

## Technical Appendix

### The Demand for Teacher Characteristics in the Market for Child Care: Evidence from a Field Experiment

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#### Abstract

This online technical appendix provides additional information regarding the design and implementation of the resume audit study intended to examine teacher hiring practices in the center-based child care market. This document begins by summarizing the timeline and data collected in the study. The second section describes the procedures for generating the resumes; this includes summarizing the sections on each resume, describing random assignment of the resume characteristics, and detailing the steps involved in readying the resumes for submission. The third section summarizes the process of generating the set of characteristics for each section of the resume. In particular, we describe how we selected the bank of names, schools, and mailing addresses to assign to resumes; we additionally discuss the processes used in constructing personal statements, work histories, and skill sets. The fourth section of the paper details how resumes were handled by the Research Assistants; the fifth section discusses how provider responses to resumes were recorded. Finally, the last section of the appendix specifies data management procedures for the study.

## **I. Project Introduction and Timeline**

Between May 2016 and January 2017, we conducted fieldwork for a resume audit study designed to examine teacher hiring practices in the center-based child care market. Specifically, we submitted approximately 11,000 resumes on behalf of fictitious individuals in response to real child care teacher job advertisements. More than 2,700 assistant and lead teacher positions were identified across 14 large U.S. cities using an online job board. This paper serves as a Technical Appendix for the main papers generated as a result of our data collection, offering greater detail with regard to the following: the process of selecting resume characteristics (e.g., work history, educational attainment, and other skills and traits); the mechanical steps involved in generating and submitting resumes; and the protocols and checks for recording provider responses and managing data.

The planning and design of our resume audit study started well before the application phase. The Summer and Fall of 2014 were spent locating previous studies to understand how they were designed and implemented; this included identifying the software used for resume generation, mechanisms for identifying jobs, and procedures for applying to jobs and recording employer various employer responses. During the Spring of 2015, online job boards were identified and examined for relevance in locating and applying for center-based child care jobs across a variety of large U.S. cities. In addition, resume randomizer software was selected for use in this study, and real teacher resumes and center-based child care job advertisements were located and downloaded to serve as guides for generating the fictitious resumes. Between late Spring 2015 and early Spring 2016, resume sections were determined and the characteristics/content to fill those sections were selected. By March 2016, the content of the resumes was finalized and formatting decisions were underway. In March and April 2016, the research team conducted a pilot study by locating and applying for assistant and lead teacher positions in cities adjacent to the study cities. Finally, between May 2016 and January 2017 the official data collection phase of the study was completed. In total, our database includes 10,986 resumes submitted in response to 2,772 child care teacher job advertisements.

The remainder of this technical appendix will be dedicated to outlining the steps taken in completing this field experiment. Section II describes how the fictitious resumes were generated and the probabilities assigned. Section III covers the selection process for the resume characteristics. Section IV details the protocol for job identification and resume submission; Section V discusses recording provider responses. Finally, Section VI documents the data management procedures.

## **II. Resume Generation**

Resumes for this study were constructed using Lahey and Beasley's (2009) Resume Randomizer software. This software was created for the purpose of computerizing resume generation in large-scale resume audit studies. The Resume Randomizer software generates resumes by randomly assigning characteristics drawn from a user-created bank of characteristics. The template is extremely flexible and allows for the creation of large batches of resumes, with any number of resumes included within a batch, and as many sections (or "leafs") within a resume as

desired, with each leaf containing any number of individual characteristics to be randomly assigned. For example, the templates created for this study had 19 primary leaves; some of the leaves had just a single option, or characteristic, for the randomizer software to draw from, while others had as many as 351 individual characteristics.

Each leaf within a resume template should be thought of as a section on the resume. The templates created for this study contained the following main treatment leaves:

1. Applicant name: randomly assigned each resume one out of fifteen possible applicant names, drawn without replacement;
2. Mailing address: assigned each resume one of five city-specific residential addresses, drawn without replacement;
3. Email address: assigned each resume one of fifteen email addresses, which is dependent on the applicant name assigned in Leaf 1;
4. Personal statement: assigned each resume one of four one-sentence personal statements, drawn without replacement;
5. Employment history: assigned each resume in the batch one of six employment histories, drawn without replacement;
6. High school: assigned each resume in the batch one of five city-specific high schools, drawn without replacement;
7. Additional education: assigned each resume one of three levels of additional education;
  - a. No additional education: resumes assigned to this level do not have any additional education information listed after the high school name;
  - b. Community college: resumes assigned to this level were then randomly assigned one community college from a list of four to eight possible schools<sup>1</sup>, with replacement, and one of three majors, drawn with replacement;
  - c. University: resumes assigned to this level were then randomly assigned an in-state or out-of-state four-year college or university, drawn with replacement;
    - i. In-state: resumes assigned an in-state university were then randomly assigned one university from a list of three to 22 possible schools<sup>2</sup>, with replacement, and one of three majors, drawn with replacement;
    - ii. Out-of-state: resumes assigned an out-of-state university were then randomly assigned one university from a list of 98 to 117 possible schools<sup>3</sup>, with replacement, and one of three majors, drawn with replacement;
8. GPA: assigned each resume one of six GPA-formatting combinations, drawn without replacement;
9. Skills: assigned each resume one of four skill bundles, drawn without replacement

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<sup>1</sup> The bank of community colleges differed by study city; on average, each study city had five community college, while the range was four to eight.

<sup>2</sup> The bank of in-state universities differed by study city; on average, each study city had eight in-state universities, while the range was three to 22.

<sup>3</sup> The bank of out-of-state universities differed by study city; on average, each study city had 112 out-of-state universities, while the range was 98 to 117.

10. Transportation: assigned each resume one of four transportation statements—two were blank— drawn without replacement

Random assignment of characteristics can be at the batch<sup>4</sup>, resume<sup>5</sup>, or section level<sup>6</sup>, with or without replacement, and contingent on or independent of options selected in previous leafs. Each city in this study had a unique template from which resumes were created; while it was the case that each city template contained identical sections (e.g., mailing address), the bank of characteristics within a section was often city-dependent (e.g., mailing addresses located in that city). The templates for this study also incorporated randomly assigned HTML/CSS markup, which allowed each resume to take on a different appearance from the others in the same batch, specifically in terms of font, page alignment, section spacing, and other formatting considerations. Templates were constructed and checked for proper coding using an online webpage interface provided with the Resume Randomizer software. Although templates must be saved as .rtf files, they can be modified using Notepad or a similar program. See Table 1 for the assignment probabilities for each resume characteristic.

For each resume created, the Resume Randomizer generated four documents: a .doc file with the resume, and .sav, .txt, and .csv files containing numerical representations of the assigned resume characteristics. The .doc file was named by the Resume Randomizer software using the following convention: “TemplateName\_Batch\_ResumeNumberofTotalResumes.doc”. For example, in Atlanta the first resume created in the first batch was named “Atlanta\_1\_1of4.doc”; these filenames were unique identifiers for each resume in each city-month. The last three documents were automatically generated and allow us to combine the individual numerical representations of assigned characteristics from all resumes within a city into one file. For this study, we combined the .csv files into .xlsx files, such that the first few columns (variables) in the sheet summarize the features of the resumes created for each city. For instance, column 5 contained numerical representations of the applicant name and there were fifteen possible choices; hence, each cell in column 5 of the .xlsx files contained a value from “1” to “15”, signifying which one of the fifteen names were assigned to that resume.

