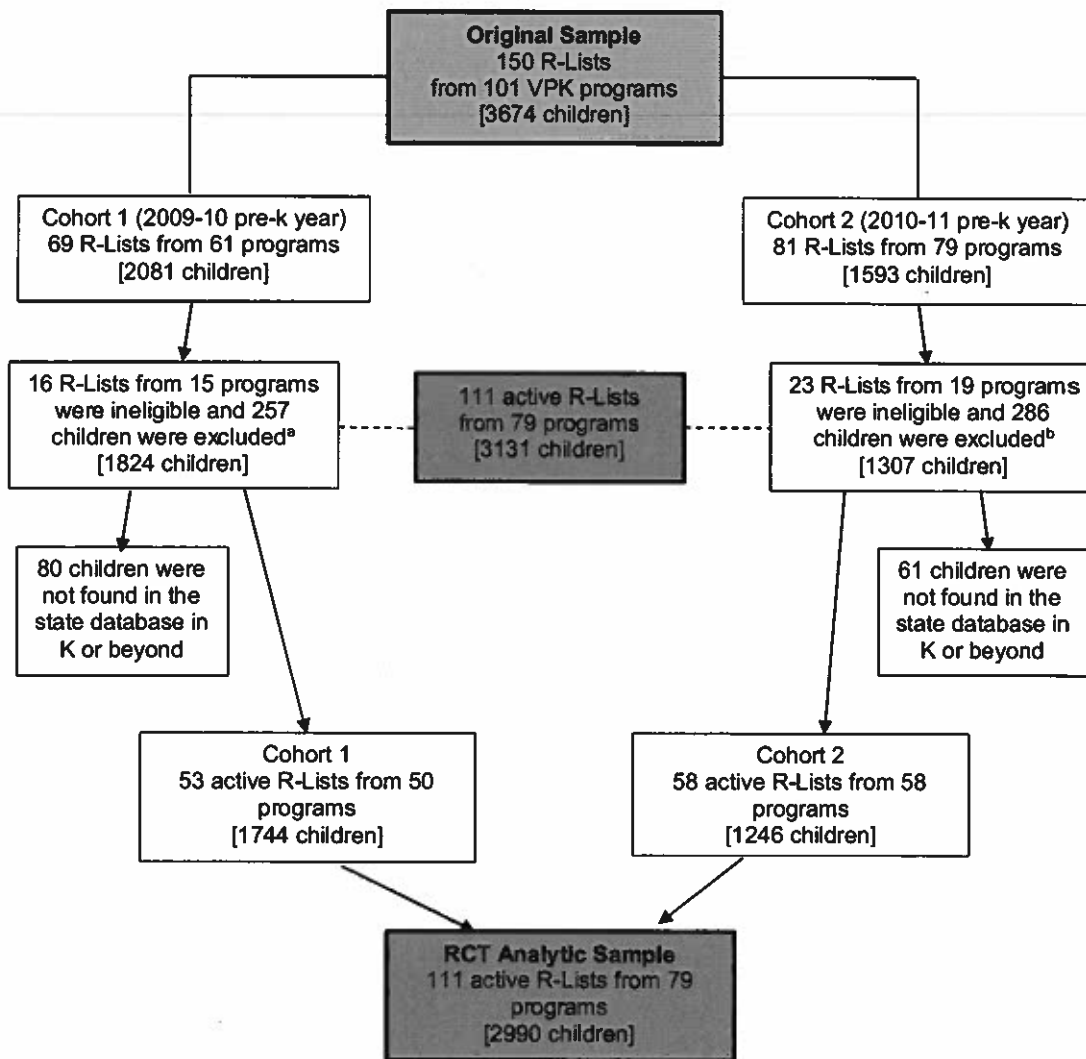


Fig. 1. Construction of the RCT analytic sample.

<sup>a</sup>In Cohort 1, 2 R-Lists from 2 programs with 44 children were lost because the schools did not use the correct random order to admit students, 14 R-Lists from 14 programs with 191 children did not have children in both the T and C conditions, 1 list of which was lost when 1 child who was not eligible for VPK due to age was excluded. An additional 18 children were excluded because they were not eligible for VPK (6 children were in blended classrooms, 1 child was over the income limit, 11 children were too young or too old) but no R-Lists were lost due to these exclusions, 4 children were excluded because they were initially included in a randomized list, but the schools later decided to exclude them from randomization; no R-Lists were lost due to these exclusions.

<sup>b</sup>In Cohort 2, 2 R-Lists from 2 programs with 37 children were lost because the schools did not use the correct random order to admit students. 21 R-Lists from 19 programs with 213 children did not have children in both the T and C conditions. An additional 26 children were excluded because they were not eligible for VPK (12 children were in blended classrooms, 1 child was over the income limit, 13 children were too young or too old) but no R-Lists were lost due to these exclusions, 10 children were excluded because they were initially included in a randomized list, but the schools later decided to exclude them from randomization; no R-Lists were lost due to these exclusions.

gible children. Of those 3131 children, 2990 had a record in the state education database for at least one year of attendance in a Tennessee public school after the pre-k year. Those 2990 children constitute the analytic sample for the RCT (hereafter the *RCT sample*). No evidence that any of the remaining 141 children attended public schools in TN after the pre-k year was found, but 11 of those children had parental consent to participate in the intensive sub-study and were retained in that sample (ISS subsample) where they were tracked while homeschooled or enrolled in private schools. Fig. 1 provides details for the construction of the RCT sample.

#### 4.2. Representativeness of the RCT sample

More than 600 programs were funded in each of the years for which the 79 participating programs contributed active R-Lists to the RCT. A natural question is how representative that relatively small group of oversubscribed programs is of VPK programs

statewide. Geographically, they were widely distributed across Tennessee with a mix of urban, suburban, and rural locations. A more specific picture was obtained by comparing their characteristics with those of the full population of VPK programs. The characteristics OEL staff identified as most relevant for describing differences among the TN programs were (a) region of the state, (b) urban vs. nonurban location, (c) in a school vs. a partner community agency, (d) an original pilot program vs. one added when VPK went to scale, and (e) whether located in or associated with a high priority school (designated as among the lowest performing in the state). OEL provided descriptive data on those characteristics for the 646 programs funded in 2009–2010. Table 1 shows how the programs in the RCT sample compare on these characteristics with the statewide population of VPK programs.

As the first two panels in Table 1 indicate, the 79 programs in the RCT are distributed across all the categories in this breakdown with proportions similar to the statewide distribution on some of

**Table 1**

Comparison of the VPK programs contributing to the RCT sample with the statewide population of programs funded in 2009–2010 on key program characteristics.

| Program characteristic | Statewide population (N = 646) |         | RCT sample (N = 79) |         | ISS subsample (N = 58) |         |
|------------------------|--------------------------------|---------|---------------------|---------|------------------------|---------|
|                        | Number                         | Percent | Number              | Percent | Number                 | Percent |
| Region                 |                                |         |                     |         |                        |         |
| Central west           | 152                            | 23.5    | 33                  | 41.8    | 25                     | 43.1    |
| West                   | 184                            | 28.5    | 14                  | 17.7    | 9                      | 15.5    |
| Central east           | 150                            | 23.2    | 15                  | 19.0    | 12                     | 20.7    |
| East                   | 160                            | 24.8    | 17                  | 21.5    | 12                     | 20.7    |
| Urbanicity             |                                |         |                     |         |                        |         |
| Not urban              | 497                            | 76.9    | 58                  | 73.4    | 40                     | 69.0    |
| Urban                  | 149                            | 23.1    | 21                  | 26.6    | 18                     | 31.0    |
| Partner site           |                                |         |                     |         |                        |         |
| Not partner            | 567                            | 87.8    | 77                  | 97.5    | 57                     | 98.3    |
| Partner                | 79                             | 12.2    | 2                   | 2.5     | 1                      | 1.7     |
| Pilot site             |                                |         |                     |         |                        |         |
| Not pilot              | 557                            | 86.2    | 74                  | 93.7    | 54                     | 93.1    |
| Pilot                  | 89                             | 13.8    | 5                   | 6.3     | 4                      | 6.9     |
| Priority               |                                |         |                     |         |                        |         |
| Not priority           | 621                            | 96.1    | 76                  | 96.2    | 55                     | 94.8    |
| Priority               | 25                             | 3.9     | 3                   | 3.8     | 3                      | 5.2     |

Notes: Partner sites are those where VPK is provided by a community agency in affiliation with a school district. Pilot sites are those from the initial pilot program that have continued to be active. Priority schools are those officially designated as among the lowest performing in the state.

**Table 2**

Demographic characteristics of children in the RCT sample and ISS subsample compared to those of VPK participants statewide.

| Child characteristic | Statewide sample (N = 2093) |                 | RCT sample (N = 2990) |                 |                 | ISS subsample (N = 1076) |                 |                 |
|----------------------|-----------------------------|-----------------|-----------------------|-----------------|-----------------|--------------------------|-----------------|-----------------|
|                      | Number                      | Mean or percent | Unweighted            |                 | Weighted        | Unweighted               |                 | Weighted        |
|                      |                             |                 | Number                | Mean or percent | Mean or percent | Number                   | Mean or percent | Mean or percent |
| Age (months)         | 2093                        | 52.7            | 2990                  | 53.3            | 52.9            | 1076                     | 53.2            | 52.7            |
| Male                 | 1035                        | 49.5            | 1496                  | 49.4            | 49.8            | 512                      | 47.6            | 49.3            |
| White                | 1261                        | 60.2            | 1461                  | 48.9            | 58.9            | 605                      | 56.2            | 61.0            |
| Black                | 616                         | 29.4            | 810                   | 27.1            | 30.3            | 246                      | 22.9            | 29.1            |
| Hispanic             | 196                         | 9.4             | 673                   | 22.5            | 9.8             | 201                      | 18.7            | 8.5             |
| Non-English          | 142                         | 6.8             | 718                   | 24.0            | 6.8             | 215                      | 20.0            | 6.5             |

Notes: Hispanic refers to ethnicity and children in that category are not also categorized as White to keep the counts independent. Non-English means that English is not the native language.

the characteristics. The largest discrepancy is over-representation in the RCT of programs in the Central West (which includes metropolitan Nashville). It was also possible to compare demographic characteristics of the children in the RCT with those of children in the statewide VPK population. The program characteristics in Table 1 were used as strata in the RDD study mentioned earlier to select a representative sample of VPK programs across the state. Data collected from the children in that RDD sample included demographic characteristics that can be compared to those of the children in the RCT sample. As the first two panels of Table 2 show, there are children in the RCT sample from all the demographic groups found in the statewide population, and with similar proportions on several, but not all, characteristics. The largest discrepancies are an under-representation of White children in the RCT sample, an overrepresentation of Hispanic children, and relatedly, of non-native English speaking children.

In order to extrapolate results of statistical analyses with data from the RCT sample to estimate the analogous results for the statewide population of VPK children, the comparative data in Table 2 were used to create a weighting function for application in those analyses. The child characteristics in Table 2 were used in a logistic regression to predict membership in the RCT sample vs. the statewide probability sample. The predicted values for children in the RCT were thus a kind of propensity score for how similar their characteristics were to those of the children in the population sample. The RCT and population samples were then stratified into bands with similar propensity scores and weights were assigned to the children in the RCT to adjust their proportion in each strata to match the proportion of children from the population in that

strata. The third column of the section on the RCT sample in Table 2 shows that applying that weighting function creates a close match between the demographics characteristics of the RCT sample and those of the children in the statewide population. This weighting function is used in analyses reported later to estimate how effects found in the RCT sample are expected to look when generalized to the statewide population of VPK participants.

#### 4.3. Treatment and control groups in the RCT sample

The R-List randomization of the 2990 children in the RCT analytic sample designated 1852 children to receive offers of admission, leaving 1138 who were not to receive such offers. These two groups constitute the intent-to-treat (ITT) treatment and control groups for the RCT. Identification of actual participation in VPK irrespective of the R-List assignment was determined from the state database for attendance during the respective pre-k years for each cohort. Of the 2990 children, 1997 attended VPK for at least one day (mean of 144 days); the remaining 993 children did not. These two groups constitute the treatment-on-treated (TOT) treatment and control groups respectively. Fig. 2 provides details about these comparison groups.

#### 4.4. Intensive substudy subsample

Attempts were made to contact the parents of all 3131 children in the initial RCT sample at the beginning of the school year for each cohort to request consent for annual individual assessments of their children. Though very few explicitly refused, making contact

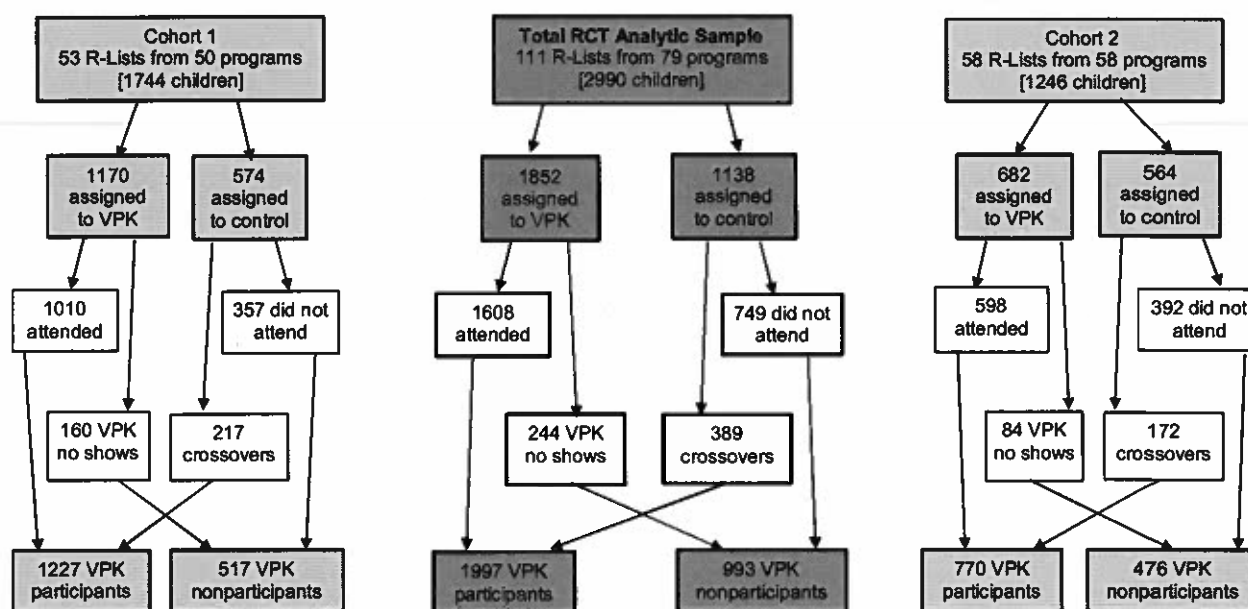


Fig. 2. Composition of the intent-to-treat (ITT) and treatment-on-the-treated (TOT) groups in the RCT sample.

and obtaining responses from parents proved challenging. For the 2009–2010 cohort, TNDOE officials interpreted the confidentiality requirements for FRPL eligible children in a way that only allowed parents to be contacted via a mailing sent centrally from TNDOE. While virtually all the parents who responded consented, most did not respond. Of the 1824 children in that cohort, affirmative parental consent forms were received for only 24.4%.

