



The Nelson A. Rockefeller Center at Dartmouth College

The Center for Public Policy and the Social Sciences

## Policy Research Shop

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# Under-Enrollment and Under-Participation in Vermont's School Lunch Program

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## *An Analysis of Causes and Solutions*

Presented to Hunger Free Vermont

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### EXECUTIVE SUMMARY

In 2011, the United States Department of Agriculture ranked Vermont the ninth hungriest state in America. Research shows that children are especially affected by food insecurity. The federal government runs a National School Lunch Program (NSLP) to help families in need provide food for their children. However, not all eligible children are enrolled in the program and not all enrolled children participate in the program. This report analyzes case studies and general overviews of the program to investigate the main causes of under-enrollment and under-participation and propose possible solutions to mitigate these problems. We find that the complexity and stigma of filling out forms are the largest barriers to enrollment. On the participation side, social stigma felt by participants appears to be the largest barrier, although others, such as the prevalence of vending machines carrying low cost *a la carte* items, also drive down participation.

The report assesses the costs and benefits of policies for responding to both problems, but with a larger focus on under-participation, the more pressing and complex of the two problem areas. Specifically, we examine the costs and benefits of the following policies:

1. No participation in NSLP
2. Maintaining current policy
3. Increasing outreach to encourage enrollment, participation
4. Make reduced price meals free
5. Invest in technologies to encourage anonymous participation
6. Establish and fund a universal free meal policy

We also address the extent of uncertainty with regard to data on both under-enrollment and under-participation. Further research exploring the extent of incorrect or under-enrollment or in identifying specific levels and causes of under-participation in Vermont, such as through a student-level survey, would be beneficial to policy makers.

### 1. BACKGROUND

#### *1.1 Hunger in Vermont*

A 2011 report published by the U.S. Department of Agriculture shows that Vermont was the ninth hungriest state in the nation in 2010, with nearly fourteen percent of households qualifying as food insecure.<sup>1</sup> Food insecure households have limited or uncertain access to adequate food supply due to economic or social reasons. A key cause of food insecurity in the United States is the lack of sufficient resources to cover the cost of food in addition to meeting other basic needs. The “Great Recession” has pushed national unemployment to its highest levels in more than twenty years, and in 2009 there were 43.6 million people in the U.S. living in households with incomes below the poverty threshold, according a report by *Feeding America*. They find that unemployment,



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poverty, and hunger are all related: a one-percent increase in the national unemployment rate leads to a 0.78 percentage point increase in the food insecurity rate, on average. In contrast, a one-percent increase in the poverty rate leads to a 0.23 percent increase in the food insecurity rate. Child food insecurity is even more strongly affected by increases in poverty.<sup>2</sup>

### *1.2 Food Insecurity and Children*

Feeding America estimates that 27,160 Vermont children, or roughly one in five, are food insecure, meaning that they do not have access to an adequate food supply. The Feeding America report writes that although food insecurity is harmful to any individual, food insecurity is particularly devastating among children due to their increased vulnerability for potential long-term consequences. The report cites several studies which have demonstrated that food insecurity impacts cognitive development among young children and is linked to poorer school performance for older children, in addition to increased illness and higher associated health costs.<sup>3</sup>

The report further states that the structural foundation for cognitive functioning is laid in early childhood. It is during this time that the underlying neural circuitry is developed, on which more complex processes are built. This foundation can be greatly affected by food insecurity. Inadequate nutrition can permanently alter a child's brain architecture and stunt their intellectual capacity, affecting the child's learning, social interaction, and productivity. Children who do not receive what they need for strong, healthy brain development during early childhood may never recover their lost potential for cognitive growth and eventual contributions to society.<sup>4</sup>

Moreover, a study by researchers at the University of Chicago found that food insecurity in the home translates into a source of family stress that could affect both parenting behaviors and children's reactions to parenting styles as well. This stress may have implications for children's behavior. This expectation is consistent with research showing that economic hardship is linked to shortfalls in parent-child interactions, which lead to subsequent increases in children's behavior problems.<sup>5</sup>

### *1.3 National School Lunch Program<sup>6</sup>*

In order to ensure that all children receive adequate food, and to mitigate the problems associated with malnourishment among children, Congress passed the National School Lunch Act in 1946. This act created the National School Lunch Program (NSLP), which has in turn spurred further investment in child nutrition. The NSLP is a federally assisted meal program operating in public and nonprofit private schools and residential child care institutions. It provides nutritionally balanced, low-cost or free lunches to children each school day.



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The Food and Nutrition Service (FNS) administers the program at the federal level. At the state level, the National School Lunch Program is usually administered by state education agencies, which operate the program through agreements with school food authorities. This is true for Vermont, where the Vermont Department of Education runs the program for the state.

The program works by having school districts and independent schools that choose to take part in the lunch program receive cash subsidies and USDA foods from the U.S. Department of Agriculture (USDA) for each meal they serve. In return, they must serve lunches that meet federal requirements, and they must offer free or reduced price lunches to eligible children. Schools may choose to take part in a similar breakfast program as well. School food authorities can also be reimbursed for snacks served to children through age eighteen in afterschool educational or enrichment programs. In Vermont, all but fourteen of 323 schools fully participate in the program.<sup>7</sup>

Any child at a participating school may purchase a meal through the National School Lunch Program. Children from families with incomes at or below 130 percent of the poverty level are eligible for free meals. Those with incomes between 130 percent and 185 percent of the poverty level are eligible for reduced-price meals, for which students can be charged no more than forty cents (\$ .40). This policy is meant to ensure that participating students have affordable meal options while in school.