To ensure that each resume was no longer than one page, a macro was constructed in Visual Basic to open each resume .doc file, change the top and bottom margins of the page to fit all resume information on one page, then resave the .doc with the updated formatting. Next, all resume .doc files were run through a batch converter program to transform them into .pdf files to be submitted by the Research Assistants. Resumes were created once per month approximately one week prior to the start of the next study month, and uploaded to a cloud-based file sharing site for the Research Assistants to access. Resumes were generated in batches of four. Resumes were then moved into city-month specific folders for processing by the Research Assistants. Research Assistants were only

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<sup>4</sup> E.g. applicant name

<sup>5</sup> E.g. university

<sup>6</sup> E.g. formatting

provided with .pdf files to prevent accidental changes which may have occurred between the time they received it and when they submitted it to a child care provider.

### III. Resume Characteristics

One of our first tasks was to determine which cities would be included in the study. In line with other resume audit studies, we used U.S. Census data to select cities with the largest populations, as well as online job advertisement sites (e.g., Monster and Indeed) to determine which cities contained the largest number of child care job openings. An additional criterion was that cities had to reside in states with diverse early childhood education regulatory environments. We initially started with twenty-one cities based on population and geographic location alone; next, we tracked the number of child care teacher positions posted in those cities over 60 days and settled on fourteen cities to include in the study: Atlanta, GA; Boston, MA; Chicago, IL; Dallas, TX; District of Columbia; Houston, TX; Los Angeles, CA; Minneapolis, MN; New York City, NY; Philadelphia, PA; Phoenix, AZ; San Diego, CA; San Francisco, CA; and Seattle, WA.

In line with previous resume audit studies, this study used the applicant's name as an indicator of race/ethnicity. Given that the preponderance of child care teachers are women, we created applicant names that were explicitly female-sounding. The most popular surnames by race/ethnicity were collected from the 2000 U.S. Census for the following categories<sup>7</sup>: non-Hispanic White only, non-Hispanic Black or African-American only, and Hispanic or Latino origin. The most popular forenames listed by race/ethnicity were not reported by the U.S. Census so we relied on multiple sources, including the New York City Health Department's Bureau of Vital Statistics birth records from 2014, Levitt and Dubner's (2005) list as published in *Freakonomics*, Babycenter.com's 2016 list of popular names from Virginia, Colorado, Arkansas, Texas, and New York City, and the list used by Bertrand and Mullainathan (2004). Assignment to each resume in a batch was performed without replacement and with equal probability. See Table 2 for a complete list of race-/ethnicity-specific names used in the resumes.

Residential addresses were identified in a two-step process. In the first step, all zip codes within each of the study cities were identified using 2012 United States Postal Service (USPS) data and were merged with median household income and race/ethnicity data from the 2009-2013 American Community Survey's (ACS) 5-year Estimates. One zip code in each study city was identified that met the following criteria: median household income at or close to the aggregate median income across all zip codes in the city and geographic proximity to the city-center. For the second step, we purchased actual addresses from a commercial vendor that maintains an extensive, up-to-date database of residential mailing addresses used primarily for targeted advertising campaigns. We additionally confirmed that each address provided was a residential address by checking with the USPS that it was tagged as "non-commercial" and that online reverse address search tools identified it as having a residential occupant. The residential listings used in this study

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<sup>7</sup> U.S. Census Bureau, 2000 Census of Population and Housing, <https://www.census.gov/main/www/cen2000.html>

included both houses and apartments. A single address in Seattle did not confirm as residential occupancy, but an alternative residential address immediately adjacent to the original address was confirmed and used as a replacement. Mailing addresses were assigned to each resume within a batch without replacement and with equal probability. See Table 3 for a complete list of addresses used in the city-specific resumes.

Email addresses were created to match the forename/surname combinations generated for use on the resumes. Fifteen email accounts were created for the unique names, one for each name used in the study. Email addresses were constructed to have the applicant name embedded in the address in order to standardize applicant characteristics across the resumes. Each email account was assigned subfolders matching the fourteen study cities. Subfolders were created to distinguish between provider responses according to the city in which the provider was located. See Table 2 for a complete list of email addresses used in the resumes.

A personal statement was included on every resume. The personal statements were developed in a two-step process. First, we captured Goldberg's (1990, 1992) list of personality-related terms that map onto the "Big-Five" personality taxonomy. Table 4 shows the five factors and the full set of trait adjectives identified by Goldberg. Second, we identified trait adjectives commonly used by child care teachers looking for employment. In order to do this, we used webscraping software to capture personal statements from 300 child care teacher resumes posted on large U.S. job boards and performed a text analysis, using two different software programs, that enumerated and ranked the frequency with which terms and phrases were used. See Table 5 for a ranked list of trait adjectives used in child care teacher resumes and the frequency counts for each. From this ranking we selected trait adjectives that were among the most commonly used by teachers to describe themselves. Thus embedded in each statement were two adjectives that are marker items for four of the Big Five personality domains: openness to experience, conscientiousness, extraversion, and agreeableness. The wording across all four personal statements was similar, with the exception of the trait adjectives. Assignment was done without replacement and with equal probability. See Table 6 for a complete list of personal statements used in the resumes.

Work history profiles were created to model two factors: quantity and quality of previous work experience. In total, six work experience profiles were created: one included no prior experience working in child care settings, two had six months of child care work experience, and three had two years of child care work experience. The six-month treatment was chosen because it meets or falls below the minimum lead teacher work experience requirement established in many of the states in which the providers are located. The two-year treatment was selected because it generally exceeds (sometimes considerably) the minimum requirement established by most states. Indeed, the modal work experience requirement for child care providers in our database is 12 months, which seems consistent with our lower- and upper-bound choices.

Of the five work experience profiles with child care experience, one contained a “lower-reputation” child care setting (YMCA), two contained “average-reputation” child care settings (Childtime Learning Center and KinderCare), and two contained “high-reputation” child care settings (The Goddard School and Primrose School).<sup>8</sup> Initially, we intended to determine the quality of providers using Quality Rating and Improvement System (QRIS) ratings for the firms selected. However, most state’s QRIS are voluntary systems; because of this, it was not necessarily the case that providers participated in the QRIS (meaning that we did not have ratings to use in determining quality). We ultimately decided to use providers’ market prices as the basis for distinguishing between quality and reputational differences between the child care centers assigned to our resumes. Monthly prices were collected from one of each of the four providers located within 25 miles of each study city between January and March 2017. Provider pricing data were collected primarily over the phone by contacting providers located within each study city. In certain cases, providers were unwilling to provide pricing information. In order to collect pricing data for those providers, online local parent chat boards were searched for self-reports of monthly costs. These self-reports were checked against other sources (using local parent chat boards and informal networks of academic mothers) to verify pricing. See Table 7 for monthly provider prices by age group in the study cities.