For the 2010–2011 cohort, arrangements were negotiated to allow parents to be approached about consent as an adjunct to the VPK application process. Participating programs included consent forms with the application paperwork during the registration period, and a member of the research team was available to respond to any questions that arose. This procedure not only facilitated the consent process but had the advantage of requesting parental consent prior to randomization so parents did not yet know if their children would be offered admission. Of the initial 1307 children in that cohort, affirmative consents were received for 67.8%. Again, most of the remainder simply did not respond; very few actively declined to consent.

These procedures yielded 1331 consented children, not all of whom were eligible for the intensive substudy sample. As with the full RCT sample, this subsample was restricted to children age-eligible for kindergarten the next year, income-eligible for FRPL, not in a blended classroom, and who had not applied only to receive out-of-classroom special education services. The sample was further restricted to children on R-Lists with consented children in both the treatment and control groups and who had at least one posttest measure at the end of the pre-k year. These restrictions left an analytic sample (hereafter the Intensive SubStudy subsample; i.e., *ISS subsample*) of 1076 children on 76 R-Lists from 58 VPK programs in 21 school districts across the state. Those 76 R-Lists included 2086 eligible children with the 1076 in the ISS subsample thus representing a 51.6% participation rate from those R-Lists. Fig. 3 reports details for the consent rates and construction of the ISS analytic subsample.

#### 4.5. Representativeness of the ISS subsample

The ISS subsample is a subset of the RCT sample except for the 11 children with parental consent for data collection while home-

schooled or enrolled in private school, but with no data past the pre-k year in the state database. Relevant questions are how similar the ISS subsample is to the full RCT sample and, especially, how similar it is to the statewide VPK population. The third panels of Tables 1 and 2 address these questions and show that the characteristics of the programs and children contributing to the ISS subsample are substantially similar to those of the RCT sample and the statewide population.

While Table 2 compares the ISS subsample to VPK participants statewide on demographic characteristics, a more detailed comparison is possible for that subsample. The data collected on the statewide RDD sample included assessments at the beginning of the pre-k year on the same Woodcock–Johnson III (WJ) achievement measures administered at the beginning of the pre-k year to the ISS subsample (described in more detail later). Table 3 shows that the ISS subsample has baseline WJ achievement scores similar to those of the statewide sample. To allow a closer match, a weighting function was created for the ISS subsample using the procedure described above for the RCT sample. The results of applying that weighting function to the baseline characteristics of the children in the ISS subsample are shown in the far right columns of Tables 2 and 3. That weighting function was also applied in analyses reported later to extrapolate findings from the ISS subsample to the statewide population.

#### 4.6. Treatment and control groups in the ISS subsample

Of the 1076 children in the ISS subsample, the R-Lists designated 697 to receive offers of VPK admission while the remaining 379 were not to receive offers. These groups thus constitute the intent-to-treat (ITT) treatment and control groups for analysis with the ISS subsample. According to records in the state database, 780 of the 1076 children attended VPK for at least one day (mean 146 days) with no attendance recorded for the remaining 296 children. These two groups constitute the treatment-on-the-treated (TOT) treatment and control groups for analysis. Fig. 4 provides more detail about the composition of these comparison groups in the ISS subsample.

For children who did not attend VPK, parent interviews identified the alternative arrangements made for their children during the pre-k year. A majority of parents reported that their VPK eligible

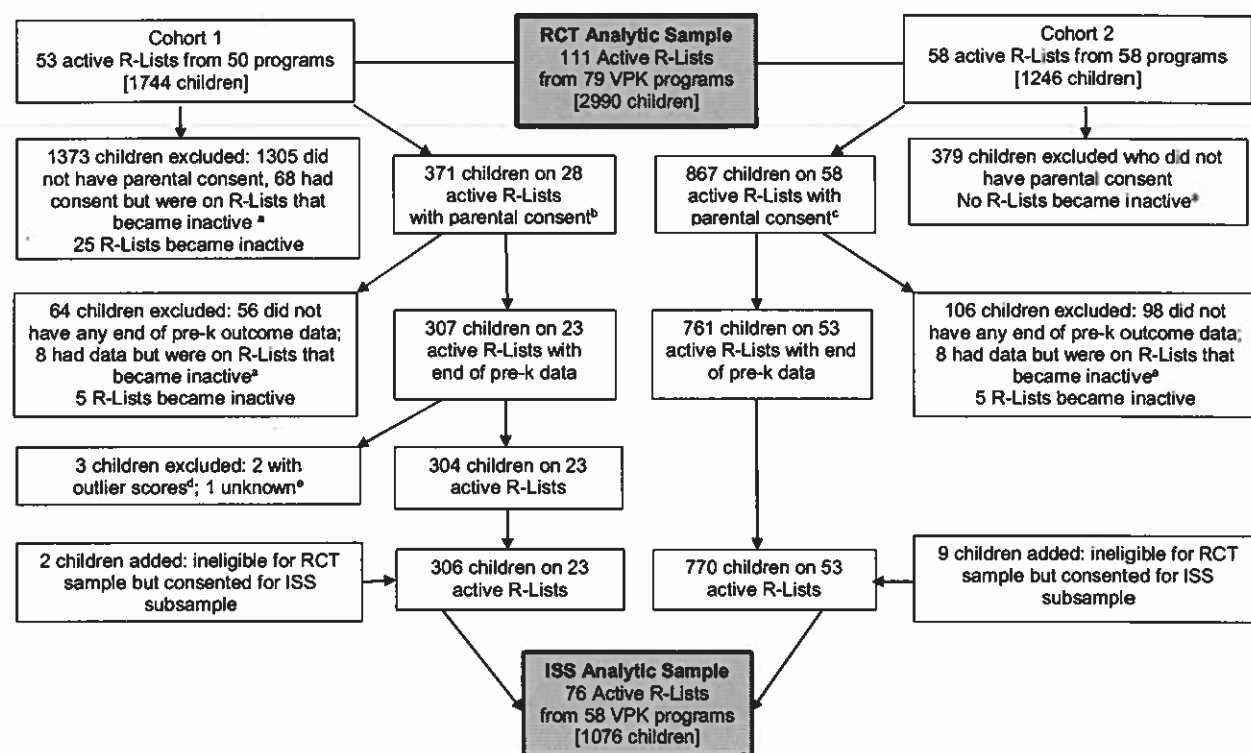


Fig. 3. Construction of the ISS analytic subsample.

<sup>a</sup>R-Lists became inactive for use in the ISS subsample when they no longer had at least one consented child who attended VPK and one who did not attend.

<sup>b</sup>Of the 337 children in Cohort 1 ineligible for the RCT analytic sample, parental consent for participation in the ISS subsample was obtained for 11 children.

<sup>c</sup>Of the 347 children in Cohort 2 ineligible for the RCT analytic sample, parental consent for participation in the ISS subsample was obtained for 72 children.

<sup>d</sup>Distributions of propensity scores created from baseline variables were compared for the Cohort 1 VPK participant and nonparticipant groups in a preliminary screening. Two children with outlier scores at opposite extremes of those distributions were trimmed from the sample on the basis of that screening.

<sup>e</sup>Child was initially identified as ineligible for the ISS subsample, but that may have been an error. There is insufficient information to resolve this ambiguity.

Table 3

Scores on Woodcock–Johnson achievement measures at the beginning of the pre-k year for children in the ISS subsample compared to those of VPK participants statewide.

| Achievement measure <sup>a</sup> | Statewide sample<br>(N = 2093) |      | ISS subsample (N = 1076) |      |                               |          |      |                               |
|----------------------------------|--------------------------------|------|--------------------------|------|-------------------------------|----------|------|-------------------------------|
|                                  |                                |      | Unweighted               |      |                               | Weighted |      |                               |
|                                  | Mean                           | SD   | Mean                     | SD   | Diff in SD units <sup>b</sup> | Mean     | SD   | Diff in SD units <sup>b</sup> |
| WJ Composite 6                   | 393.9                          | 15.5 | 394.3                    | 18.1 | −0.022                        | 393.8    | 16.9 | 0.010                         |
| Letter–Word ID                   | 317.3                          | 23.9 | 318.6                    | 27.1 | −0.054                        | 317.3    | 26.5 | −0.002                        |
| Spelling                         | 349.1                          | 22.2 | 351.1                    | 28.4 | −0.091                        | 348.7    | 28.5 | 0.017                         |
| Oral Comprehension               | 443.4                          | 15.0 | 443.3                    | 16.2 | 0.005                         | 443.1    | 15.2 | 0.014                         |
| Picture Vocabulary               | 457.7                          | 18.6 | 454.6                    | 23.3 | 0.171                         | 458.1    | 17.7 | −0.019                        |
| Applied Problems                 | 389.9                          | 26.9 | 390.6                    | 27.8 | −0.027                        | 389.1    | 26.7 | 0.029                         |
| Quantitative Concepts            | 406.3                          | 12.9 | 407.6                    | 14.0 | −0.097                        | 406.2    | 13.5 | 0.009                         |

<sup>a</sup> Woodcock–Johnson III achievement measures; the longitudinally scaled W-scores are reported. WJ Composite 6 is the mean of the W-scores across the six content-specific scales included in this table.

<sup>b</sup> Based on the standard deviations of the statewide sample.

child did not attend any center-based preschool program. Overall, 63% received home-based care by a parent, relative, or other person; 13% attended Head Start or what parents described as a public pre-k program; 16% were in private center-based childcare; 5% had some combination of Head Start and private childcare; and childcare for 3% was not reported.

#### 4.7. Data collection

Data were drawn from the state database for the 2990 children in the RCT analytic sample for each year through the 3rd grade year. Those data included descriptive characteristics such as birthdate, gender, race/ethnicity, and native language as well as outcome vari-

ables for attendance, retention in grade, disciplinary actions, special education designations, and scores on the state achievement tests. Some children were not enrolled in a Tennessee public school in some years and did not appear in the state records those years. Records were found for 98.5% of the RCT sample in the kindergarten year, 97.8% in the 1st grade year, 95.8% in the 2nd grade year, and 93.7% in the 3rd grade year. Note that throughout this report phrases like “1st grade year” refer to the year in which children were expected to be in that grade according to the normal sequence, including those retained in a prior grade and thus not actually in the indicated grade.

Children in the ISS subsample who attended Tennessee public schools after the pre-k year (1065 of the 1076) also had data

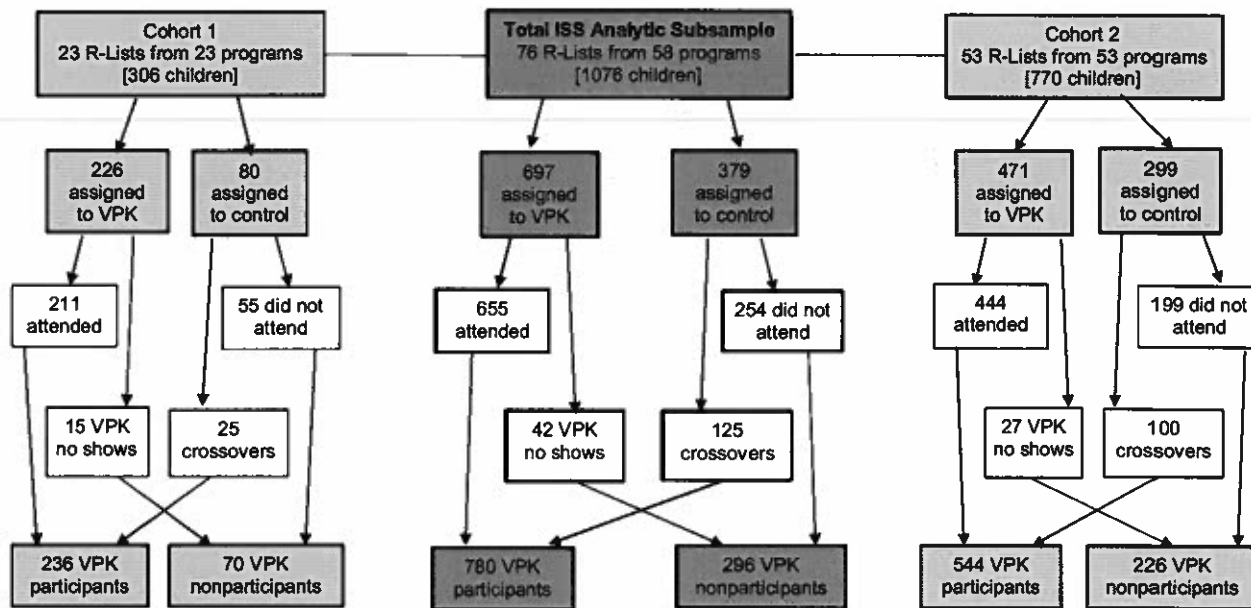


Fig. 4. Composition of the intent-to-treat (ITT) and treatment-on-the-treated (TOT) groups in the ISS subsample.

from the state database. In addition, the children in that subsample were individually assessed by research staff in the fall and spring of their pre-k year (including the 11 children home schooled or attending private schools). VPK participants were assessed at their program sites and nonparticipants were assessed at locations convenient for the parents (e.g., Head Start centers, libraries, parks, and homes). Children in both groups were assessed in the spring of each subsequent year through the 3rd grade year. Assessments were completed on 100% of the ISS subsample at the end of the pre-k year, 97.2% at end of kindergarten, 95.6% at end of 1st, 94.4% at end of 2nd, and 92.3% at end of 3rd.

Early in the kindergarten year and in the spring of the 1st through 3rd grade years, children's classroom behaviors were rated by their teachers. Ratings by kindergarten teachers near the beginning of the kindergarten year were treated as pre-k outcomes. The target time for those ratings was 6 weeks (42 days) into the kindergarten year – long enough for teachers to become familiar with the children but before extensive exposure to kindergarten instruction. Not all teachers were responsive to that request – on average, ratings were received 52 days into the kindergarten year for VPK participants and 51 days for control children (standard deviation of 41 days). The completion rates for teacher ratings ranged from 89.5% at the beginning of kindergarten to 86.7% at the end of the 3rd grade year.

#### 4.8. Measures for the intensive substudy (ISS) subsample

##### 4.8.1. Parent questionnaire

During the pre-k year, parents of consented children were interviewed via telephone about their education and employment and that of their spouse/partner, the home language and literacy environment, and childcare arrangements if their child was not in VPK. When needed, these interviews were conducted by Spanish-speaking interviewers.

##### 4.8.2. Direct assessments

Children's academic achievement was assessed with a selection of scales from the Woodcock–Johnson (WJ) III Achievement Battery (Woodcock, McGrew, & Mather, 2001) administered in English. At the beginning and end of the pre-k year, these included two mea-

sures of literacy skills (Letter–Word Identification and Spelling), two measures of language skills (Oral Comprehension and Picture Vocabulary), and two measures of math skills (Applied Problems and Quantitative Concepts). At the end of the kindergarten year and through the 3rd grade year two other scales were added: a reading measure (Passage Comprehension) and another math measure (Calculation). Analysis was conducted with the longitudinally scaled W-scores from these measures, which are comparable from year to year in ways that index the change that has taken place over successive waves of measurement. The scores on these different WJ scales were moderately to highly intercorrelated. To provide summary achievement indices, composite scores were created as the mean of the W-scores across the individual scales, one that combined the original six scales administered from the beginning of pre-k (WJ Composite 6) and another that combined those six subscales with the two first administered at the end of the kindergarten year (WJ Composite 8).