Each work experience profile spanned, in total, approximately five years at three positions<sup>9</sup>: two retail and food service sector positions, and one child care provider (except those with no child care experience who have an additional retail position). All employers were national firms and present in the cities where the resumes were being submitted; this ensured that there would be name recognition by the child care providers who received the resumes. In order to increase the realism of the study, we again drew on content from real child care teacher resumes to select firm names, job titles, and work history descriptions: details of each position listed in the work experience profile were modeled after position details found on real child care teacher resumes posted on the job boards. However, in order to standardize the work histories for the purposes of a resume audit study, we created the profiles using similar language, order of descriptive bullet points, and order of firm type. No position listed on any of the work experience profiles was held longer than two years. In addition, each work experience profile lists the child care provider job title as “Assistant Teacher” or “Teacher’s Assistant” to signal that the employment was entry-level. Assignment of work experience profiles was done without replacement and with equal probability. The complete list of experience profiles can be found in Table 8.

Resumes were assigned one of three levels of educational attainment: high school diploma, an associate’s degree, or a bachelor’s degree. To signal that our applicants were approximately the same age, every resume reported a high school degree obtained in 2012. A complete list of all high schools located in each of the study cities was collected from the 2012-2013 National Center for Education Statistics’ (NCES) Elementary and Secondary Information System (ELSi). School-level

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<sup>8</sup> Forthcoming work offers an in-depth discussion of our identification and classification of these child care providers, as well as analyses of provider preferences.

<sup>9</sup> Starting months varied such that a resume had between 58 and 61 months of work experience, and the first job listed on the resume began while the applicant was in high school.

data from NCES included the racial composition of the student body, school type (e.g. public, charter, etc.), school address (including zip code), and the total number of students attending the school. These data were merged with zip code level median household income data from the 2009-2013 (ACS) 5-year estimates. High schools were selected for inclusion in the city-specific templates if they met the following criteria: the school was listed as a regular public school (i.e., not a charter, technical, or vocational school), the median household income for the school's zip code was at or near the median income for the city as a whole, the school had achieved a non-trivial amount of racial diversity as determined by the ratio of minority students to non-minority students, and the school had a large student body (defined as containing 1,000 or more students). Five high schools for each city were selected; assignment was performed without replacement and with equal probability. See Table 9 for the complete list of the selected high schools within each city.

Two-thirds of all resumes were assigned a post-secondary degree in addition to a high school degree. One-third of resumes were assigned an associate's degree from a community college, and one-third were assigned a bachelor's degree from a four-year college or university. Drawing on the NSECE, we identified broad fields of study common to child care teachers. We found early childhood education (ECE) to be the predominant academic major among assistant and lead teachers, but our analysis of other data revealed that nursing and business administration majors comprised a sizable fraction of degrees held in non-education fields. Indeed, our analysis of over 300 real resumes posted by individuals seeking ECE employment (or with previous ECE work experience) revealed that a nursing degree was the most common non-education major, followed by business-related degrees. Majors were also assigned with equal probability, where one-third received an ECE degree (half associate's and half bachelor's), one-third received a nursing degree (half associate's and half bachelor's), and one-third received a business administration degree (half associate's and half bachelor's). See Table 1 for the complete list of assignment probabilities.

A list of all community colleges located within or near (i.e. within a 50-mile radius) each study city was compiled using the American Association of Community Colleges (AACC) online list, as well as targeted web searches. Each community college was recorded as having (or not) the following degrees: ECE, nursing, and business administration. Community colleges that offered all three degrees (or a closely-related degree) were eligible to be included in the study. Across all cities, 72 community colleges were selected for use in this study. In most cities, we identified five eligible community colleges, however the range was four to eight. For each community college, a major was specified. Since we had three possible majors, each community college was listed three times so that they represented all community college-major combinations. We specified whether the degree was an Associate of Arts or Associate of Science, consistent with the actual degree awarded by the college. Regardless of community college or major, the graduate date reported was May 2016, four years after the date of graduation from high school. Assignment was done with replacement and with equal probability.



Approximately one-third of all resumes were assigned a bachelor's degree in addition to a high school degree. We selected all colleges in the 2015 edition of *Barron's Profiles of American Colleges* that met two criteria: first, the schools were located in the same states as the study cities and, second, the schools offered majors in ECE, nursing, and business administration.<sup>10</sup> Barron's includes quality-tier rankings<sup>11</sup> for each university; we were nondiscriminatory with regard to quality tier, selecting eligible schools from all quality tiers<sup>12</sup>. We avoided universities that were highly prestigious (e.g., Harvard and Stanford) and those recognized as Historically Black Colleges and Universities. For each city-specific template, universities were further divided into two groups: in-state universities and out-of-state universities. In-state and out-of-state universities were randomly assigned with equal probability. Moreover, for each university-major combination we specified whether the degree was a Bachelor of Arts or Bachelor of Science, consistent with the actual degree awarded by the college or university. Regardless of the university or major, the graduation date reported was May 2016, four years after the date of graduation from high school. Assignment was done with replacement and with equal probability

Each resume was randomly assigned one of three grade point averages (GPA) as a signal of academic performance: 2.8, 3.3, and 3.8. GPAs were assigned with equal probability, but were only assigned to the highest degree attained. In order to give resumes within a batch different appearances, two differently formatted versions of the GPAs were created. Assignment was done without replacement and with equal probability.

Each resume was assigned a bundle of skills and credentials that signal professional attributes important to employers. To determine the baseline set of skills and credentials, we once again examined real resumes posted by child care teachers as well as child care teacher positions located on online job boards. The baseline bundle includes the following credentials: First Aid and CPR certifications, as well as a current Fingerprint Clearance Card. The second bundle includes the baseline credentials and adds a Child Development Associate (CDA) credential. The third bundle includes all baseline credentials and adds a 6-hour Cultural Diversity in Early Childhood training module and fluency in English and Spanish. To select this course, we referenced accredited schools that offer continuing professional education and certifications in child care and child development. Specifically, we consulted The Care Courses School, Inc. which offers a 6-hour course in cultural diversity as part of their CDA certificate schedule. The fourth bundle includes all baseline credentials and adds an employee of the month (EoM) award and a job performance-based pay bonus. Assignment was done without replacement and with equal probability. See Table 10 for a complete list of credential bundles.

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<sup>10</sup> In some cases, the university was recorded as having an early childhood education degree when the exact name of the major was a related degree, such as 'child development'; in other cases, the university was recorded as having a business administration degree when the exact name of the major was a related degree, such as 'business management'. For consistency's sake, all majors were recorded into one of three categories as described.

<sup>11</sup> The nine quality-tier rankings include the following: most competitive, highly competitive plus, highly competitive, very competitive plus, very competitive, competitive plus, competitive, less competitive, no selection.

<sup>12</sup> We avoided selecting universities from the "most competitive" and "no selection" quality tiers where possible in order to avoid both prestigious and unknown universities.

Some resumes were randomly assigned to include a transportation statement. Four possible assignments were included into the bank of statements: two statements indicating that the applicant had access to reliable transportation, and two blank spaces. The statements indicating reliable access to transportation used similar language, as follows: “Have dependable transportation for work” and “I have access to reliable transportation.” Assignment was done without replacement and with equal probability.