##### 4.8.3. Teacher ratings

Two teacher rating instruments were completed by kindergarten, 1st, 2nd, and 3rd grade teachers. The Cooper–Farran Behavioral Rating Scales (Cooper & Farran, 1991) ask teachers to rate each child's work-related and interpersonal skills. *Work-Related Skills* assesses ability to work independently, listen to the teacher, remember and comply with instructions, complete tasks, and otherwise engage appropriately in classroom activities. This scale consists of 16 7-point behaviorally anchored ratings with the mean as an overall total score (Cronbach alpha reliability coefficients ranged from .94 to .95 across the waves of data collection). *Interpersonal Skills* assesses social interactions with peers including behavior in group activities, play, and outdoor games; expression of feelings and ideas; and response to others' mistakes or misfortunes. It consists of 21 7-point behaviorally anchored ratings with the mean providing an overall total score (Cronbach alphas from .93 to .94 across waves).

The second measure, the Academic Classroom and Behavior Record (ACBR; Farran, Bilbrey, & Lipsey, 2003), consists of four scales. *Preparedness for Grade Level Work* asks how prepared the child is in math, literacy/language, and social behavior. It includes three 7-point behaviorally anchored ratings with the mean as

**Table 4**

Number and proportion of children randomly assigned to VPK participation or nonparticipation who did and did not comply with that assignment.

| Random assignment     | RCT sample (N = 2990)               |                                        | ISS subsample (N = 1076)            |                                        |
|-----------------------|-------------------------------------|----------------------------------------|-------------------------------------|----------------------------------------|
|                       | Participants<br>number (proportion) | Nonparticipants<br>number (proportion) | Participants<br>number (proportion) | Nonparticipants<br>number (proportion) |
| VPK (treatment)       | 1608 (.87)                          | 244 (.13)                              | 655 (.94)                           | 42 (.06)                               |
| No VPK (control)      | 389 (.34)                           | 749 (.66)                              | 125 (.33)                           | 254 (.67)                              |
| ITT to TOT multiplier | 1/[(.8683–.3418) = 1.8993]          |                                        | 1/[(.9397–.3298) = 1.6396]          |                                        |

Notes: Data for full samples; assumes imputation of missing outcome values. Participants/Nonparticipants refers to those who did or did not attend VPK irrespective of the random assignment. ITT to TOT multiplier is the inverse of the proportion assigned to treatment that participated minus the proportion assigned to control that participated.

the total score (Cronbach alphas from .85 to .87 across the measurement waves). *Peer Relations* includes two 7-point behaviorally anchored ratings for whether other children like the child and how many close friends the child has; the mean is the total score (Cronbach alphas of .75 to .80 across waves). *Behavior Problems* asks whether a child has shown any of nine problem behaviors including explosive or overactive behavior, attention problems, physical or relational aggression, and social withdrawal or anxiety. A total score is computed as 0 or 1 to indicate whether no problems are identified vs. one or more (Cronbach alphas of .63–.70 across waves). *Feelings About School* consists of six 3-point ratings for the child's liking or disliking school, enjoying and engaging in classroom activities, and seeming happy at school. Ratings are skewed toward positive responses so the total score is computed as the mean with the lowest rating on any item scored 1 and either of the higher ratings scored 2 (Cronbach alphas of .80–.85 across waves).

#### 4.9. Analysis

##### 4.9.1. Missing data

Missing value rates for the RCT sample ranged from 0% to 6.3% except for 3rd grade state achievement scores with 18.4% missing, mostly due to children retained who had not yet reached 3rd grade. Missing values for the ISS subsample ranged from 0% to 5.6% for parent interview and child assessment data and from 10.5% to 13.3% for teacher ratings. To retain the full samples in all analyses given these modest missing data rates, multiple imputation was done separately in the RCT and ISS samples and, in each, separately for VPK participants and nonparticipants using the Mistler (2013) procedure for multilevel data (children nested in R-Lists). Fifty imputed files were produced with the results of analysis of each pooled to include the uncertainty associated with the imputations in the standard error estimates. Analyses using only observed outcome data were conducted in parallel to identify any sensitivity to the imputations in the statistical conclusions.

##### 4.9.2. Analysis models

All analyses used hierarchical linear models with children nested in R-Lists that were nested in school districts. The primary analyses were intent-to-treat (ITT) comparisons with outcomes for children randomly assigned to receive an offer of VPK admission compared with outcomes for children assigned to receive no offer. A standard set of covariates (described later) was included in each analysis to adjust for baseline differences, improve statistical power, and provide a basis for moderator analysis. The results of each ITT analysis were then used to estimate treatment-on-the-treated (TOT) effects for children who actually attended VPK compared to children who did not attend. The TOT estimates were generated from two-stage least-squares (2SLS) regressions with R-List random assignment as an instrumental variable (Angrist, Imbens, & Rubin, 1996; Angrist, 2006).

Overall, 79% of the RCT sample and 84% of the ISS subsample complied with the random assignment. The 2SLS estimates for TOT

effects were obtained by rescaling the ITT effect estimates with a multiplier based on the proportion ( $p_{tp}$ ) of children assigned to VPK who actually participated (treatment compliers) and the proportion ( $p_{cp}$ ) assigned to the control condition who nonetheless also participated (crossovers) that is defined as the inverse of the  $p_{tp} - p_{cp}$  difference (reported in Table 4 for the RCT and ISS samples). The rationale for this approach to estimating TOT effects can be found in Puma et al. (2010, pp. 5–34 to 5–53) and Gennetian, Morris, Bos, and Bloom (2005). A notable feature of this procedure is that it rescales the standard errors of the ITT estimates with the same multiplier so that the statistical significance of the TOT effect estimates is the same as that for the ITT estimates.

##### 4.9.3. Baseline equivalence for the RCT sample

Baseline variables for the RCT are limited to the few static demographics available in the state database: age, gender, race/ethnicity, and native language. Table 5 shows the differences between the ITT treatment and control groups on these variables. The differences were tested in multilevel OLS regression models with ITT condition as the only predictor and none was statistically significant. For binary variables, more technically appropriate logistic regression analyses were also conducted to check that the results were similar (Cleary & Angel, 1984), and those also showed no significant differences. There were no missing values on these variables and all but the language differentiation for Hispanic children were included as covariates in the outcome analyses for the RCT reported later.

Further analysis explored the baseline equivalence on these variables for each of the two cohorts of children combined in the full RCT sample. The analyses reported in Table 5 were repeated with addition of dummy codes for cohort and cohort by treatment condition interaction terms that tested for cohort differences on the treatment-control equivalence of the baseline variables. Neither the cohort main effect nor the interaction was statistically significant for any baseline variable. Additionally, all analyses of VPK effects for the RCT sample reported later were repeated with cohort and cohort by treatment condition interaction terms added. With only a few scattered exceptions, these interaction tests showed no statistically significant differential treatment effects for the cohorts so VPK effect estimates are not reported separately by cohort.

Because the ISS subsample is the consented subset of the RCT sample (except for 11 children), the similarity of the ISS subsample to the remaining children not in that subsample on the RCT baseline variables can also be examined. Each analysis reported in Table 5 was repeated with addition of a dummy code for ISS membership and its interaction with the ITT treatment condition. Neither the main effect for ISS subsample membership nor the interaction was statistically significant at  $p < .05$  for any baseline variable. Two effects were significant at the  $p < .10$  level, one indicating that the proportion of White children in the ISS subsample was somewhat larger than the proportion among those not in that subsample (by about five percentage points), the other for an interaction term that

**Table 5**

Intent-to-treat (ITT) treatment-control comparison on baseline variables for the RCT sample.

| Variable                 | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value |
|--------------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|---------|
| Age (months)             | 53.2                              | 53.3                            | 3.47                   | -.087                                       | -.025                    | .507    |
| Gender (male)            | .495                              | .489                            | .500                   | .006                                        | .012                     | .752    |
| White                    | .674                              | .684                            | .505                   | -.010                                       | -.019                    | .578    |
| Black                    | .196                              | .195                            | .451                   | .001                                        | .003                     | .941    |
| Hispanic                 | .140                              | .132                            | .411                   | .007                                        | .018                     | .639    |
| Hispanic, native English | .021                              | .029                            | .158                   | -.009                                       | -.054                    | .158    |
| Hispanic, not English    | .122                              | .110                            | .393                   | .012                                        | .030                     | .421    |
| Not native English       | .138                              | .131                            | .414                   | .008                                        | .019                     | .617    |
|                          | N = 1852                          | N = 1138                        |                        |                                             |                          |         |

<sup>a</sup>  $p < .05$ , <sup>b</sup>  $p < .10$ .<sup>a</sup> Estimated marginal means from multilevel analysis models; except for age, these can be read as proportions. There were no missing values on these baseline variables so no imputed values were used in these analyses.<sup>b</sup> Pooled treatment and control group standard deviations.<sup>c</sup> Coefficients for the ITT treatment-control difference from multilevel models with children nested in R-Lists, R-Lists nested in districts, with ITT condition as the only predictor.<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.**Table 6**

Intent-to-treat (ITT) treatment-control comparison on baseline variables for the ISS subsample.

| Variable                 | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value     |
|--------------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|-------------|
| Age (months)             | 53.1                              | 53.4                            | 3.43                   | -.299                                       | -.087                    | .171        |
| Gender (male)            | .468                              | .483                            | .500                   | -.015                                       | -.031                    | .638        |
| White                    | .646                              | .666                            | .505                   | -.020                                       | -.039                    | .505        |
| Black                    | .236                              | .216                            | .432                   | .020                                        | .047                     | .445        |
| Hispanic                 | .140                              | .155                            | .385                   | -.016                                       | -.040                    | .527        |
| Hispanic, native English | .027                              | .038                            | .175                   | -.011                                       | -.063                    | .341        |
| Hispanic, not English    | .114                              | .123                            | .358                   | -.009                                       | -.025                    | .701        |
| Not native English       | .136                              | .169                            | .389                   | -.034                                       | -.087                    | .172        |
| Mother's education       | 2.13                              | 2.11                            | .743                   | .014                                        | .019                     | .786        |
| No. of working parents   | 1.25                              | 1.24                            | .635                   | .008                                        | .013                     | .846        |
| Library card             | .972                              | .886                            | .846                   | .086                                        | .102                     | .142        |
| No. of newspapers        | .382                              | .331                            | .775                   | .051                                        | .066                     | .328        |
| No. of magazines         | .291                              | .267                            | .515                   | .025                                        | .048                     | .479        |
| Lag to pretest (days)    | 41.7                              | 52.5                            | 26.96                  | <b>-10.77<sup>*</sup></b>                   | <b>-.322</b>             | <b>.000</b> |
| WJ Composite 6           | 394.5                             | 395.2                           | 18.3                   | -.666                                       | -.036                    | .583        |
| WJ Letter-Word ID        | 318.4                             | 317.7                           | 27.4                   | .722                                        | .026                     | .695        |
| WJ Spelling              | 349.4                             | 352.2                           | 28.7                   | -2.84                                       | -.099                    | .140        |
| WJ Oral Comp             | 444.2                             | 443.7                           | 16.3                   | .419                                        | .026                     | .704        |
| WJ Picture Vocab         | 456.8                             | 455.6                           | 23.1                   | 1.292                                       | .056                     | .396        |
| WJ Applied Problems      | 391.7                             | 392.5                           | 28.0                   | -.812                                       | -.029                    | .666        |
| WJ Quant Concepts        | 406.8                             | 408.9                           | 14.2                   | <b>-2.11<sup>*</sup></b>                    | <b>-.149</b>             | <b>.027</b> |
|                          | N = 697                           | N = 379                         |                        |                                             |                          |             |

<sup>a</sup>  $p < .05$ , <sup>b</sup>  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: Mother's education: 1 = below high school; 2 = completed high school; 3 = some postsecondary; 4 = bachelors' degree or higher. Library card: 1 = yes for at least one parent, 0 = no. No. of newspapers and magazines counts number of household subscriptions. Lag to pretest is counted from September 1, the start date or very close for VPK programs, to the date of WJ assessments. WJ Composite 6 is the mean of the W-scores across the six content-specific scales included in this table.

<sup>a</sup> Estimated marginal means from the multilevel analysis model.<sup>b</sup> Pooled treatment and control group standard deviations.<sup>c</sup> Coefficients for the ITT treatment-control differences from a multilevel model with multiple imputation for missing values and children nested in R-Lists, R-Lists nested in districts, with ITT condition as the only predictor.<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.

identified more non-native English speakers in the control group than the treatment group for the ISS subsample, with the reverse pattern for the non-ISS subsample (three percentage point differences in each case). Within each subgroup, however, the baseline treatment-control differences were not significant.

Overall, these results show substantial similarity between children included and not included in the ISS subsample, but also raise the possibility of differential effects for these groups on the outcomes examined later. Accordingly, all analyses of VPK effects with the RCT sample were repeated with a test of the ITT condition by ISS membership interaction added. These many interaction tests identified only a few statistically significant differential VPK effects between the ISS subsample and the remaining portion of the RCT sample. This finding has important implications. In particular, it indicates that VPK effects that can only be examined with the ISS subsample can be expected to generalize reasonably well to the full RCT sample.

#### 4.9.4. Baseline equivalence for the ISS subsample

An extensive set of baseline variables is available for the ISS subsample including pretests on the WJ achievement scales as well as family information from the parent interviews. Table 6 compares the ITT treatment and control groups in the ISS subsample on a differentiated set of demographic variables, the WJ pretests, and key variables from the parent interviews. Multilevel tests confirmed the substantial similarity of the groups on all but two of these variables and, except for those, it is notable that the effect sizes for the differences are modest, well under the Imbens and Rubin (2015, p. 277) suggested standard of .25 for baseline differences too large to adjust with covariates.

The most striking exception to the similarity of the ISS treatment and control groups at baseline relates to the time lag between the start of VPK classes and administration of the WJ pretests. Start times across sites clustered closely around September 1, which was used as the date for computing time lags. The pretest assessment

was an average of 45.5 days after that date overall but, as shown in Table 6, it was about 11 days later for the control children than the VPK treatment children. The general equivalence between these groups on the WJ pretests gives no indication that this timing difference affected their scores. Nonetheless, to statistically adjust for any influence of pretest timing difference or any related timing misalignment between the ISS treatment and control groups, pretest time lag and age at time of assessment were included as covariates in all analyses of WJ achievement outcomes. Also included as covariates in analyses with the ISS sample were the WJ Composite 6 pretest to represent initial achievement performance, the Quantitative Concepts pretest (the one WJ scale with a significant pretest difference), and age, gender, race/ethnicity, native English, and mother's education. Despite the few significant differences on the baseline variables, inclusion of these covariates in analyses of VPK effects further ensures the equivalence of the ISS subsample treatment and control groups and improves the statistical power of the analyses for this smaller sample.