Each resume was randomly assigned font and alignment styles in order to alter the appearance of each resume in a batch. HTML/CSS style code was built into the template in three ways. First, each resume in a batch was assigned one of five fonts which would be used across the entire resume. Second, each resume in a batch was assigned one of five contact information heading alignments; this section determined where the contact information would be placed on the page (alignment), the spacing of the contact information (margins), as well as the size and style of the font (e.g., bold, italics) and if a line would separate the contact information from the remaining sections of the resume. Third, HTML/CSS style code (e.g., to vary font, presence of a horizontal line, or page alignment) was integrated into the resume section headers, work experience profiles, and credential bundles. This was done so that resumes within a batch appeared distinct from one another. Assignment of font and contact information alignment was done without replacement.

Resumes for this study were generated by city and month; within each city-month, we created batches of four resumes for each job. Prior to creating new resumes for the next study month, all dates on the resume (with the exception of high school graduation) were moved forward one month. For example, if a position on a work history profile was held between May 2014 and October 2014 in the previous month’s template, the position on the current month’s work history profile would be held between June 2014 and November 2014. This was done to keep each resume up-to-date without changing the work history treatments. Each city had a unique template that was used to generate 60 batches of resumes (with each batch containing four resumes) for the study month. See Figure 1 for a sample resume.

#### **IV. Application Submission**

A Data Collection Protocol was developed for the Research Assistants to serve as a step-by-step guide for identifying relevant child care teacher positions and submitting resumes in response to those positions. In total, the Data Collection Protocol summarized three main steps in the data collection phase: (i) generate a large bank of resumes whose attributes were randomly assigned, (ii) submit resumes in response to on-line child care teacher job postings, and (iii) record whether each submitted resume was invited for an interview. This section primarily discusses the second step.

The fourteen study cities were divided among a group of Research Assistants; each Research Assistant was responsible for locating relevant positions in his/her assigned cities and submitting resumes. Once the city-specific resumes were generated using the Resume Randomizer software, they were cleaned using a macro to ensure resumes were no longer than one page, converted to

PDFs, and uploaded to the cloud-based file sharing service within each Research Assistant's unique folder. The Research Assistant-specific folders contained city-specific folders (for each of the cities they were assigned) which in turn contained monthly folders (e.g., May, June, and July). The monthly folders contained all of the resumes to be submitted to jobs throughout a given month; every resume's filename contained unique city, batch, and within-batch identifiers. The naming convention for the resumes contained the study city name, the batch number (which also represented the job number being applied for in that city- month), and the resume number (the specific resume in the batch of four). For example, the filename for the second resume in a batch to be sent to the tenth job located in Dallas would be "Dallas\_10\_2of4.pdf". Together, this naming convention created a unique identifier, which was used along with the month-of-study variable to create a unique study identification number.

Approximately one week prior to the next month, the Research Assistants received the resumes for the following month. This was referred to as the monthly bank of resumes. Research Assistants recreated the monthly folder naming system on their individual computers and downloaded the monthly bank of resumes. Within each monthly folder, Research Assistants created 60 job-specific folders (e.g., Job 1, Job 2, etc.). All four resumes in a batch were moved into those job-specific folders. For example, the folder "Job 10" located in the monthly folder "May" nested in the city folder "Dallas" would contain the following files: Dallas\_10\_1of4.pdf, Dallas\_10\_2of4.pdf, Dallas\_10\_3of4.pdf, and Dallas\_10\_4of4.pdf. Once all four resumes in a batch were moved into the job-specific folder, the PDFs were renamed before being sent out. Initially, we intended to list the applicant's name as the PDF document name. This was problematic for several reasons. One, in order to rename resumes, the Research Assistants would need to open the resume, see the name, then close the resume and rename it. Such an operation would take a substantial amount of time. Two, we were concerned that if employers' hiring decisions were driven in part by racial bias, the resume documents with minority-sounding names would be less likely to be opened and reviewed. Therefore, we decided to use unremarkable language and created the following naming convention for the four resumes within a batch: "FinalResume", "new\_resume", "resume\_final\_version", and "UpdatedResume". Note that this convention kept the resumes within a batch in alphabetical order so that the resumes were more likely to be submitted in the proper order; for example, the first resume created in every batch of four was renamed "FinalResume"—a document name which comes first alphabetically in the list—while the resume entitled "UpdatedResume" was submitted last.

Within each city-specific monthly folder, Research Assistants were also provided an Excel spreadsheet. This spreadsheet stored an exact replication of the information displayed on every resume generated for that city-month. The rows in the spreadsheet corresponded to individual resumes, and the columns corresponded to characteristics displayed on the resumes. For example, the first variable was "filename" which represented the city, batch number, and resume number of

that resume (e.g. Dallas\_10\_2of4.doc). To create the monthly city-specific spreadsheets, we used the .csv files generated by the Resume Randomizer software during the resume creation process.<sup>13</sup>

Research Assistants used the spreadsheets to record all identifying information about the job posting and child care provider to which the resumes were submitted; this included the month, date, and time that they found and applied for the job; the name of the provider; the website for the provider; the city and state in which the provider was located; the position title; the full-time or part-time status of the position; the minimum amount of previous child care experience listed in the job ad (if applicable); the minimum required educational attainment listed in the job ad (if applicable); the link to the job ad; and any other information that they felt was important. In addition, they recorded whether (and when) given resumes were invited for interviews or asked to provide additional information/documentation to the provider. This information was recorded by adding specific columns (variables) to the city-specific monthly spreadsheets.

Once resumes were renamed and spreadsheets were prepared, Research Assistants began the job search and resume submission process. A large and well-known job-listing aggregator website was used by the Research Assistants to locate child care teacher positions. Within this site, the Research Assistants used the following job search criteria: job listings with the words “child care” in the position title, for providers located within 25 miles of the study city, which were published within the last 24 hours. We submitted resumes in response to a broad set of job advertisements, while maintaining an explicit focus on pedagogical positions. Specifically, we responded to advertisements seeking ECE, child care or daycare lead teachers, assistant teachers and aides, and co-teachers, and floating-classroom teachers. These positions could be located in infant, toddler, or preschool-aged classrooms; as well as before- and after-school settings; or floating classrooms. In addition, we applied for full- and part-time, seasonal and temporary, and contractual positions. We limited the job search to child care taking place in for- and non-profit centers, places of worship, community-based organizations, and school-based before- and after-school program settings. Although most of the jobs for which we applied were in the child care sector, whenever possible we applied for Early Head Start and Head Start teacher positions. Excluded from our job search were teacher positions in pre-kindergarten classrooms as well as elementary and secondary schools; non-pedagogical or administrative positions (e.g., center directors, accountants, cooks, and bus drivers); child care taking place in the child’s home or that of a friend or relative; and home-based child care businesses. Finally, they were only to apply for jobs that allowed resumes to be submitted through the job-search website.

When a new job posting was found and deemed eligible to be included in the study, the Research Assistants submitted Resume #1 immediately; Resume #s 2, 3, and 4 had to be submitted within the next 24 hours; and each resume was submitted between two and four hours after the previous resume. These rules provided the Research Assistants with the flexibility to search and

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<sup>13</sup> Each resume was represented by a unique .csv file; these were appended to one another to create a city-specific spreadsheet for each month’s resumes.

apply for jobs as their schedules allowed, but also ensured efficiency in the resume submission process while minimizing the risk that providers would become suspicious of our study. Recording the month, date, and time of application submission allowed us to control for this variability in the regression models.