## 5. Results

The research questions that guided this study asked about the effects of VPK on children's cognitive skills and classroom behavior by kindergarten entry, whether VPK effects carry forward to enhance performance in later grades, and whether the effects are greater for some demographic subgroups of children than others. The findings presented in this results section address each of these questions for each outcome domain for which data are available. Full details for any of the analyses reported in this article and the associated sensitivity tests for the analysis models are available from the corresponding author.

### 5.1. Academic performance

#### 5.1.1. Achievement

For school systems, a major aspiration is that VPK improve the performance of participating children on the state achievement tests first administered in 3rd grade. However, there is an interval of nearly four years between the end of pre-k and 3rd grade during which state data provide no direct information about children's achievement. The primary rationale for the ISS subsample, with its annual assessments on WJ achievement measures, was to shed light on children's performance during that interval.

#### 5.1.2. Woodcock-Johnson achievement measures (ISS)

Table 7 reports the VPK ITT and TOT effects for the WJ achievement measures administered to the ISS subsample from pre-k through the 3rd grade year. The composite measures provide the best overall summary, but the results for the individual measures that contribute to those composites are also presented. Table 7 shows rather consistent findings across the achievement measures. VPK effects are positive and statistically significant at the end of the pre-k year with effect sizes for TOT impacts large enough to be educationally meaningful, e.g., by the .25 threshold used by the U.S. Department of Education What Works Clearinghouse. This is not only true for the composite measure, but for each of the scales represented in that composite with the exception of Oral Comprehension.

However, in later grades the performance of the children in the control conditions converged with that of children in the VPK conditions; that is, the control children caught up to the VPK children. By the end of kindergarten, there were no longer any statistically significant differences on most of the achievement measures (Picture Vocabulary is the only exception, and that difference is no longer significant by the end of the 1st grade year). After the kindergarten year, most of the effect estimates are negative, though short

of statistical significance, indicating that the control children outperformed the children in the VPK treatment conditions.

The analyses that generated the results in Table 7 used multiple imputation for missing values; parallel analyses using only observed values produced similar results for statistical conclusions and effect size magnitude. In particular, VPK effects were positive and statistically significant at the end of pre-k for all the achievement measures except Oral Comprehension, with null or negative findings thereafter except for Picture Vocabulary in kindergarten.

To extrapolate the VPK findings from the ISS subsample to the statewide population of VPK participants, the analyses reported in Table 7 were repeated with application of the weights described earlier that create a close match between the ISS subsample and the statewide population on demographic characteristics and baseline WJ scores. The results in the last two columns of Table 7 reveal a pattern of TOT effect estimates for the generalization to the statewide population that is quite similar to the pattern in the ISS subsample. The statewide estimates at the end of pre-k are positive but smaller than those for the ISS subsample with those statistically significant in the ISS subsample remaining so in the statewide estimates except for Applied Problems. Moreover, after pre-k there are negative trends in the statewide estimates that largely parallel those in the ISS subsample, though only a few reached statistical significance.

#### 5.1.3. Teacher ratings of preparedness for grade (ISS)

The data for the ISS subsample include teacher ratings of how prepared children were for grade-level work related to language/literacy, math, and social behavior. Kindergarten teachers made their ratings near the beginning of the school year; 1st, 2nd, and 3rd grade teachers made their ratings near the end of the respective years. The ITT and TOT effects on those ratings (Table 8) showed a pattern similar to that found for the WJ achievement measures (Table 7). Early in the kindergarten year, teachers reported that VPK participants were better prepared than the control group ( $p < .10$ ). However, in the later grades the direction of the effect was reversed with the control group receiving higher ratings, although none of those differences reached statistical significance. Moreover, the weighted analysis that generalized the ISS subsample results to the statewide VPK population showed the same pattern, giving no indication that this finding was distinctive to the ISS subsample.

#### 5.1.4. State achievement tests (RCT)

The Tennessee Comprehensive Assessment Program (TCAP) in place during this study requires annual testing on reading/language arts, mathematics, and science beginning in 3rd grade. The 3rd grade scores on those tests were available for most of the children in the RCT sample although some were retained in a prior grade and thus had not yet reached 3rd grade. However, as reported later, there were no statistically significant differences in retention between the VPK treatment and control groups by the 3rd grade year that would bias the comparisons of 3rd grade TCAP scores for children who did take the tests. Furthermore, our primary analysis models used multiple imputation for missing data, which includes the missing TCAP scores for retained children. Because imputation for this distinctive situation is more questionable than when missingness is not so heavily influenced by a single factor, the results of parallel analyses with only observed values are also reported.

The first panel of Table 9 presents the results with multiple imputation of missing scores; the second panel shows the results with only observed values. The third panel shows the results with multiple imputation and the weighting function that matches the RCT sample to the demographic profile of the statewide VPK population. All these analyses show the same pattern of VPK effects on the state achievement tests. As indicated by the negative effect coefficients and effect sizes, the control children outperformed the

**Table 7**  
Intent-to-treat (ITT) and treatment-on-treated (TOT) impact estimates for the WJ achievement measures (ISS subsample).

| WJ scale & year       | ITT                               |                                 |                        |                                             |                          |                      | TOT                               |                                 |                                             |                          | TOT weighted                                |                          |
|-----------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------------------|--------------------------|---------------------------------------------|--------------------------|
|                       | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |
| <b>WJ Composite 6</b> |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | 411.1                             | 407.1                           | 16.80                  | <b>4.00<sup>*</sup></b>                     | <b>.236</b>              | <b>.000</b>          | 412.4                             | 405.8                           | <b>6.57<sup>*</sup></b>                     | <b>.395</b>              | <b>4.30<sup>*</sup></b>                     | <b>.270</b>              |
| K                     | 441.0                             | 440.7                           | 13.88                  | 0.27                                        | .019                     | .676                 | 441.1                             | 440.7                           | 0.44                                        | .032                     | 0.52                                        | .038                     |
| 1st                   | 464.1                             | 464.3                           | 14.33                  | −0.21                                       | −.015                    | .777                 | 464.0                             | 464.4                           | −0.34                                       | −.024                    | −0.58                                       | −.040                    |
| 2nd                   | 478.0                             | 479.1                           | 13.95                  | −1.12                                       | −.080                    | .130                 | 477.6                             | 479.5                           | −1.84                                       | −.132                    | −1.85                                       | −.127                    |
| 3rd                   | 489.4                             | 490.4                           | 13.93                  | −0.98                                       | −.070                    | .204                 | 489.1                             | 490.7                           | −1.60                                       | −.115                    | −1.81                                       | −.125                    |
| <b>WJ Composite 8</b> |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | —                                 | —                               | —                      | —                                           | —                        | —                    | —                                 | —                               | —                                           | —                        | —                                           | —                        |
| K                     | 437.8                             | 438.0                           | 14.06                  | −0.15                                       | −.011                    | .818                 | 437.8                             | 438.0                           | −0.25                                       | −.018                    | 0.03                                        | .002                     |
| 1st                   | 463.1                             | 463.4                           | 14.24                  | −0.32                                       | −.022                    | .682                 | 463.0                             | 463.5                           | −0.52                                       | −.036                    | −0.56                                       | −.038                    |
| 2nd                   | 477.4                             | 478.3                           | 13.32                  | −0.89                                       | −.067                    | .210                 | 477.1                             | 478.5                           | −1.47                                       | −.110                    | −1.40                                       | −.101                    |
| 3rd                   | 488.8                             | 489.6                           | 13.45                  | −0.85                                       | −.063                    | .259                 | 488.5                             | 489.9                           | −1.39                                       | −.103                    | −1.52                                       | −.108                    |
| <b>Letter-word ID</b> |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | 344.0                             | 336.4                           | 26.94                  | <b>7.61<sup>*</sup></b>                     | <b>.279</b>              | <b>.000</b>          | 346.4                             | 333.9                           | <b>12.48<sup>*</sup></b>                    | <b>.470</b>              | <b>10.60<sup>*</sup></b>                    | <b>.400</b>              |
| K                     | 398.5                             | 399.5                           | 27.34                  | −1.07                                       | −.039                    | .480                 | 398.1                             | 399.9                           | −1.76                                       | −.064                    | −0.47                                       | −.017                    |
| 1st                   | 446.3                             | 447.5                           | 29.47                  | −1.15                                       | −.039                    | .519                 | 446.0                             | 447.8                           | −1.89                                       | −.064                    | −1.66                                       | −.053                    |
| 2nd                   | 470.4                             | 472.3                           | 25.88                  | −1.96                                       | −.076                    | .209                 | 469.7                             | 473.0                           | −3.22                                       | −.124                    | −2.95                                       | −.108                    |
| 3rd                   | 487.5                             | 489.4                           | 24.88                  | −1.91                                       | −.077                    | .219                 | 486.9                             | 490.0                           | −3.12                                       | −.126                    | −3.13                                       | −.118                    |
| <b>Spelling</b>       |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | 376.7                             | 370.9                           | 25.26                  | <b>5.81<sup>*</sup></b>                     | <b>.229</b>              | <b>.000</b>          | 378.5                             | 369.0                           | <b>9.53<sup>*</sup></b>                     | <b>.379</b>              | <b>6.64<sup>*</sup></b>                     | <b>.255</b>              |
| K                     | 423.9                             | 424.4                           | 21.17                  | −0.56                                       | −.027                    | .640                 | 423.7                             | 424.6                           | −0.92                                       | −.043                    | −0.24                                       | −.011                    |
| 1st                   | 459.4                             | 461.6                           | 20.95                  | −2.23 <sup>†</sup>                          | −.107                    | .073                 | 458.7                             | 462.3                           | −3.66 <sup>†</sup>                          | −.175                    | −3.75 <sup>†</sup>                          | −.173                    |
| 2nd                   | 476.9                             | 478.4                           | 20.77                  | −1.58                                       | −.076                    | .209                 | 476.4                             | 478.9                           | −2.59                                       | −.125                    | −2.47                                       | −.114                    |
| 3rd                   | 489.1                             | 490.3                           | 20.80                  | −1.19                                       | −.057                    | .372                 | 488.7                             | 490.6                           | −1.95                                       | −.094                    | −2.20                                       | −.099                    |
| <b>Oral comp</b>      |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | 452.0                             | 451.3                           | 16.90                  | 0.69                                        | .041                     | .355                 | 452.2                             | 451.1                           | 1.13                                        | .067                     | −0.48                                       | −.032                    |
| K                     | 465.9                             | 465.3                           | 15.43                  | 0.58                                        | .038                     | .446                 | 466.1                             | 465.1                           | 0.96                                        | .062                     | −0.40                                       | −.029                    |
| 1st                   | 477.2                             | 477.2                           | 13.93                  | −0.03                                       | −.002                    | .967                 | 477.2                             | 477.2                           | −0.05                                       | −.004                    | −0.90                                       | −.069                    |
| 2nd                   | 485.4                             | 486.3                           | 13.28                  | −0.89                                       | −.067                    | .233                 | 485.1                             | 486.5                           | −1.46                                       | −.110                    | −1.98                                       | −.152                    |
| 3rd                   | 493.9                             | 494.6                           | 13.85                  | −0.66                                       | −.048                    | .403                 | 493.7                             | 494.8                           | −1.09                                       | −.079                    | −2.48 <sup>†</sup>                          | −.183                    |
| <b>Picture vocab</b>  |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | 462.8                             | 459.3                           | 18.27                  | <b>3.51<sup>*</sup></b>                     | <b>.192</b>              | <b>.000</b>          | 463.9                             | 458.2                           | <b>5.76<sup>*</sup></b>                     | <b>.316</b>              | <b>3.31<sup>*</sup></b>                     | <b>.227</b>              |
| K                     | 472.3                             | 470.8                           | 11.89                  | <b>1.55<sup>*</sup></b>                     | <b>.130</b>              | <b>.007</b>          | 472.8                             | 470.3                           | <b>2.54<sup>*</sup></b>                     | <b>.214</b>              | <b>2.16<sup>*</sup></b>                     | <b>.208</b>              |
| 1st                   | 479.1                             | 478.1                           | 11.84                  | 1.00                                        | .084                     | .101                 | 479.4                             | 477.7                           | 1.64                                        | .139                     | <b>1.86<sup>†</sup></b>                     | <b>.170</b>              |
| 2nd                   | 484.9                             | 484.6                           | 11.50                  | 0.27                                        | .024                     | .653                 | 485.0                             | 484.5                           | 0.44                                        | .039                     | 0.84                                        | .076                     |
| 3rd                   | 491.2                             | 490.9                           | 11.58                  | 0.34                                        | .029                     | .606                 | 491.3                             | 490.8                           | 0.55                                        | .048                     | 0.53                                        | .047                     |
| <b>Passage comp</b>   |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | —                                 | —                               | —                      | —                                           | —                        | —                    | —                                 | —                               | —                                           | —                        | —                                           | —                        |
| K                     | 421.6                             | 422.9                           | 22.26                  | −1.24                                       | −.056                    | .331                 | 421.2                             | 423.3                           | −2.03                                       | −.091                    | −1.04                                       | −.047                    |
| 1st                   | 457.6                             | 458.1                           | 19.59                  | −0.47                                       | −.024                    | .684                 | 457.4                             | 458.2                           | −0.77                                       | −.039                    | −0.27                                       | −.013                    |
| 2nd                   | 474.2                             | 474.5                           | 16.64                  | −0.32                                       | −.019                    | .742                 | 474.1                             | 474.6                           | −0.52                                       | −.032                    | −0.60                                       | −.036                    |
| 3rd                   | 483.8                             | 483.9                           | 16.34                  | −0.02                                       | −.001                    | .984                 | 483.8                             | 483.9                           | −0.03                                       | −.002                    | −0.22                                       | −.013                    |
| <b>Applied probs</b>  |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | 409.3                             | 405.5                           | 23.92                  | <b>3.81<sup>*</sup></b>                     | <b>.158</b>              | <b>.001</b>          | 410.5                             | 404.3                           | <b>6.25<sup>*</sup></b>                     | <b>.263</b>              | 1.57                                        | .069                     |
| K                     | 436.8                             | 435.6                           | 16.12                  | 1.18                                        | .073                     | .161                 | 437.2                             | 435.3                           | 1.93                                        | .120                     | 1.63                                        | .103                     |
| 1st                   | 458.0                             | 456.9                           | 16.08                  | 1.15                                        | .071                     | .190                 | 458.4                             | 456.5                           | 1.89                                        | .117                     | 1.21                                        | .076                     |
| 2nd                   | 473.9                             | 474.6                           | 17.04                  | −0.77                                       | −.045                    | .435                 | 473.6                             | 474.9                           | −1.26                                       | −.074                    | −1.49                                       | −.085                    |
| 3rd                   | 485.2                             | 486.8                           | 18.20                  | −1.61                                       | −.089                    | .139                 | 484.7                             | 487.3                           | −2.64                                       | −.145                    | −1.53                                       | −.084                    |
| <b>Quant concepts</b> |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | 422.1                             | 418.9                           | 16.04                  | <b>3.21<sup>*</sup></b>                     | <b>.199</b>              | <b>.000</b>          | 423.1                             | 417.8                           | <b>5.26<sup>*</sup></b>                     | <b>.330</b>              | <b>3.99<sup>*</sup></b>                     | <b>.250</b>              |
| K                     | 448.7                             | 448.3                           | 13.54                  | 0.32                                        | .024                     | .660                 | 448.8                             | 448.2                           | 0.53                                        | .039                     | 0.34                                        | .025                     |
| 1st                   | 464.5                             | 464.6                           | 13.77                  | −0.08                                       | −.006                    | .921                 | 464.5                             | 464.6                           | −0.13                                       | −.009                    | −0.91                                       | −.064                    |
| 2nd                   | 476.5                             | 478.2                           | 14.24                  | −1.75 <sup>*</sup>                          | −.123                    | .039                 | 475.9                             | 478.8                           | −2.87 <sup>*</sup>                          | −.202                    | −3.43 <sup>*</sup>                          | −.234                    |
| 3rd                   | 489.2                             | 490.0                           | 13.72                  | −0.82                                       | −.060                    | .321                 | 488.9                             | 490.3                           | −1.35                                       | −.098                    | −2.07                                       | −.144                    |
| <b>Calculation</b>    |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| Pre-k                 | —                                 | —                               | —                      | —                                           | —                        | —                    | —                                 | —                               | —                                           | —                        | —                                           | —                        |
| K                     | 434.3                             | 435.9                           | 18.84                  | −1.53                                       | −.081                    | .172                 | 433.8                             | 436.3                           | −2.51                                       | −.133                    | −1.85                                       | −.096                    |
| 1st                   | 462.2                             | 462.7                           | 15.75                  | −0.56                                       | −.036                    | .580                 | 462.0                             | 462.9                           | −0.92                                       | −.059                    | −0.37                                       | −.022                    |
| 2nd                   | 476.8                             | 476.9                           | 12.17                  | −0.18                                       | −.015                    | .817                 | 476.7                             | 477.0                           | −0.29                                       | −.024                    | 0.16                                        | .012                     |
| 3rd                   | 490.4                             | 491.0                           | 13.92                  | −0.57                                       | −.041                    | .528                 | 490.2                             | 491.2                           | −0.94                                       | −.068                    | −0.76                                       | −.052                    |
|                       | N = 697                           | N = 379                         |                        |                                             |                          |                      | N = 780                           | N = 296                         |                                             |                          |                                             |                          |

\*  $p < .05$ , †  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: Woodcock-Johnson W-scores. WJ Composite 6 is the mean of the W-scores across the content-specific scales except Passage Comprehension and Calculation. WJ Composite 8 is the mean of the W-scores including Passage Comprehension and Calculation, which were not administered at the end of the pre-k year.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.

<sup>b</sup> Pooled treatment and control group standard deviations. There are minor variations between the pooled SDs for the ITT and TOT; the mean is presented here but effect sizes are computed on the exact values.

<sup>c</sup> Coefficients for treatment-control differences from OLS multilevel multiple imputation models with children nested in R-Lists and R-Lists nested in districts. Covariates are age at time of testing, male, Black, Hispanic, non-native English, mother's education, WJ Composite 6 pretest, Quantitative Concepts pretest, and pretest lag. The multiplier for ITT coefficients that estimates TOT coefficients is 1.6396 (see Table 4).

<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.

<sup>e</sup> The 2SLS analysis model yields  $p$ -values for statistical significance that are the same for the ITT and TOT coefficients.

**Table 8**

Intent-to-treat (ITT) and treatment-on-treated (TOT) impact estimates for teacher ratings of preparedness for grade (ISS subsample).

| Scale & year        | ITT                               |                                 |                        |                                             |                          |                      | TOT                               |                                 |                                             |                          | TOT weighted                                |                          |
|---------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------------------|--------------------------|---------------------------------------------|--------------------------|
|                     | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |
| ACBR prep for grade |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |                                             |                          |
| K                   | 4.53                              | 4.38                            | 1.46                   | <b>.147<sup>†</sup></b>                     | <b>.100</b>              | <b>.080</b>          | 4.57                              | 4.33                            | <b>.242<sup>†</sup></b>                     | <b>.166</b>              | <b>.299<sup>†</sup></b>                     | <b>.208</b>              |
| 1st                 | 4.36                              | 4.48                            | 1.48                   | –.116                                       | –.078                    | .205                 | 4.33                              | 4.52                            | –.190                                       | –.128                    | –.238                                       | –.160                    |
| 2nd                 | 4.31                              | 4.41                            | 1.45                   | –.095                                       | –.066                    | .298                 | 4.28                              | 4.44                            | –.156                                       | –.107                    | –.136                                       | –.096                    |
| 3rd                 | 4.20                              | 4.26                            | 1.61                   | –.055                                       | –.035                    | .574                 | 4.19                              | 4.28                            | –.091                                       | –.056                    | –.082                                       | –.050                    |
|                     | N = 697                           | N = 379                         |                        |                                             |                          |                      | N = 780                           | N = 296                         |                                             |                          |                                             |                          |

<sup>†</sup>  $p < .05$ , <sup>†</sup>  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: ACBR Preparedness for Grade, scored as the mean of 3 items rated on 1–7 point scales.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.<sup>b</sup> Pooled treatment and control group standard deviations. There are minor variations between the pooled SDs for ITT and TOT; the mean is presented here but effect sizes are computed on the exact values.<sup>c</sup> Coefficients for treatment-control differences from OLS multilevel multiple imputation models with children nested in R-Lists and R-Lists nested in districts. Covariates are age at time of rating, male, Black, Hispanic, non-native English, mother's education, WJ Composite6 pretest, and Quantitative Concepts pretest. The multiplier for the ITT coefficients that estimate the TOT coefficients is 1.6396 (see Table 4).<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.<sup>e</sup> The 2SLS analysis model yields  $p$ -values for statistical significance that are the same for the ITT and TOT coefficients.**Table 9**

Intent-to-treat (ITT) and treatment-on-treated (TOT) impact estimates for the state achievement tests (RCT sample).

| Analysis & subject  | ITT                               |                                 |                        |                                             |                          |                      | TOT                               |                                 |                                             |                          |  |
|---------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------------------|--------------------------|--|
|                     | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |  |
| Multiple imputation |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |  |
| Reading             | 744.9                             | 747.3                           | 35.24                  | –2.34                                       | –.066                    | .130                 | 743.9                             | 748.3                           | –4.45                                       | –.126                    |  |
| Mathematics         | 755.9                             | 760.4                           | 36.59                  | <b>–4.46<sup>†</sup></b>                    | <b>–.122</b>             | <b>.006</b>          | 753.9                             | 762.4                           | <b>–8.48<sup>†</sup></b>                    | <b>–.232</b>             |  |
| Science             | 749.0                             | 752.8                           | 36.34                  | <b>–3.87<sup>†</sup></b>                    | <b>–.106</b>             | <b>.016</b>          | 747.2                             | 754.6                           | <b>–7.34<sup>†</sup></b>                    | <b>–.202</b>             |  |
|                     | N = 1852                          | N = 1138                        |                        | N = 2990                                    |                          |                      | N = 1997                          | N = 993                         | N = 2990                                    |                          |  |
| Observed values     |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |  |
| Reading             | 746.2                             | 748.1                           | 34.33                  | –1.82                                       | –.053                    | .214                 | 745.4                             | 748.9                           | –3.45                                       | –.100                    |  |
| Mathematics         | 757.1                             | 761.0                           | 31.55                  | <b>–3.86<sup>†</sup></b>                    | <b>–.140</b>             | <b>.011</b>          | 755.4                             | 762.7                           | <b>–7.34<sup>†</sup></b>                    | <b>–.206</b>             |  |
| Science             | 750.1                             | 753.2                           | 35.32                  | <b>–3.17<sup>†</sup></b>                    | <b>–.090</b>             | <b>.033</b>          | 748.7                             | 754.7                           | <b>–6.02<sup>†</sup></b>                    | <b>–.170</b>             |  |
|                     | N = 1505                          | N = 935                         |                        | N = 2440                                    |                          |                      | N = 1638                          | N = 802                         | N = 2440                                    |                          |  |
| Weighted imputation |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |  |
| Reading             | 746.4                             | 748.6                           | 34.96                  | –2.24                                       | –.064                    | .356                 | 745.3                             | 749.6                           | –4.26                                       | –.122                    |  |
| Mathematics         | 756.3                             | 759.7                           | 36.59                  | –3.35                                       | –.092                    | .162                 | 754.8                             | 761.2                           | –6.36                                       | –.174                    |  |
| Science             | 750.7                             | 753.9                           | 36.60                  | –3.13                                       | –.085                    | .189                 | 749.3                             | 755.3                           | –5.94                                       | –.162                    |  |
|                     | N = 1852                          | N = 1138                        |                        | N = 2990                                    |                          |                      | N = 1997                          | N = 993                         | N = 2990                                    |                          |  |

<sup>†</sup>  $p < .05$ , <sup>†</sup>  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: TCAP state achievement scaled scores.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.<sup>b</sup> Pooled treatment and control group standard deviations. There are minor variations between the pooled SDs for ITT and TOT; the mean is presented here but effect sizes are computed on the exact values.<sup>c</sup> Coefficients for treatment-control differences from OLS multilevel models with children nested in R-Lists and R-Lists nested in districts. Covariates are age, male, Black, Hispanic, and non-native English. The multipliers for the ITT coefficients that estimate the TOT coefficients are 1.8993 with multiple imputation and 1.8990 with observed values.<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.<sup>e</sup> The 2SLS analysis model yields  $p$ -values for statistical significance that are the same for the ITT and TOT coefficients.

VPK treatment children in all three subject areas. Those differences were statistically significant for math and science in the analyses with multiple imputation and observed scores, but not for reading. Negative effect estimates also appeared in the weighted analyses that generalized to the statewide VPK population, but they were smaller and fell short of statistical significance so are best characterized as null effects.

It is noteworthy that the pattern of null and negative VPK effects on the state achievement tests for the RCT sample is substantially similar to that found on the WJ achievement measures for the ISS subsample (Table 7) and consistent with teachers' ratings of preparedness for grade level work (Table 8). Across all these achievement-related outcomes, there were no statistically significant differences past the kindergarten year that favored the VPK participants. Moreover, the direction of the differences in those later grades was overwhelmingly negative, indicating that the

VPK participants did not perform as well as the control children, with a number of those differences reaching statistical significance.

#### 5.1.5. Achievement effects for different subgroups of children

Further analysis of the various VPK achievement effects was conducted to identify any differential effects for demographic subgroups of children at the end of the pre-k year and later.

**5.1.5.1. Differential effects at the end of the pre-k year.** Achievement data at the end of the pre-k year were available on the WJ measures and teacher ratings, but only for the ISS subsample. Analyses like those reported in Table 7 for main effects on the WJ achievement measures were repeated for the WJ Composite 6 summary measure with addition of terms for the interactions of the ITT treatment condition with the baseline variables for

**Table 10**  
ITT and TOT subgroup impact estimates for the WJ Composite 6 measure at the end of the pre-k year (ISS subsample).

| Moderator variable and subgroup | ITT                                   |                                     |                        | TOT                                       |                          |                         |
|---------------------------------|---------------------------------------|-------------------------------------|------------------------|-------------------------------------------|--------------------------|-------------------------|
|                                 | Treatment group mean <sup>a</sup> (N) | Control group mean <sup>a</sup> (N) | Pooled SD <sup>b</sup> | Treatment-control difference <sup>c</sup> | Effect size <sup>d</sup> | p-value <sup>e</sup>    |
| Native English                  |                                       |                                     | 16.80                  |                                           |                          | <b>.001<sup>*</sup></b> |
| Yes                             | 409.9 (592)                           | 406.5 (269)                         |                        | 3.35                                      | .197                     |                         |
| No                              | 412.7 (105)                           | 398.9 (110)                         |                        | 13.79                                     | .813                     |                         |
| WJ Composite 6 pretest          |                                       |                                     | 16.80                  |                                           |                          | <b>.001<sup>*</sup></b> |
| Lower scores                    | 406.0 (232)                           | 396.2 (127)                         |                        | 9.86                                      | .581                     |                         |
| Higher scores                   | 416.5 (465)                           | 409.2 (252)                         |                        | 7.27                                      | .429                     |                         |
| English × Comp 6 pretest        |                                       |                                     | 16.80                  |                                           |                          | <b>.056<sup>†</sup></b> |
| Yes/low score                   | 405.6 (151)                           | 400.9 (50)                          |                        | 4.75                                      | .280                     |                         |
| Yes/high score                  | 414.1 (441)                           | 412.2 (219)                         |                        | 1.95                                      | .115                     |                         |
| No/low score                    | 406.5 (81)                            | 391.5 (77)                          |                        | 14.98                                     | .883                     |                         |
| No/high score                   | 418.9 (24)                            | 406.3 (33)                          |                        | 12.60                                     | .743                     |                         |

<sup>\*</sup>  $p < .05$ , <sup>†</sup>  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: Woodcock-Johnson Composite 6 W-scores. To illustrate the magnitude of the relations, pretest WJ Composite 6 scores are grouped into the lowest tertile vs. the two higher tertiles.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample; OLS multilevel multiple imputation models with children nested in R-Lists and R-Lists nested in districts. Covariates are age at time of testing, male, Black, Hispanic, non-native English, mother's education, WJ Composite 6 pretest, Quantitative Concepts pretest, and pretest lag.

<sup>b</sup> Pooled treatment and control group standard deviations for the aggregate treatment and control groups to facilitate comparison across subgroups and with the main effects in Table 7. There are minor variations between the pooled SDs for the ITT and TOT; the mean is presented here but effect sizes are computed on the exact values.

<sup>c</sup> Difference between the treatment and control covariate-adjusted means. The multiplier for the ITT differences that estimate the TOT differences is 1.6396 (see Table 4).

<sup>d</sup> Effect size: treatment-control difference divided by the pooled standard deviation.

<sup>e</sup> p-values for the respective interaction terms in the analysis model. The 2SLS analysis model yields p-values for statistical significance that are the same for the ITT and TOT coefficients.

children's age, gender, race, whether English was the native language, mother's education, and performance on the WJ Composite 6 pretest. Larger positive and statistically significant VPK effects were found for non-native English speakers compared with native English speakers, and for children who scored lowest on the Composite 6 pretest achievement measure relative to those with higher scores. Table 10 summarizes these results, showing the treatment and control group means for each subgroup and the associated effect sizes, with subgroups on the Composite 6 measure created by contrasting children who scored in the lower tertile of the distribution with those with higher scores.

Table 10 also reports the breakout for the subgroups of the three-way interaction that combines VPK treatment status with both the native English and Composite 6 pretest variables. The largest VPK effects were for non-native English speakers with low pretest achievement scores. Conversely, the smallest effects were for native English speaking children with higher pretest achievement scores. Note that the Composite 6 pretest is correlated with other moderator variables that did not emerge so strongly in their own right in these analyses. In particular, Composite 6 scores are significantly lower for children who are younger, have mothers with less education, are Hispanic (the largest concentration of non-native English speakers), or are male.

Differential effects on teachers' ratings of preparedness for grade-level work at the beginning of kindergarten were investigated with the same procedure. None of the interactions of the baseline variables with ITT treatment condition was statistically significant for those ratings.