Research Assistants also had to follow specific conventions during the resume upload and submission process. In many cases, the only information required for submitting resumes was to provide the applicant's first and last name, email address, and resume. In other cases, additional questions were asked to filter out individuals who did not meet the minimum requirements for education and experience. For example, to ensure that experience requirements were met, a pop-up window would pose the question, "Do you have at least 1 year of experience in child care?". If these requirements were asked, Research Assistants were told to do the following: (i) respond in the affirmative, even if the experience and education requirements in the filter questions did not correspond to the experience and education displayed on the resume; and (ii) record the stated education and experience filters on the monthly city-specific spreadsheet.

On occasion, the same provider posted two different job advertisements within the same month. In these cases, the Research Assistants were given the following rule: if a provider had been sent resumes within the previous 30 days, they were not to be sent resumes for new listings. Once 30 days had passed, resumes could once again be submitted to new job listings, either for different positions or the same position being reposted.

## **V. Recording Responses**

Results from the pilot study suggested that child care providers typically responded with interview requests within 24 to 48 hours after resumes were submitted. In addition to applying for new jobs each week, Research Assistants were required to regularly check the name-specific email accounts to determine if interview requests or other correspondence were received from a given provider. Name-specific email accounts were not unique to each study city, so Research Assistants had to read all responses and identify which providers and positions corresponded to their assigned cities. Within each name-specific email account, we created 14 city-specific folders. This allowed Research Assistants to move emails to their assigned city folders once they identified them. Identification was a two-step process: (i) Research Assistants linked the email to a specific job advertisement, and (ii) they linked the job advertisement to a specific resume. Since the potential for confusion was great, we established a group chatroom which allowed Research Assistants to communicate with one another, communicate with us, and receive study-related information simultaneously online. One feature of the job-listing website used for this study also made this process less confusing: the auto-generated confirmation email. Once a resume was submitted to a provider, the relevant email account was sent a confirmation email containing the applicant's name and email address and resume PDF filename, which in most cases could quickly be connected to provider response emails. In practice, we rarely encountered an email from a provider that could not

be linked to a specific resume. When providers communicated with our fictitious applicants, they regularly included email signatures which contained their contact information – including provider name, address, and phone number. In rare cases where only phone numbers were provided, Research Assistants would have to perform a reverse phone number search to identify which provider they were associated with. A small number of provider emails still could not be connected to specific resumes. In those cases, a “Questionable” folder was created in each email account so that Principal Investigators could make final determinations.

Once emails were identified as belonging to a job advertisement, the Research Assistants had to determine if the email was a request for an interview, a request for more information, or something else. In most cases, the intent of the email was clear; for example, emails would contain language such as “Let me know when you are available for an interview” or “You are not a good fit for this position”. In those cases, a “1” or a “0” (respectively) would be entered under the “interview” variable column in the spreadsheet. In other cases, the intent of the email was less clear; some emails contained language such as “See the link for a position we think you would be good for” or “Send the name and contact information for three references”. These emails were not requests for interviews, but they were positive responses that could potentially lead to interviews had the applicants been real. In those cases, a “1” would be entered under the “response” variable column in the spreadsheet. A “0” would also be entered under the “response” variable column in cases where “interview” received a “0”. Under no circumstances did the Research Assistants respond to the provider emails.

Once all resumes for the city were submitted that month, Research Assistants checked spreadsheets to ensure all variable and provider email responses were properly recorded. Cleaned spreadsheets were named using the following convention: CityName\_DataCollectionMonth\_UploadDate. For example, the May spreadsheet for Dallas would have the filename “Dallas\_May\_6\_3.xlsx”. Spreadsheets were then uploaded by the Research Assistants to the cloud-based file-sharing service into city-specific folders labeled “UPLOAD SPREADSHEETS”. Uploaded spreadsheets were reviewed for completeness and accuracy by a Principal Investigator.

## **VI. Creating the Dataset**

Once the monthly spreadsheets were uploaded to the cloud-based file sharing service by the Research Assistants and checked for completeness, the individual city-specific Excel files were merged into a single Stata file. A .do file was created which recoded, labeled, and generated the variables as needed. At the end of each month, the dataset was checked to ensure that the assignment probabilities were in-line with expectations, cleaned using the .do file, and then merged to the previous month’s dataset.

Finally, the dataset was checked for errors. This primarily involved checking for coding errors (e.g., typos) and submission errors. Prior to submitting spreadsheets at the end of each

month, Research Assistants checked their work to make sure there were no errors, either in coding or in spelling. Next, a second Research Assistant as well as the Principal Investigators checked their work for errors, specifically looking at job advertisement characteristics and the recording of interview requests or positive responses from providers. If coding discrepancies arose between the Research Assistants, a Principal Investigator would adjudicate all discrepancies. This multi-step review process served two purposes: one, to check that all provider email responses were coded correctly in the city-specific spreadsheets; and two, to standardize the classification of provider correspondence across Research Assistants, cities, and months.

In addition, we were concerned with submission errors in which the Research Assistants did not enter the correct applicant name on the job search website, or did not submit resumes in the correct order. Checking the name recorded by the Research Assistants when the resume was submitted against the name on the resume that was supposed to be submitted revealed the majority of submission errors. When the resumes were generated, the template file coded names as numerical depending on the order they were placed in the leaf. However, the Research Assistants were also instructed to record the name on the resume submitted to each job ad. Checking that the two variables matched required the variable “template\_name” to be recoded from numerical to string so that it could be checked against the variable “recorded\_name”. Approximately .05% of all resumes had an error located at this point; of those, all but 5 were resolved as spelling errors or sending resumes within a batch in the incorrect order.

**Table 1: Assignment Probabilities for Resume Characteristics**

Characteristic	Probability
Font: Arial 11pt	0.20
Font: Times New Roman 11pt	0.20
Font: Verdana 11pt	0.20
Font: Calibri 11pt	0.20
Font: Tahoma 11pt	0.20
White name	0.33
African American name	0.33
Hispanic name	0.33
Address 1	0.20
Address 2	0.20
Address 3	0.20
Address 4	0.20
Address 5	0.20
Personal statement: "Enthusiastic and energetic"	0.25
Personal statement: "Friendly and cooperative"	0.25
Personal statement: "Responsible and organized"	0.25
Personal statement: "Creative and perceptive"	0.25
No ECE experience	0.17
6 months of ECE experience	0.33
2 years of ECE experience	0.50
High school 1	0.20
High school 2	0.20
High school 3	0.20
High school 4	0.20
High school 5	0.20
No additional degree	0.33
Associate's degree	0.33
Early Childhood Education	0.11
Nursing	0.11
Business Administration	0.11
Bachelor's degree	0.33
In-State University	0.17
Early Childhood Education	0.06
Nursing	0.06
Business Administration	0.06
Out-of-State University	0.17
Early Childhood Education	0.06
Nursing	0.06
Business Administration	0.06
GPA: 2.8	0.33
GPA: 3.3	0.33
GPA: 3.8	0.33
Baseline: CPR/First Aid/Fingerprint	0.25
Adds: CDA credential	0.25
Adds: Bilingual/diversity course	0.25
Adds: EoM award/Bonus pay	0.25
No transportation statement	0.50
Transportation statement	0.50