**5.1.5.2. Differential effects after the end of the pre-k year.** The large gain on the WJ Composite 6 achievement measure during the pre-k year by VPK children who were not native English speakers and/or had low pretest scores on that measure (Table 10) might propel sustained achievement advantages for those subgroups in the later grades. However, analysis of the interactions of ITT treatment condition with age, gender, race, native English, mothers' education, and the WJ Composite 6 pretest revealed no statistically significant differential effects on the WJ Composite 6 achievement measure at the end of kindergarten or later through the 2nd grade year. A small

statistical interaction with the WJ Composite 6 pretest ( $p < .07$ ) emerged in the 3rd grade year, but in the opposite direction from that in the pre-k year – the initially lowest scoring children whose participation in VPK produced especially large gains on the Composite 6 achievement measure during pre-k had fallen behind the control children on that measure by the 3rd grade year. The magnitude of the effect can again be illustrated by contrasting the VPK effect on the Composite 6 outcome for children scoring in the lowest tertile with those in the upper tertiles on that measure at pretest. For the ITT comparison, that representation yields effect sizes in the 3rd grade year of  $-.06$  for the initially lowest scoring group and  $-.01$  for the higher scoring group. For the TOT comparison, the corresponding effect sizes were  $-.11$  and  $-.01$ .

Teacher ratings of preparedness for grade level work in the years after pre-k also showed negative differential effects for the children with lower pretest scores on WJ Composite 6 achievement. Those effects were statistically significant for teacher ratings at the end of the 1st, 2nd, and 3rd grade years. The effect sizes on those ratings for children in the lowest tertile of the Composite 6 pretest compared to those with higher scores for the ITT comparison (TOT effect sizes in parentheses) were  $-.27$  vs.  $.05$  ( $-.44$  vs.  $.09$ ) at the end of the 1st grade year,  $-.26$  vs.  $.06$  ( $-.43$  vs.  $.11$ ) at the end of 2nd grade, and  $-.13$  vs.  $.04$  ( $-.21$  vs.  $.06$ ) at the end of 3rd grade.

Examined individually, there were a number of other statistically significant interactions that indicated differential effect on the ratings of preparedness for grade after the pre-k year, in particular, for Black and Hispanic children, non-native English speakers, and children with less educated mothers. However, all those variables are correlated with the baseline Composite 6 achievement pretest. When the differential effects associated with that pretest were accounted for in the analyses, none of these other interaction terms remained statistically significant.

Further exploration was made of differential effects on the state achievement tests in 3rd grade with the full RCT sample. The data for that sample do not include pretest achievement measures, so no direct comparison with the results from the ISS subsample can be made. The interactions of ITT treatment condition with age, gender, race, and native English were tested, but none was statistically significant for reading, math, or science.

**Table 11**  
ITT and TOT impact estimates for retention in grade (RCT sample).

| Analysis & grade year      | ITT                               |                                 |                        |                                             |                          | TOT                  |                                   |                                 |                                             |                          |
|----------------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------------------|--------------------------|
|                            | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |
| <b>Multiple imputation</b> |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                          | .052                              | .066                            | .227                   | -.014                                       | -.064                    | .108                 | .045                              | .072                            | -.027                                       | -.121                    |
| K-1st                      | .109                              | .103                            | .299                   | .006                                        | .019                     | .622                 | .111                              | .100                            | .011                                        | .037                     |
| K-2nd                      | .126                              | .128                            | .321                   | -.001                                       | -.004                    | .921                 | .126                              | .128                            | -.002                                       | -.008                    |
| K-3rd                      | .137                              | .137                            | .335                   | .000                                        | .001                     | .976                 | .137                              | .137                            | .001                                        | .002                     |
|                            | N = 1852                          | N = 1138                        |                        |                                             |                          |                      | N = 1997                          | N = 993                         |                                             |                          |
| <b>Observed values</b>     |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                          | .050                              | .065                            | .224                   | -.015 <sup>†</sup>                          | -.067                    | .084                 | .043                              | .072                            | -.029 <sup>†</sup>                          | -.128                    |
| K-1st                      | .107                              | .099                            | .296                   | .008                                        | .025                     | .516                 | .111                              | .096                            | .014                                        | .048                     |
| K-2nd                      | .123                              | .121                            | .316                   | .002                                        | .006                     | .870                 | .126                              | .120                            | .004                                        | .012                     |
| K-3rd                      | .130                              | .126                            | .324                   | .003                                        | .010                     | .801                 | .137                              | .125                            | .006                                        | .019                     |
|                            | N = 1764–1807                     | N = 1067–1113                   |                        |                                             |                          |                      | N = 1902–1953                     | N = 929–967                     |                                             |                          |
| <b>Weighted imputation</b> |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                          | .055                              | .064                            | .222                   | -.009                                       | -.043                    | .309                 | .050                              | .068                            | -.018                                       | -.081                    |
| K-1st                      | .117                              | .103                            | .302                   | .015                                        | .048                     | .247                 | .124                              | .096                            | .028                                        | .091                     |
| K-2nd                      | .141                              | .120                            | .330                   | .021                                        | .064                     | .361                 | .150                              | .111                            | .040                                        | .121                     |
| K-3rd                      | .154                              | .125                            | .344                   | .028                                        | .083                     | .221                 | .166                              | .112                            | .054                                        | .157                     |
|                            | N = 1852                          | N = 1138                        |                        |                                             |                          |                      | N = 1997                          | N = 993                         |                                             |                          |

<sup>†</sup>  $p < .05$ , <sup>††</sup>  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: Cumulative values across the grades indicated; e.g., K-2nd refers to retention in any grade from K through 2nd.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.

<sup>b</sup> Pooled treatment and control group standard deviations. There are minor variations between the pooled SDs for the ITT and TOT; the mean is presented here but effect sizes are computed on the exact values.

<sup>c</sup> Coefficients for the treatment-control differences from OLS multilevel models with children nested in R-Lists and R-Lists nested in districts. Covariates are age, male, Black, Hispanic, and non-native English. The multiplier for the ITT coefficient that estimates the TOT coefficient is 1.8993 with multiple imputation and varies from 1.9004 to 1.9051 with observed values.

<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.

<sup>e</sup> The 2SLS analysis model yields  $p$ -values for statistical significance that are the same for the ITT and TOT coefficients.

### 5.1.6. Retention in grade (RCT)

Because retained students continue to lag behind their peers in subsequent grades, we examined cumulative retention – the proportion of students in each successive school year below the expected grade level for that year irrespective of the year in which they had been retained. Table 11 reports the retention rates for students in the treatment and control conditions of the RCT sample. For example, a K-3rd retention rate of .13 means that 13% of the children were retained in the 3rd grade or a prior year.

The top panel of Table 11 reports results from multilevel OLS analysis with multiple imputation of missing data. Substantially similar retention rate estimates were found with analyses of only observed values (second panel of Table 11), and with multilevel logistic regression rather than OLS for the binary retention outcomes each year (not shown). The lower panel of Table 11 presents the results of the retention analyses with application of the weighting function that yields estimates of the expected results if those in the upper panel are extended to the statewide population of VPK programs and participating children.

As Table 11 indicates, a somewhat lower proportion of VPK children was retained in kindergarten than the corresponding control children, but those differences were statistically significant only at the  $p < .10$  level and only for the observed data. Retention through 1st grade reversed the proportions, although not statistically significant. That is, the retention rates for the VPK groups caught up with those for the control groups by 1st grade and there were no significant differences between the groups thereafter.

**5.1.6.1. Differential effects on retention.** Further analyses explored differential VPK effects on retention for subgroups of children identified by the demographic variables for the RCT sample (age, gender, race, and native English). The only statistically significant interaction with ITT treatment condition ( $p = .026$ ) was for age in kindergarten. While younger children were more likely to be

retained throughout the K-3rd grade period, the younger VPK participants were less likely to be retained in kindergarten than their counterparts in the control group. The retention rate in kindergarten for the VPK children below the mean age of their classmates was 7.0% versus 11.2% for the corresponding control children in the TOT comparison; the analogous difference for children above the mean age was 2.2% vs. 3.2%.

### 5.2. Classroom and school behavior

#### 5.2.1. Teacher ratings (ISS)

For the ISS subsample, teachers rated children's behavior and performance in the classroom on the Cooper–Farran Work-Related Skills and Interpersonal Skills scales, and the ACBR Peer Relations, Behavior Problems, and Feelings About School scales. Table 12 shows the effect estimates on these measures through the 3rd grade year. There is no consistent direction in the effect sizes for these ratings and none are statistically significant with one exception. The 1st grade teachers' ratings of children's feelings about school was statistically significant with VPK children having less positive attitudes toward school than control children. Application of the weighting function that extrapolated the results in Table 12 to the statewide VPK population (not shown) produced comparable findings with negative VPK effects ( $p < .10$ ) on teacher ratings of feelings about school in the 1st and 2nd grade years.

#### 5.2.2. Disciplinary actions (RCT)

School records in the state database report expulsions and in-school and out-of-school suspensions. The frequency of such events is low, especially in any one school year. The outcome variable used here thus aggregates across the K-3rd grade years to indicate whether there were any recorded actions (yes/no) during that period. The overall rates are further subdivided into those for less serious infractions such as breaking school rules and related admin-

**Table 12**  
ITT and TOT impact estimates for teacher ratings of classroom behavior (ISS subsample).

| Rating scale & year               | ITT                               |                                 |                        |                                             |                          | TOT                  |                                             |                          |
|-----------------------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|---------------------------------------------|--------------------------|
|                                   | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |
| <b>CF Interpersonal Skills</b>    |                                   |                                 |                        |                                             |                          |                      |                                             |                          |
| K (fall)                          | 5.78                              | 5.69                            | .96                    | .095                                        | .099                     | .150                 | .156                                        | .162                     |
| 1st (spring)                      | 5.80                              | 5.88                            | 1.01                   | -.075                                       | -.074                    | .272                 | -.123                                       | -.122                    |
| 2nd (spring)                      | 5.87                              | 5.89                            | .97                    | -.020                                       | -.021                    | .763                 | -.033                                       | -.034                    |
| 3rd (spring)                      | 6.00                              | 5.94                            | 1.21                   | .060                                        | .049                     | .385                 | .098                                        | .081                     |
| <b>CF Work-Related Skills</b>     |                                   |                                 |                        |                                             |                          |                      |                                             |                          |
| K (fall)                          | 4.99                              | 4.93                            | 1.16                   | .051                                        | .044                     | .475                 | .083                                        | .072                     |
| 1st (spring)                      | 5.03                              | 5.17                            | 1.25                   | -.133                                       | -.107                    | .108                 | -.219                                       | -.175                    |
| 2nd (spring)                      | 5.09                              | 5.15                            | 1.19                   | -.064                                       | -.054                    | .408                 | -.106                                       | -.089                    |
| 3rd (spring)                      | 5.23                              | 5.20                            | 1.67                   | .031                                        | .019                     | .721                 | .051                                        | .031                     |
| <b>ACBR Peer Relations</b>        |                                   |                                 |                        |                                             |                          |                      |                                             |                          |
| K (fall)                          | 5.21                              | 5.17                            | 1.01                   | .046                                        | .046                     | .492                 | .076                                        | .075                     |
| 1st (spring)                      | 5.26                              | 5.24                            | 1.11                   | .017                                        | .016                     | .827                 | .028                                        | .026                     |
| 2nd (spring)                      | 5.24                              | 5.20                            | 1.11                   | .033                                        | .030                     | .662                 | .054                                        | .049                     |
| 3rd (spring)                      | 5.16                              | 5.22                            | 1.35                   | -.061                                       | -.045                    | .460                 | -.101                                       | -.074                    |
| <b>ACBR Behavior Problems</b>     |                                   |                                 |                        |                                             |                          |                      |                                             |                          |
| K (fall)                          | .42                               | .46                             | .50                    | -.037                                       | -.076                    | .257                 | -.061                                       | -.124                    |
| 1st (spring)                      | .43                               | .40                             | .49                    | .031                                        | .062                     | .340                 | .050                                        | .102                     |
| 2nd (spring)                      | .40                               | .42                             | .49                    | -.023                                       | -.047                    | .485                 | -.038                                       | -.077                    |
| 3rd (spring)                      | .41                               | .39                             | .49                    | .013                                        | .027                     | .682                 | .022                                        | .045                     |
| <b>ACBR Feelings about School</b> |                                   |                                 |                        |                                             |                          |                      |                                             |                          |
| K (fall)                          | 1.62                              | 1.60                            | .49                    | .018                                        | .037                     | .584                 | .029                                        | .061                     |
| 1st (spring)                      | 1.53                              | 1.60                            | .50                    | -.072 <sup>*</sup>                          | -.146                    | .032                 | -.119 <sup>*</sup>                          | -.239                    |
| 2nd (spring)                      | 1.51                              | 1.55                            | .50                    | -.039                                       | -.077                    | .266                 | -.063                                       | -.127                    |
| 3rd (spring)                      | 1.47                              | 1.47                            | .50                    | -.002                                       | -.004                    | .952                 | -.003                                       | -.007                    |
|                                   | N = 697                           | N = 379                         |                        |                                             |                          |                      | N = 780 & 296                               |                          |

\*  $p < .05$ , <sup>†</sup>  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: CF Interpersonal Skills, CF Work-Related Skills, and ACBR Peer Relations scored as means of 1–7 point scales. ACBR Behavior Problems scored as 1 for any problem indication, 0 otherwise. ACBR Feelings about School is scored 2 for ratings near the highest possible, 1 for lower ratings.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.

<sup>b</sup> Pooled treatment and control group standard deviations. There were minor variations between the pooled SDs for the ITT and TOT; the mean is presented here but effect sizes were computed on the exact values.

<sup>c</sup> Coefficients for the treatment-control differences from OLS multilevel multiple imputation models with children nested in R-Lists and R-Lists nested in districts. Covariates are age at time of rating, male, Black, Hispanic, non-native English, mother's education, WJ Composite6 pretest, and Quantitative Concepts. The multiplier for ITT coefficients that estimates the TOT coefficients is 1.6396 (see Table 4).

<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.

<sup>e</sup> The 2SLS analysis model yields p-values for statistical significance that are the same for the ITT and TOT coefficients.

istrative matters and more serious infractions such as fighting, bullying, and bringing a weapon to school. Table 13 summarizes the results for the primary analysis with multiple imputation for missing values, analysis with only observed values, and the weighted analysis that generalizes to the statewide population of programs and children. All those analyses found a higher frequency of violations of school rules for VPK participants that was marginally significant ( $p < .10$ ). The weighted analysis also showed a significantly greater frequency of major infractions and all infractions taken together for the VPK participants.

### 5.2.3. Attendance (RCT)

Attendance rates for children in the RCT sample were derived from state data for kindergarten through 3rd grade as the proportion of instructional days for which a child did not have a recorded absence. As shown in Table 14, those rates were universally high, around 95%, and no significant differences were found between the VPK treatment and control groups for any year. The results using only observed data and applying the weighting function to estimate statewide effects are not shown but are substantially similar.