**Table 2: Forename-Surname Combinations and Email Addresses**

Forename-Surname	Email Address
White-sounding names	
Allison Lutz	allison.lutz01@XXXXXXXXX.com
Emily Carlson	emily.carlson37@XXXXXXXXX.com
Jill O'Connell	jill.oconnell45@XXXXXXXXX.com
Meredith Larson	merel Larson01@XXXXXXXXX.com
Sarah Walsh	sarah.walsh921@XXXXXXXXX.com
African American-sounding names	
Aisha Booker	booker.aisha@XXXXXXXXX.com
Ebony Jackson	ebonyjackson010@XXXXXXX.com
Aaliyah Jefferson	aaliyahjefferson15@XXXXXXX.com
Lakisha Robinson	lakisharobinson83@XXXXXXX.com
Tanisha Washington	tanishawashington62@XXXXX.com
Hispanic-sounding names	
Amelia Velazquez	ameliavelazquez478@XXXXXX.com
Francesca Ramirez	francescaramirez134@XXXXX.com
Josefina Hernandez	josefinahernandez954@XXXXX.com
Maria Gonzalez	mariagonz557@XXXXXXXXX.com
Gabriella Espinoza	gabriellaespinoza5@XXXXXXX.com

**Table 3: Applicant Mailing Addresses by City**

Study City	Mailing Address
Atlanta, GA	849 Piedmont Ave NE Apt 12, Atlanta GA 30308 855 Peachtree St NE Unit 2407, Atlanta GA 30308 400 W Peachtree St NW Unit 1205, Atlanta GA 30308 6305 Renaissance Way NE, Atlanta GA 30308 116 Ponce de Leon Ave NE Apt 2211, Atlanta GA 30308
Boston, MA	571 Massachusetts Ave Apt 4, Boston MA 02118 189 W Springfield St Apt 2, Boston MA 02118 148 Worcester St Apt 4, Boston MA 02118 176 W Brookline St, Boston MA 02118 35 Northampton St Apt 601, Boston MA 02118
Chicago, IL	2512 N Artesian Ave, Chicago IL 60647 2536 W Moffat St, Chicago IL 60647 1731 N Campbell Ave, Chicago IL 60647 2406 N Albany Ave #3, Chicago IL 60647 3719 W Belden Ave, Chicago IL 60647
Dallas, TX	5736 Marquita Ave Apt 1, Dallas TX 75206 5911 Morningside Ave, Dallas TX 75206 6020 Birchbrook Dr Apt 208, Dallas TX 75206 8735 Southwestern Blvd Apt 1703, Dallas TX 75206 6305 Shady Brook Ln, Dallas TX 75206
District of Columbia	772 Harvard St NW, Washington DC 20001 443 New York Ave NW Apt 205, Washington DC 20001 212 Q St NW, Washington DC 20001 2030 8 <sup>th</sup> St NW Unit 412, Washington DC 20001 204 Rhode Island Ave NW #1, Washington DC 20001
Houston, TX	9434 Briar Forest Dr, Houston TX 77063 2700 Rolido Dr Apt 236, Houston TX 77063 32 E Shady Ln, Houston TX 77063 7979 Westheimer Rd Apt 1114, Houston TX 77063 9519 Meadowglen Ln, Houston TX 77063
Los Angeles, CA	128 S Normandie Ave Apt F, Los Angeles CA 90004 4838 Elmwood Ave Apt 6, Los Angeles CA 90004 668 N Mariposa Ave, Los Angeles CA 90004 4475 Rosewood Ave Apt 207, Los Angeles CA 90004 221 N Commonwealth Ave, Los Angeles CA 90004
Minneapolis, MN	3909 Harriet Ave, Minneapolis MN 55409 4107 Lyndale Ave S, Minneapolis MN 55409 3617 Bryant Ave S Apt 102, Minneapolis MN 55409 4057 2 <sup>nd</sup> Ave S, Minneapolis MN 55409 4149 Dupont Ave S, Minneapolis MN 55409
New York City, NY	233 Calyer St Apt 2F, Brooklyn NY 11222 122 Noble St Apt 3, Brooklyn NY 11222 195 Driggs Ave Apt 2C, Brooklyn NY 11222 515 Meeker Ave, Brooklyn NY 11222 204 Huron St Apt 2R, Brooklyn NY 11222
Philadelphia, PA	1765 Frankford Ave Apt 1, Philadelphia PA 19125 1325 E Hewson St, Philadelphia PA 19125 2040 Blair St, Philadelphia PA 19125 2643 Tulip St, Philadelphia PA 19125 2637 E Lehigh Ave, Philadelphia PA 19125
Phoenix, AZ	420 W Earll Dr Unit 14, Phoenix AZ 85013 3601 N 5 <sup>th</sup> Ave Apt 104, Phoenix AZ 85013 141 W Highland Ave Apt 2, Phoenix AZ 85013 6602 N 7 <sup>th</sup> Ave, Phoenix AZ 85013 342 W Berridge Ln, Phoenix AZ 85013
San Diego, CA	2020 Camino de la Reina, San Diego CA 92108 5918 Rancho Mission Rd Unit 55, San Diego CA 92108 10210 San Diego Mission Rd Apt 59, San Diego CA 92108 6314 Friars Rd Unit 121, San Diego CA 92108 720 Camino de la Reina Apt 215, San Diego CA 92108
San Francisco, CA	2750 Sutter St Apt 9, San Francisco CA 94115 944 Central Ave, San Francisco CA 94115 1730 O'Farrell St Apt 621, San Francisco CA 94115 2476 Bush St Apt 6, San Francisco CA 94115 1510 Eddy St Apt 908, San Francisco CA 94115
Seattle, WA	1511 Boylston Ave Apt 302, Seattle WA 98122 1206 E Jefferson St Unit 401, Seattle WA 98122 1819 23 <sup>rd</sup> Ave Apt E208, Seattle WA 98122 3601 E Union St, Seattle WA 98122 1616 E Howell St Apt 306, Seattle WA 98122

**Table 4: Goldberg's "Big Five" Personality Factors and Associated Positive Terms**

Extroversion	Agreeableness	Conscientiousness	Emotional Stability	Openness to Experience
Extraverted	Warm	Organized	Calm	Intelligent
Energetic	Kind	Responsible	Relaxed	Analytical
Talkative	Cooperative	Conscientious	At Ease	Reflective
Bold	Unselfish	Practical	Not envious	Curious
Active	Agreeableness	Thorough	Stable	Imaginative
Assertive	Trustful	Hardworking	Contented	Creative
Adventurous	Generous	Thrifty	Unemotional	Sophisticated

*Source:* Factors and associated terms shown are from Appendix B in Goldberg, L.R. (1992). The Development of Markers for the Big-Five Factor Structure. *Psychological Assessment*, 4(1), 26-42.

**Table 5: Keywords from Child Care Teacher Resumes**

Keyword	Frequency
Communication	73
Team/teamwork/team-builder	55
Solving	32
Leader/ship	31
Reliable	28
Organized	26
Organizational	25
Energetic	23
Learner	22
Motivated	21
Responsible	21
Creative	20
Interpersonal	20
Listening	17
Dependable	16
Efficient/ly	15
Dedicated	14
Flexible	14
Fun	13
Enthusiastic/ally/ism	13
Caring	12
Communicate	12
Patient	11
Nurturing	11
Patience	10
Passionate	9
Punctual/ity	9
Analytic/al	8
Independent/ly	8
Confident	7
Competent	7
Detailed	7
Capable	7
Friendly	7
Adaptable	7
Resourceful	7
Solver	6
Committed	5
Confidence	5
Outgoing	5
Compassion	5
Multitask/Multitasking	5
Integrity	4
Encouraging	4
Perceptiveness	4
Knowledgeable	4
Loving	4
Ambitious	3
Thinker	3
Persuasion	3
Respectful	3
Creativity	3
Proactive	3

**Table 6: Personal Statements**

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Big-Five Factor	Statement
Introversion-Extroversion	I'm an enthusiastic and energetic person who seeks employment working with children.
Pleasantness or Agreeableness	A friendly and cooperative individual searching for a job to work with children.
Conscientiousness or Dependability	Responsible and organized worker seeking a position to work with children.
Intellect or Sophistication	I'm a creative and perceptive person who is looking for a position to work with children.

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**Table 7: Monthly Child Care Costs at the Centers Listed on the Fictitious Resumes, by Age Group**

	Infant				Toddler				Preschool			
	Childtime	KinderCare	Primrose	Goddard	Childtime	KinderCare	Primrose	Goddard	Childtime	KinderCare	Primrose	Goddard
Athlana	640	1040	1775	1886	624	1008	1645	1610	600	900	1601	1495
Boston	1540	2276	2700	3200	1380	2040	2500	2900	1380	1900	2400	2800
Chicago	1500	1720	1725	2362	1320	1648	1515	2139	1280	1416	1440	1887
Dallas	959	872	1440	1400	800	728	1300	1200	800	728	1352	1000
District of Columbia	N/A	1736	1824	2175	N/A	1542	1700	1845	N/A	1500	1604	1740
Houston	833	860	1440	1400	750	774	1320	1320	700	649	1236	1250
Los Angeles	N/A	903	N/A	1390	N/A	834	N/A	1310	N/A	662	N/A	1260
Minneapolis	840	1548	1640	1752	820	1420	1360	1547	800	1244	1240	1296
New York City	1484	1916	1823	2795	1072	1756	1800	2595	968	1496	1680	2495
Philadelphia	880	1700	N/A	N/A	860	1580	N/A	1870	740	1440	N/A	N/A
Phoenix	940	1116	1120	1470	800	1036	1048	1155	780	896	984	1050
San Diego	1157	N/A	1460	1675	N/A	N/A	1200	1375	829	N/A	1160	1250
San Francisco	1461	1756	1900	1820	N/A	1476	1700	1794	1074	1336	1420	1700
Seattle	N/A	1956	1742	1950	N/A	1756	1570	1750	N/A	1556	1333	1450
<b>Average</b>	<b>1112</b>	<b>1492</b>	<b>1716</b>	<b>1944</b>	<b>936</b>	<b>1354</b>	<b>1555</b>	<b>1744</b>	<b>905</b>	<b>1209</b>	<b>1454</b>	<b>1590</b>

*Note:* Monthly prices were collected from providers located within 25 miles of the study city between January and March 2017. Some providers would not give pricing data, as indicated by “N/A” in the table.

**Table 8: Work Experience Profiles**

Experience-Quality Type	Profile
None	<p>Customer Service Associate - JC Penney - May 2015 to Present</p> <ul style="list-style-type: none"> <li>Express appreciation and invite customers to return to the store</li> <li>Responsible for ringing up customers in a timely manner</li> <li>Recommend, select, and help locate merchandise based on customer needs and desires</li> <li>Organize the store by returning all merchandise to its proper place</li> </ul> <p>Sales Clerk - CVS - July 2013 to April 2015</p> <ul style="list-style-type: none"> <li>Greeted and assisted customers with questions</li> <li>Maintained knowledge of store inventory and sales activities</li> <li>Assisted in stocking shelves, rotating merchandise and marking prices</li> <li>Responded to customers' complaints and resolved their issues quickly</li> </ul> <p>Cashier - McDonald's - April 2011 to June 2013</p> <ul style="list-style-type: none"> <li>Greeted customers with friendly and positive attitude</li> <li>Received and filled customer orders, operated cash register, coffee and ice cream machine</li> <li>Presented food, drinks, and other condiments and products</li> <li>Cleaned and monitored lobby, stocked condiments, cups, lids, napkins, straws</li> </ul>
2 Years, Low-Reputation	<p>Child Care Assistant – YMCA - May 2014 – Present</p> <ul style="list-style-type: none"> <li>Provide child care to children of gym members</li> <li>Ensure safety and security of child care area and children</li> <li>Plan and implement activities with children and attend to any needs</li> <li>Read stories to the children and teach them painting, drawing, and crafts</li> <li>Communicate with parents and compile daily activity reports</li> </ul> <p>Cashier - Home Depot - September 2013 - April 2014</p> <ul style="list-style-type: none"> <li>Greeted customers as they entered the store</li> <li>Answered customer questions and addressed problems and complaints in person and over the phone</li> <li>Helped customers select products that best fit their personal needs</li> <li>Ran the cash register and computed sales prices, total purchases and processed payments</li> </ul> <p>Barista - Starbucks - May 2011 - August 2013</p> <ul style="list-style-type: none"> <li>Represented the company mission and values with exceptional customer service</li> <li>Prepared beverage and food orders for customers and operated the cash register</li> <li>Restocked the inventory and cleaned my work station frequently</li> <li>Created seasonal display boards</li> </ul>
6 Months, Middle-Reputation	<p>Teacher's Assistant - KinderCare Learning Center - 12/2015 – Present</p> <ul style="list-style-type: none"> <li>Provide assistance to the lead teacher in the day-to-day care of infants, toddlers, and preschoolers</li> <li>Support communication with parents</li> <li>Assist in developing educational lesson plans for classrooms and individuals</li> <li>Create an enjoyable and safe classroom environment conducive to learning</li> <li>Maintain written records regarding children's progress and behavior</li> </ul> <p>Cashier - Target - 10/2013 -- 11/2015</p> <ul style="list-style-type: none"> <li>Maintained positive attitude to make customer's shopping experiences memorable</li> <li>Ran the register and received payments by cash, credit cards, and checks</li> <li>Maintained the look and cleanliness of checkout lanes</li> <li>Assisted customers by providing product information and resolving their complaints</li> </ul> <p>Cashier - Burger King - 4/2011 -- 9/2013</p> <ul style="list-style-type: none"> <li>Took customer orders and processed transactions using cash register</li> <li>Balanced drawer before and after shift</li> <li>Answered inquiries about the food</li> <li>Basic store cleaning and stocking of all areas of store</li> </ul>
2 Years, Middle-Reputation	<p>Assistant Teacher - Childtime Learning Center - May 2014 : Present</p> <ul style="list-style-type: none"> <li>Assist the lead teacher in the personal, nutritional, and educational care in the 1's to 4's classroom</li> <li>Maintain daily records of activities, behaviors, meals, and naps</li> <li>Create a safe and clean environment for learning</li> <li>Plan developmental programs and activities, based on observation of individual children</li> <li>Interact with every child and their parent when it is pick-up or drop-off time</li> </ul> <p>Cashier -Walmart - October 2013 : March 2014</p> <ul style="list-style-type: none"> <li>Efficiently worked on register processing cash, check, debit and credit card transactions</li> <li>Directly assisted customers in locating store items and informed them of sale items</li> <li>Stocked, organized, and shelved store items and conducted inventory</li> <li>Kept up a neat and tidy work station at all times</li> </ul> <p>Sandwich Artist -Subway - July 2011 : September 2013</p> <ul style="list-style-type: none"> <li>Exhibited a cheerful and helpful manner while greeting guests and preparing their orders</li> <li>Took orders, made sandwiches, baked bread, baked cookies, and cleaned dishes</li> <li>Operated the cash register</li> <li>Assisted in cleaning the store and maintained food safety and sanitation standards</li> </ul>
6 Months, High-Reputation	<p>Assistant Teacher - Goddard School - December 2015 thru Present</p> <ul style="list-style-type: none"> <li>Aid lead Teachers in infant, toddler, and preschool-age classrooms</li> <li>Interact with parents and caregivers by answering any questions or concerns</li> <li>Help to plan and supervise activities that promote educational growth for the children</li> <li>Assist in maintaining a generally tidy classroom appearance and sanitary environment</li> <li>Maintain daily reports of each child's activities, behaviors, meals, and naps</li> </ul>