### 5.2.4. Classroom and school behavior effects for different subgroups of children

Moderator analyses were conducted for the classroom and school outcomes to identify any differential effects for demographic subgroups of children. To accomplish this, the analyses of main effects reported above were repeated with the addition

of interaction terms for the ITT treatment condition by subgroup relationships at each wave of data collection.

### 5.2.5. Differential effects on teacher ratings (ISS)

Two patterns of differential VPK effects emerged for teacher ratings when statistical interaction effects were tested for age, gender, race/ethnicity, mother's education, and pretest achievement level in the ISS subsample. In 2nd grade, significant interaction effects showed that male VPK participants received more positive teacher ratings than males in the control group in several domains. The rating scales that showed these differential effects (ITT effect sizes for treatment-control differences for males vs. those for females in parentheses, followed by the corresponding TOT effect sizes) are as follows: Cooper-Farran Interpersonal Skills (.11 vs. -.14; .18 vs. -.23), ACBR Peer Relations (.16 vs. -.08; .25 vs. -.13), ACBR Behavior Problems (-.19 vs. .08; -.32 vs. .14), and ACBR Feelings About School (.09 vs. -.23; .14 vs. -.37). Conversely, female VPK participants received less positive ratings than females in the control group on these scales, as indicated by the second effect size in each pair. In 3rd grade, a similar differential favoring male students appeared for ACBR Peer Relations (.09 vs. -.16; .14 vs. -.26) and Cooper-Farran Work-Related Skills (.11 vs. -.06; .18 vs. -.10).

Teacher ratings also showed differential VPK effects for Black children in contrast to their mainly White and Hispanic counterparts. In 1st and 3rd grade statistically significant interactions revealed higher ratings for Black VPK participants than for Black control children on Cooper-Farran Work-Related Skills (1st grade: .11 vs. -.17; .17 vs. -.28. 3rd grade: .20 vs. -.04; .33 vs. -.06). Con-

**Table 13**  
ITT and TOT impact estimates for disciplinary actions (RCT sample).

| Analysis & outcome  | ITT                               |                                 |                        |                                             |                          |                      | TOT                               |                                 |                                             |                          |
|---------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------------------|--------------------------|
|                     | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |
| Multiple imputation |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| School rules        | .064                              | .049                            | .225                   | <b>.015<sup>†</sup></b>                     | <b>.065</b>              | <b>.098</b>          | .071                              | .043                            | <b>.028<sup>†</sup></b>                     | <b>.123</b>              |
| Major offenses      | .034                              | .034                            | .183                   | –.001                                       | –.003                    | .940                 | .034                              | .035                            | –.001                                       | –.006                    |
| All offenses        | .080                              | .071                            | .261                   | .009                                        | .033                     | .403                 | .084                              | .067                            | .016                                        | .062                     |
|                     | N = 1852                          | N = 1138                        |                        |                                             |                          |                      | N = 1997                          | N = 993                         |                                             |                          |
| Observed values     |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| School rules        | .068                              | .051                            | .231                   | <b>.017<sup>†</sup></b>                     | <b>.072</b>              | <b>.072</b>          | .075                              | .044                            | <b>.031<sup>†</sup></b>                     | <b>.136</b>              |
| Major offenses      | .036                              | .036                            | .189                   | .000                                        | .002                     | .961                 | .036                              | .036                            | .001                                        | .004                     |
| All offenses        | .085                              | .075                            | .269                   | .010                                        | .037                     | .359                 | .089                              | .070                            | .019                                        | .069                     |
|                     | N = 1705                          | N = 1034                        |                        |                                             |                          |                      | N = 1849                          | N = 890                         |                                             |                          |
| Weighted imputation |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| School rules        | .070                              | .050                            | .244                   | <b>.020<sup>†</sup></b>                     | <b>.080</b>              | <b>.053</b>          | .079                              | .042                            | <b>.037<sup>†</sup></b>                     | <b>.152</b>              |
| Major offenses      | .050                              | .021                            | .207                   | <b>.029<sup>*</sup></b>                     | <b>.138</b>              | <b>.001</b>          | .062                              | .008                            | <b>.054<sup>*</sup></b>                     | <b>.263</b>              |
| All offenses        | .101                              | .059                            | .290                   | <b>.042<sup>*</sup></b>                     | <b>.144</b>              | <b>.000</b>          | .119                              | .040                            | <b>.079<sup>*</sup></b>                     | <b>.273</b>              |
|                     | N = 1852                          | N = 1138                        |                        |                                             |                          |                      | N = 1997                          | N = 993                         |                                             |                          |

<sup>†</sup> p < .05, <sup>\*</sup> p < .10 for coefficients; significant coefficients and related estimates are also bolded.

Notes: School rules: violations of school rules or other administrative issues; major offenses: fighting, bullying, weapon in school, and the like; all offenses: total across school rule and major offenses categories. These are coded for whether there is any infraction recorded in school records (1 = yes, 0 = no) cumulatively from K through the 3rd grade year.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.

<sup>b</sup> Pooled treatment and control group standard deviations. There were minor variations between the pooled SDs for the ITT and TOT; the mean is presented here but effect sizes were computed on the exact values.

<sup>c</sup> Coefficients for the treatment-control differences from OLS multilevel models with children nested in R-Lists and R-Lists nested in districts. Covariates are age, male, Black, Hispanic, and non-native English. The multiplier for ITT coefficients that estimates TOT coefficients is 1.8993 with multiple imputation and 1.8765 with observed values.

<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.

<sup>e</sup> The 2SLS analysis model yields p-values for statistical significance that are the same for the ITT and TOT coefficients.

versely, for White and Hispanic children, VPK participants were rated lower on this scale than White and Hispanic control children. A similar relationship favoring Black VPK participants relative to their counterparts in the control group was found in 3rd grade on the Cooper–Farran Interpersonal Skills scale (.24 vs –.01; .39 vs –.02). In 2nd grade, another statistically significant differential indicated that Black VPK participants received higher ratings than Black control group children on the ACBR Feelings About School scale while the contrasting group of White and Hispanic participants received lower ratings than their corresponding controls (.17 vs –.15; .27 vs –.25). There were only a few other statistically significant interaction effects of the many tested, none of which involved as many of the teacher ratings for particular subgroups as those for male and Black children.

#### 5.2.6. Differential effects on disciplinary actions and attendance (RCT)

No statistically significant differential effects for demographic subgroups were found for disciplinary outcomes. For attendance, however, VPK effects were more positive and statistically significant for male and for Black children in the 2nd grade, and for Black children in the 3rd grade. Conversely, female and non-Black VPK participants had lower attendance rates than the corresponding control children. These gender and race/ethnic interactions echo some of those described above for teacher ratings for male and Black children. Whereas, there was no evidence that VPK effects on achievement were stronger for those subgroups, some of their school and classroom behavior past the pre-k year does appear to have been positively affected by their VPK participation.

**Table 14**  
ITT and TOT impact estimates for attendance (RCT sample).

| Analysis & grade year | ITT                               |                                 |                        |                                             |                          |                      | TOT                               |                                 |                                             |                          |
|-----------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------------------|--------------------------|
|                       | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |
| Multiple imputation   |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                     | .947                              | .950                            | .042                   | –.002                                       | –.055                    | .158                 | .946                              | .951                            | –.004                                       | –.104                    |
| 1st                   | .954                              | .955                            | .038                   | .000                                        | –.008                    | .838                 | .954                              | .955                            | –.001                                       | –.015                    |
| 2nd                   | .959                              | .960                            | .036                   | –.002                                       | –.042                    | .286                 | .958                              | .961                            | –.003                                       | –.081                    |
| 3rd                   | .962                              | .963                            | .042                   | –.001                                       | –.032                    | .426                 | .961                              | .964                            | –.003                                       | –.062                    |
|                       | N = 1852                          | N = 1138                        |                        |                                             |                          |                      | N = 1997                          | N = 993                         |                                             |                          |

<sup>†</sup> p < .05, <sup>\*</sup> p < .10 for coefficients; significant coefficients and related estimates are also bolded.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.

<sup>b</sup> Pooled treatment and control group standard deviations. There are minor variations between the pooled SDs for the ITT and TOT; the mean is presented here but effect sizes are computed on the exact values.

<sup>c</sup> Coefficients for the treatment-control differences from OLS multilevel multiple imputation models with children nested in R-Lists and R-Lists nested in districts. Covariates are age, male, Black, Hispanic, and non-native English. The multiplier for ITT coefficients that estimates TOT coefficients is 1.8993 (see Table 4).

<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.

<sup>e</sup> The 2SLS analysis model yields p-values for statistical significance that are the same for the ITT and TOT coefficients.

**Table 15**  
ITT and TOT impact estimates for special education IEPs (RCT sample).

| Outcome, analysis, & grade year                                    | ITT                               |                                 |                        |                                             |                          | TOT                  |                                   |                                 |                                             |                          |
|--------------------------------------------------------------------|-----------------------------------|---------------------------------|------------------------|---------------------------------------------|--------------------------|----------------------|-----------------------------------|---------------------------------|---------------------------------------------|--------------------------|
|                                                                    | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Pooled SD <sup>b</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> | p-value <sup>e</sup> | Treatment group mean <sup>a</sup> | Control group mean <sup>a</sup> | Coefficient <sup>c</sup> for T-C difference | Effect size <sup>d</sup> |
| Any IEP except gifted or physical disability (multiple imputation) |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                                                                  | .129                              | .096                            | .304                   | <b>.034<sup>*</sup></b>                     | .111                     | <b>.004</b>          | .144                              | .080                            | <b>.064<sup>*</sup></b>                     | .211                     |
| 1st                                                                | .138                              | .106                            | .321                   | <b>.031<sup>*</sup></b>                     | .097                     | <b>.013</b>          | .152                              | .092                            | <b>.059<sup>*</sup></b>                     | .185                     |
| 2nd                                                                | .135                              | .113                            | .331                   | <b>.022<sup>†</sup></b>                     | .068                     | <b>.088</b>          | .145                              | .103                            | <b>.043<sup>†</sup></b>                     | .128                     |
| 3rd                                                                | .133                              | .106                            | .331                   | <b>.027<sup>*</sup></b>                     | .082                     | <b>.039</b>          | .146                              | .094                            | <b>.052<sup>*</sup></b>                     | .156                     |
|                                                                    | N = 1852                          | N = 1138                        |                        |                                             |                          |                      | N = 1997                          | N = 993                         |                                             |                          |
| Any IEP except gifted or physical disability (observed values)     |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                                                                  | .130                              | .096                            | .305                   | <b>.034<sup>*</sup></b>                     | .111                     | <b>.004</b>          | .145                              | .081                            | <b>.065<sup>*</sup></b>                     | .212                     |
| 1st                                                                | .138                              | .107                            | .322                   | <b>.031<sup>*</sup></b>                     | .097                     | <b>.013</b>          | .153                              | .093                            | <b>.060<sup>*</sup></b>                     | .186                     |
| 2nd                                                                | .139                              | .116                            | .330                   | <b>.023<sup>†</sup></b>                     | .070                     | <b>.078</b>          | .150                              | .106                            | <b>.044<sup>†</sup></b>                     | .134                     |
| 3rd                                                                | .137                              | .111                            | .331                   | <b>.026<sup>†</sup></b>                     | .079                     | <b>.051</b>          | .149                              | .099                            | <b>.049<sup>†</sup></b>                     | .150                     |
| Intellectually gifted (observed values)                            |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                                                                  | .002                              | .004                            | .049                   | -.002                                       | -.047                    | .232                 | .001                              | .005                            | -.004                                       | -.090                    |
| 1st                                                                | .002                              | .009                            | .072                   | -.007 <sup>*</sup>                          | -.091                    | <b>.022</b>          | -.001                             | .012                            | -.012 <sup>*</sup>                          | -.173                    |
| 2nd                                                                | .005                              | .010                            | .092                   | -.005                                       | -.054                    | .177                 | .003                              | .012                            | -.009                                       | -.103                    |
| 3rd                                                                | .008                              | .014                            | .109                   | -.006                                       | -.054                    | .180                 | .005                              | .017                            | -.011                                       | -.103                    |
| Speech/language impairment (observed values)                       |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                                                                  | .123                              | .087                            | .295                   | <b>.036<sup>*</sup></b>                     | .122                     | <b>.001</b>          | .139                              | .071                            | <b>.068<sup>*</sup></b>                     | .231                     |
| 1st                                                                | .121                              | .094                            | .304                   | <b>.026<sup>*</sup></b>                     | .086                     | <b>.026</b>          | .132                              | .082                            | <b>.050<sup>*</sup></b>                     | .165                     |
| 2nd                                                                | .115                              | .101                            | .298                   | .014                                        | .048                     | .230                 | .121                              | .094                            | .027                                        | .091                     |
| 3rd                                                                | .098                              | .092                            | .281                   | .007                                        | .024                     | .554                 | .101                              | .089                            | .013                                        | .045                     |
| Specific learning & intellectual disabilities (observed values)    |                                   |                                 |                        |                                             |                          |                      |                                   |                                 |                                             |                          |
| K                                                                  | .015                              | .014                            | .116                   | .001                                        | .000                     | .754                 | .016                              | .013                            | .003                                        | .000                     |
| 1st                                                                | .029                              | .017                            | .148                   | <b>.013<sup>*</sup></b>                     | .084                     | <b>.033</b>          | .035                              | .011                            | <b>.024<sup>*</sup></b>                     | .160                     |
| 2nd                                                                | .048                              | .034                            | .196                   | <b>.014<sup>†</sup></b>                     | .073                     | <b>.068</b>          | .054                              | .027                            | <b>.027<sup>†</sup></b>                     | .139                     |
| 3rd                                                                | .068                              | .042                            | .228                   | <b>.026<sup>*</sup></b>                     | .113                     | <b>.006</b>          | .079                              | .030                            | <b>.049<sup>*</sup></b>                     | .214                     |
|                                                                    | N = 1745–1825                     | N = 1056–1121                   |                        |                                             |                          |                      | N = 1881–1980                     | N = 920–965                     |                                             |                          |

<sup>\*</sup>  $p < .05$ , <sup>†</sup>  $p < .10$  for coefficients; significant coefficients and related estimates are also bolded.

Notes: IEP = Individualized Educational Program as the formal special education designation.

<sup>a</sup> Covariate-adjusted means generated by the multilevel analysis models with covariates set at the grand means for the sample.

<sup>b</sup> Pooled treatment and control group standard deviations. There are minor variations between the pooled SDs for the ITT and TOT; the mean is presented here but effect sizes are computed on the exact values.

<sup>c</sup> Coefficients for the treatment-control differences from OLS multilevel models with children nested in R-Lists and R-Lists nested in districts. Covariates are age, male, Black, Hispanic, and non-native English. The multiplier for ITT coefficients that estimates TOT coefficients is 1.8993 with multiple imputation and varies from 1.8950 to 1.9055 with observed values.

<sup>d</sup> Effect size: coefficient for the treatment-control difference divided by the pooled standard deviation.

<sup>e</sup> The 2SLS analysis model yields p-values for the statistical significance that are the same for the ITT and TOT coefficients.