2 Years, High-Reputation

Stocker and Cashier - Walgreens - May 2013 thru October 2015

- Greeted customers entering store
- Stocked shelves and made sure everything was neat and organized
- Came up with new ideas for the endcap displays for around the store
- Received payment by cash, check, credit cards, vouchers, or debits

Crew Member - Wendy's - June 2011 thru April 2013

- Greeted customers and ensured outstanding guest service
- Assured the completion of all POS transactions and the proper control of all cash
- Prepared and distributed food in a safe and healthy manner
- Stocked merchandise and assisted in the cleaning of the dining area

Teacher's Assistant - Primrose Schools - 5-2014 to Present

- Assist lead teacher in providing child care and instruction for kids ages 2 to 5
- Help to maintain a clean, safe, and orderly classroom environment
- Prepare fun and educational activities like crafts, games, and reading circles
- Keep accurate records of daily lessons, meals, naps, accidents, and illness report
- Communicate with parents on the wellbeing of their child

Cashier - Kohl's - 6-2013 to 3-2014

- Welcomed customers as they arrived at the store
- Entered transactions in the sales register and operated credit machine
- Answered customer questions about products
- Assisted in stocking shelves, rotating merchandise and marking prices

Server and Cashier - Pizza Hut - 7-2011 to 5-2013

- Ran the register and credit card machine and counted out the drawer
  - Took phone orders, seated dine-in customers, and served drinks and meals
  - In general ensured the customers a pleasant and comfortable dining experience
  - Brought dirty dishes to dishwasher, restocked beverage bar station, and cleaned up after shift
-



**Table 9: High Schools by City**

Study City	High Schools
Atlanta, GA	Henry W. Grady High School Druid Hills High School North Atlanta High School North Springs Charter High School Lakeside High School
Boston, MA	Brighton High School Jeremiah E. Burke High School Charlestown High School Excel High School East Boston High School
Chicago, IL	Mather High School Lake View High School Nicholas Senn High School Edwin G. Foreman High School Amundsen High School
Dallas, TX	Woodrow Wilson High School W.T. White High School Seagoville High School Bryan Adams High School Lake Highlands High School
District of Columbia	Dunbar High School Theodore Roosevelt High School Calvin Coolidge High School Cardozo Education Campus Woodrow Wilson High School
Houston, TX	Clear Lake High School Cypress Creek High School Lamar High School North Shore Senior High School C.E. King High School
Los Angeles, CA	John Marshall High School Venice High School Fairfax High School University High School Alexander Hamilton High School
Minneapolis, MN	Southwest High School South Senior High Thomas Edison High School Washburn High School Roosevelt High School
New York City, NY	James Madison High School Susan E. Wagner High School Sheepshead Bay High School Abraham Lincoln High School Curtis High School
Philadelphia, PA	Frankford High School George Washington High School Northeast High School Fels Samuel High School Abraham Lincoln High School
Phoenix, AZ	Moon Valley High School Camelback High School Cortez High School Greenway High School Mountain Point High School
San Diego, CA	Patrick Henry High School Point Loma High School Junipero Serra High School Mission Bay High School Madison High School
San Francisco, CA	George Washington High School Balboa High School John O'Connell High School Galileo Academy of Science and Technology High School Mission High School
Seattle, WA	Cleveland High School Franklin High School Nathan Hale High School Ingraham High School West Seattle High School

**Table 10: Skill and Credential Bundles**

Baseline	Baseline plus CDA	Baseline plus Diversity	Baseline plus EoM
Current CPR and First Aid certifications	Fingerprint Clearance	Certifications in CPR and First Aid	Fingerprint clearance
Fingerprint clearance card	First Aid/CPR certified	Fingerprint Clearance Card	First Aid & CPR certified
	CDA certificate	Cultural Diversity in Early Childhood Programs (6 - hour training module)	Awarded Employee of the Month for February 2016
		Fluent in English and Spanish (speak/read/write)	Received bonus in April 2016 for outstanding job performance

Figure 1: Sample Resume

**Sarah Walsh**  
3601 N. 5th Ave  
Apt 104, Phoenix, AZ 85013  
[sarah.walsh921@xxx.com](mailto:sarah.walsh921@xxx.com)

---

### Introduction

I'm an enthusiastic and energetic person who seeks employment working with children.

### Employment

#### **Teacher's Assistant**

##### **KinderCare Learning Center**

**8/2016 -- present**

- Provide assistance to the lead teacher in the day-to-day care of infants, toddlers, and preschoolers
- Support communication with parents
- Assist in developing educational lesson plans for classrooms and individuals
- Create an enjoyable and safe classroom environment conducive to learning
- Maintain written records regarding children's progress and behavior

#### **Cashier**

##### **Target**

**6/2014 -- 7/2016**

- Maintained positive attitude to make customer's shopping experiences memorable
- Ran the register and received payments by cash, credit cards, and checks
- Maintained the look and cleanliness of checkout lanes
- Assisted customers by providing product information and resolving their complaints

#### **Cashier**

##### **Burger King**

**12/2011 -- 5/2014**

- Took customer orders and processed transactions using cash register
- Balanced drawer before and after shift
- Answered inquiries about the food
- Basic store cleaning and stocking of all areas of store

### Education

Camelback High School, **2012**  
Phoenix, AZ

Glendale Community College, AAS in Nursing, **May 2016**  
Glendale, AZ  
GPA: 3.3

### Other Skills

- Certifications in CPR and First Aid
- Fingerprint Clearance Card
- Cultural Diversity in Early Childhood Programs (6-hour training module)
- Fluent in English and Spanish (speak/read/write)

### Additional Information

I have access to reliable transportation.

## References

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