### 5.3. Special education (RCT)

Special education services defined by an Individualized Education Program (IEP) are often of interest as pre-k outcomes. However, for pre-k programs like VPK that are administered by the department of education, located mainly in schools, and staffed by licensed teachers, it is not entirely clear how to interpret special education placement rates. In those circumstances, pre-k students are screened for special needs and special education services may be provided as part of the pre-k program, an opportunity not generally available to the control children who are not in VPK classrooms. Once begun, special education services typically continue for some years, ending only when a formal determination is made that they are no longer needed.

For VPK participants in the RCT sample, 9.4% had at least one IEP recorded in the state education database during the pre-k year in a category other than physical disabilities (0.2% of the children) and intellectually gifted (no children). Of these children, 93% had an IEP for speech or language impairment and 10% had an IEP for an intellectual disability (some had more than one IEP). For nearly all of the children given an IEP in pre-k, it was continued into the kindergarten year (93%) and, in most cases, for some time beyond kindergarten (80%).

This early identification of VPK participants for special education services, and continuation of that status into later grades, creates an asymmetry that confounds any attempt to interpret special education differences between VPK treatment and control

groups in later grades. Such differences might represent the impact of pre-k, including early provision of special education services, on later need for such services. But, they may also represent carry-over of the special education designations from the pre-k year for VPK participants with equally needy control children not receiving such designations until kindergarten at the earliest. These different effects cannot be disentangled in the data available for this study, but given the rate of special education designations in pre-k and the high proportion carried forward into the later grades, there is little basis to doubt that carryover plays a role.

With this ambiguity about how to interpret the results in mind, Table 15 reports the proportions of VPK treatment and control children with recorded IEPs from K to the 3rd grade year. The first two panels report IEPs other than those relating to physical disabilities or giftedness for the primary analysis with multiple imputation and the parallel analysis with only observed values. The remaining panels break out the different special education categories for analysis with observed values, omitting physical disabilities.

Table 15 shows that a higher proportion of VPK children had IEPs than control children in every year with differences that are often statistically significant. The one exception is the intellectually gifted category, where the proportions are low but favor the control groups. The results for speech or language impairments are especially noteworthy. This is the overwhelmingly dominant category for the early IEP designations for VPK participants and continues to be so through the 3rd grade year. The treatment-control differences shrink somewhat over those years as a result of small declining

proportions in the VPK treatment groups and relatively constant proportions in the control groups. If continued into later years that trend could eventually yield a more favorable outcome for VPK. In contrast, the category of specific learning and intellectual disabilities, albeit small, shows an increasing trend for both groups that increases more sharply for VPK participants.

Differential VPK effects on special education status were explored for the demographic subgroups in the RCT sample. Interactions between the ITT treatment condition and age, gender, Black, Hispanic, and whether a non-native English speaker were tested for the overall outcome of any IEP other than gifted or physical disabilities at each K–3rd grade year. A weak pattern of mostly  $p < .10$  interaction effects emerged for males and Black children. In the early grades (K and 1st), VPK participation was associated with more IEPs for males relative to males in the control group; conversely female participants had fewer IEPs relative to females in the control group. But those difference diminished in 2nd and 3rd grade. For Black children, VPK participants had fewer IEPs from 1st through 3rd grade than their counterparts in the control group.

## 6. Discussion

The results of this study of the Tennessee Voluntary Pre-K program have addressed our initial research questions while raising still others. The first of those research questions is about the effects of VPK participation on literacy, language, and math skills, and classroom behavior, by kindergarten entry. The second question is whether any advantage of VPK participation carries forward to enhance performance in later grades.

For the ISS subsample we found that children who participated in VPK experienced considerably greater gains in literacy, language, and math skills during the pre-k year than the control children, and that this difference was recognized as greater preparedness for grade level work by kindergarten teachers at the beginning of the following year.

However, those positive VPK effects on achievement largely disappeared by the end of kindergarten with children in the control group catching up to the VPK participants. Moreover, by second grade the performance of the control children surpassed that of the VPK participants on some achievement measures. This pattern was echoed on the 3rd grade state achievement tests for the full RCT sample. VPK participants scored lower on the reading, math, and science tests than the control children with differences that were statistically significant for math and science.

On other outcomes, including teacher ratings of classroom behavior, retention in grade, disciplinary infractions, and attendance, there were generally few overall differences between VPK participants and control children across the years, although school records did show somewhat more disciplinary actions for the violation of school rules for the VPK participants. For special education designations, the differences were not so modest – VPK participants had distinctly higher rates than control children that extended through the 3rd grade year. However, VPK participation allowed children deemed in need of such services to be identified during the pre-k year and, unlike the control children, to already have special education designations when they entered kindergarten. Those early designations persisted through later school years.

The third research question is whether some demographic subgroups of children benefited more from VPK participation than others. Considering the number of combinations of subgroups, outcomes, and school years involved in examining this issue, relatively few differential pre-k effects were found. Children for whom English was not their native language and the overlapping group with low pretest achievement scores experienced the greatest gains on the achievement measures during the pre-k year, but that

early advantage did not persist into the later grades. For school and classroom behavior, there was an intriguing pattern of differential pre-k effects on some measures for male and Black children. In the years after kindergarten these children received higher teacher ratings than their control counterparts on a mix of outcomes related to peer interactions, appropriate engagement in classroom activities, and feelings about school, and their school records showed somewhat higher attendance rates.

The generality of the overall findings from the samples of programs and children that provided the data for this study was affirmed in several ways. Pre-k effect estimates for the consented ISS subsample showed no pattern of statistically significant differences from estimates for the remaining unconsented children in the full RCT sample on the outcomes available for both groups. These results provide some assurance that the consent procedure did not select a subgroup of children for whom pre-k effects on outcomes only available for them are unrepresentative of the effects that would be expected for the full RCT sample.

Additionally, the fortuitous availability of a probability sample of VPK programs and participants statewide made it possible to extrapolate the pre-k effects found with the RCT and ISS samples to the statewide VPK population. Though not definitive, this procedure gave no indication that the overall findings of this study would not generalize to the statewide population of VPK programs and the children who participate in them.

### 6.1. Issues raised by the VPK findings

#### 6.1.1. Program quality

The unfavorable outcomes of the Tennessee program might be explained if it is of distinctively poor quality and, as such, unrepresentative of other state programs that might be assumed to be more effective (Bustamante, Hirsh-Pasek, Vandell, & Golinkoff, 2017). Whether state pre-k programs generally are of high or low quality is an open question, but we know of no evidence that demonstrates that VPK is notably below average. The only attempt to compare quality across states is in the NIEER reports that identify the 10 standards NIEER advocates and which are met by each state program. By those criteria, Tennessee has one of the better programs, meeting 9 of those standards.

The results of classroom observations provide another perspective. Until recently, the most commonly used quality measure for early childhood classrooms has been the *Early Childhood Environmental Rating System-Revised (ECERS-R)*; Harms, Clifford, & Cryer, 1998). ECERS-R data were collected by trained observers during daylong mid-year visits to the classrooms of the statewide representative sample of VPK programs drawn for our separate RDD study. The average total ECERS-R score for VPK classrooms was 4.15. Scores that have been reported for other state pre-k programs show variability but by our calculations average 4.35 (Bassok, Fitzpatrick, Greenberg, & Loeb, 2016; Coley, Votruba-Drzal, Collins, & Cook, 2016; Keys et al., 2012; Weiland, Ulvestad, Sachs, & Yoshikawa, 2013). Neither that average nor that for VPK crosses the 4.5 quality threshold espoused by Burchinal et al. (2016), but this comparison does not indicate distinctively lower quality for VPK classrooms.

The search for an evidence-based definition of high quality pre-k that would better predict both short and long-term positive effects is intensifying (see e.g., Sharpe, Davis, & Howard, 2017). However, recent empirical approaches have not produced definitive results. None of the widely used classroom assessments has been linked strongly to child outcomes (Burchinal, 2017; Mashburn, 2016). Nor have teacher qualifications been found to be consistently associated with better child outcomes (e.g., Lin & Magnuson, 2018). Walters' (2015) analysis of the relationship between characteristics of Head Start centers and child outcomes using data from the Head Start Impact study led him to conclude that "important

drivers of successful preschool programs have yet to be identified” (Walters, 2015, p. 99). Recent work by Farran and colleagues has highlighted promising features of classroom interactions predictive of child growth (Farran, Meador, Christopher, Nesbitt, & Bilbrey, 2017), but data on those interactions are expensive to collect and are not included in any current widely used classroom assessments.

The upshot of this fluid research enterprise is that we do not yet have a basis for improving state-funded pre-k programs that is grounded in empirical evidence relating program characteristics to child outcomes. The most direct quality index we have may be the nature and magnitude of the impact a pre-k program actually has on outcomes that are consequential for participating children. This perspective is clouded by uncertainty about which outcomes in fact are most consequential (Bailey et al., 2017). The study reported here demonstrates that VPK has substantial impact on a number of widely used outcome measures during the pre-k year, but longer-term effects were largely null or even negative. Judged by effects on child outcomes, these findings present a mixed picture. Whether other state programs have larger or longer lasting effects is difficult to assess in light of the limited and methodologically problematic research available on other programs described in the introduction to this paper. But if further research demonstrates that they do, it is imperative that researchers also provide detailed information about the practices that led to those outcomes.

#### 6.1.2. *The counterfactual*

All evaluations of the effects of programs and policies must assess them against a counterfactual condition, meaning in the case of pre-k, what children would experience if they were not in a pre-k program. The small experimental programs of the late 1950s through the early 1970s that have such a high profile in discussions of the benefits expected from public pre-k served primarily poor African American children (Darlington, Royce, Snipper, Murray, & Lazar, 1980) during an era of segregation and immense poverty (Jencks, 1972).

Young children today are different. Between 1998 and 2010 disparities in school readiness between children from lower and higher income families narrowed despite sharp increases in the income gap and segregation in housing and schools (Reardon & Portilla, 2016). Reasons for this surprising finding have to be speculative, but Bassok, Finch, Lee, Reardon, and Waldfogel (2016) document changes in parenting practices that may be relevant. Comparing 1998–2010, they found that parents increasingly structured their children's experiences to focus on learning opportunities such as those that involve computer access, more books in the home, and enrichment activities organized specifically for children. It is especially notable that the socioeconomic gap in these practices narrowed over this period with low-income parents showing stronger increases in their investments in their children than more affluent parents.

The greater contrast between the earlier counterfactual for preschool and the contemporary counterfactual is evident in the effect sizes found in the Perry Preschool and Abecedarian studies, which are three times larger than those found for programs evaluated in the past 15 years (Duncan & Magnuson, 2013). With smaller families (Angier, 2013), exposure to *Sesame Street* (Kearney & Levine, 2015), and access to the Internet even for young, poor children (Rideout & Katz, 2016), early childhood experiences are very different in the 21st century. Contemporary pre-k programs that, as a matter of course, only provide a more concentrated version of what children would otherwise experience are unlikely to lead to the strong effects seen 50 years ago.

#### 6.1.3. *Public school involvement in pre-kindergarten programs*

The issue of the appropriate vision for early childhood education raises the perennial question of which agency should administer

pre-k programs. Departments of health and human services and education have been the primary contenders. As states and the federal government increase funding for pre-k, education is becoming the lead agency and pre-k classrooms are more often located in public elementary schools (94% in Tennessee) than in community-based early childhood centers.

One consequence of this trend is reflected in our finding that more VPK children than control children were identified for special education in contrast to what earlier studies led the field to expect (an expectation central to return-on-investment strategies like Pay for Success; <http://www.payforsuccess.org/learn/issues#early-childhood-education>). Children who enter the public school system a year before kindergarten not only have a greater chance of being identified for special services prior to kindergarten entry, but their varied developmental progress at that younger age may cause more of them to be identified than would be the case a year later. It is notable in this regard that the overwhelming majority of special education designations in VPK were for speech and language issues, a domain in which development is especially varied for 4-year olds. Once a child has received a special education designation, it is difficult to lose it. While early special education intervention may be a good thing in the long run for the children involved, the expectation that school-based pre-k will lead to rather immediate reductions in special education rates may be unrealistic.

Questions about the consequences of an increasing public school dominance of pre-k programs have existed for years (e.g., Rescorla, Hyson, & Hirsh-Pasek, 1991). Some scholars have argued that a focus on social-emotional development and self-regulation skills is especially important for children of preschool age as a foundation for later academic success (e.g., Bierman, Greenberg, & Abenavoli, 2016). Public schools, however, have increasingly prioritized content and skills related to academic achievement in recent decades with effects that have crept into pre-k and are evident in kindergarten (Bassok, Latham, & Rorem, 2016; Brown, 2009). McCabe and Sipple (2011) characterized the relationship between early childhood education and the public schools as “colliding worlds,” and cautioned that the gathering momentum of public school involvement in pre-k education was occurring without a full appreciation of the complexity of providing quality education for young children. If public pre-k is to be offered through the public school system, new fundamental empirical work may be required to identify the appropriate goals and associated instructional practices most important for young children's development in that environment.

#### 6.1.4. *Alignment with K-3*

Finally, our findings highlight the importance of the K-3 experience. One possible explanation for why the gains children made in VPK did not continue to advantage them afterwards is failure of kindergarten and later teachers to build on the skills those children bring from their pre-k experience (Stipek, Franke, Clements, Farran, & Coburn, 2017). For instance, teachers may teach to the children who need it the most while learning for more advanced children languishes. While this is an empirical question we do not yet have sufficient data to address, explorations of kindergarten teaching suggest that many teachers may be out of touch with the skills children bring to their classrooms. Claessens, Engel, and Curran (2014), for example, found that, rather than focusing on children with the greatest need, kindergarten teachers provided relatively undifferentiated instruction that covered skills many children had already mastered.

Children in VPK classrooms and their counterparts in the control group were eligible for the program because their families were impoverished. VPK participants showed meaningful achievement gains during the pre-k year relative to control children, but after pre-k most then attended high poverty and generally low performing schools. Of concern from our findings is that the achievement

of both the VPK and control children began to decline in 2nd and 3rd grade relative to the national norms for the Woodcock–Johnson tests we used. While Reardon (2011) has rightfully called attention to the widening achievement gap between the rich and the poor, it is important to determine when that actually begins. Our data suggest that children were responsive to their first introduction to formal schooling, whether in pre-k or kindergarten, no matter what their skills upon entry. But their 1st through 3rd grade instructional experiences did not maintain their momentum. It is doubtful that anything done in pre-k can have sustained effects if the gains made there are not supported and extended in the schooling that follows.

## 7. Conclusion

We are mindful of the limitations of any one study, no matter how well done, and the need for a robust body of research before firm conclusions are drawn. Nonetheless, the inauspicious findings of the current study offer a cautionary tale about expecting too much from state pre-k programs. The fact that the Head Start Impact study – the only other randomized study of a contemporary publicly funded pre-k program – also found few positive effects after the pre-k year adds further cautions (Puma et al., 2012). State-funded pre-k is a popular idea, but for the sake of the children and the promise of pre-k, credible evidence that a rather typical state pre-k program is not accomplishing its goals should provoke some reassessment. It is apparent that the phrase “high-quality pre-k” does not convey enough about what the critical elements of a program should be. Now is the time to pay careful attention to whether the country’s youngest and most vulnerable children are well served in the pre-k classroom environments currently operated and to explore innovations with the potential to serve them better.

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