### *1.3.1 Benefits of NSLP: A Review of Recent Research*

The school lunch program provides a host of benefits for enrolled and participating children. By enrolling in the NSLP, these families can improve their children's nutrition in two ways. First, enrollment in the school lunch program has been related to better nutrition in general.<sup>8</sup> They consume more vegetables and grain foods, drink more milk and fewer sugary drinks, and eat fewer cookies, cakes, and salty snacks.<sup>9</sup> School lunch and breakfast programs may also protect against being overweight in some students; one study found that food insecure girls whose families participated in the Supplemental Nutrition Assistance Program and the National School Breakfast and Lunch Programs had a lower risk of being overweight than did food insecure girls who did not participate in these programs.<sup>10</sup> Second, families are able to provide better quality food at home without having the financial burden of having to provide for breakfast and lunch.

Additionally, a study in the *Journal of Policy Analysis and Management* shows that increasing NSLP exposure by ten percentage points is associated with an increase in education by 0.365 years among women and nearly 1 year among men.<sup>11</sup>

However, a study from the University of Chicago suggests that the additional nutrient intake from participating in the NSLP does not necessarily lead to overall improvements in a child's well-being with regards to their ability to learn, health, and development.



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These benefits may not translate into nutritional performance because the child may already be receiving a sufficient amount of nutrients, the food eaten as part of the NSLP may not be of an adequate nutritional value, or families may use the NSLP to replace equally-nutritious meals that were being served at home. It is difficult to determine the exact impact of participating in the NSLP as research on the impacts of the NSLP and food insecurity on child well-being is limited.<sup>12</sup>

Nevertheless, the University of Chicago study shows that many children participating in the NSLP are still at risk for food insecurity. Twenty-four percent of the children who participate in the school lunch program live in food insecure households, compared to five percent of nonparticipating children.<sup>13</sup> In addition, the extra money saved from spending less on food could be used to improve other domestic factors that improve well-being, such as heat.

## 2. IDENTIFYING BARRIERS TO EFFECTIVENESS OF THE NSLP

Two distinct barriers, under-enrollment and under-participation, prevent students from utilizing the benefits of the NSLP. **Under-enrollment** is defined by the number of students who would be eligible for participating in the program, given that their family income is below 185 percent of the poverty line, who are not enrolled in the program. **Under-participation** is defined by the number of students who are enrolled in the NSLP who choose not to eat meals covered by the program. The literature often does not distinguish between eligibility, enrollment, and participation in the program, making it difficult to quantify under-enrollment or under-participation. A few studies, however, do provide insights on the extent of under-enrollment and under-participation as distinct issues.

### 2.1 Quantifying Under-Enrollment

Quantifying under-enrollment poses a significant challenge, in part because of the difficulty tracking exact numbers of children in households below 185 percent of poverty. Indeed, many sources writing of the number of children below the 185 percent poverty level simply cite the population enrolled for the NSLP. A comprehensive white paper exploring the issue of under-enrollment in Florida writes, “In an era in which society measures and quantifies everything, we do not know exactly how many children are eligible for free and reduced lunch, but do not apply.”<sup>14</sup> Like the Florida study, we looked to compare enrollment data to census data as another option.

The Vermont Department of Education recorded a total of 92,601 students enrolled in school lunch programs in the 2010-2011 academic year, of which 28,913 students were enrolled in free lunch programs and another 6,214 were enrolled in reduced lunch programs for a total of 35,127 students in grades K-12 enrolled in free and reduced lunch programs. These figures show that free and reduced lunch program students comprise



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37.9 percent of the total enrollment in K-12 school lunch programs across the state. According to the upper-limit eligibility estimates from the one-year projection of the 2009 American Community Survey (ACS) data from the US Census Bureau—the most recent available—a maximum of 38,217 out of 93,085, or 41.1 percent, of students ages six to seventeen should have been eligible for free and reduced price lunches in the year 2010. This figure is at the upper bound of a very large margin of error, and also does not include five- and eighteen-year old students, a small but significant proportion of students. While working with decennial census data would help to avoid these issues, completion rate for the census is still less than perfect, and this data was unavailable at the time of our research.<sup>15</sup>

A major challenge of quantifying enrollment is the high margin of error associated with projections made from both the census and ACS surveys. For example, if one were to examine 2010 eligibility data based on the five-year projection of the 2005 ACS, just looking at the upper end of the confidence interval for the data we would find 29,728 children ages six to seventeen living under the 185 percent poverty line, nearly six-thousand *fewer* than were actually enrolled for that year. This is due in part to the fact that projections based on 2005 data would not account for the effects of the 2008 recession.<sup>16</sup>

Our survey of the academic literature on this topic turned up just as much disagreement, in part because the extent of under- or over-enrollment depends so highly on the survey utilized, and because the margins of error are so high. Vermont's data problems are not unique in this regard. The Under Secretary for Food, Nutrition and Consumer Services noted in his testimony before the House Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug, and Related Agencies in March 2002 that the 2000 US Census showed twenty-seven percent more students enrolled for free or reduced-price meals than the Census data would suggest are eligible.<sup>17</sup> Beyond making it difficult to quantify the problem, this discrepancy has also led some to doubt the veracity of claims of under-enrollment.

The non-profit organization *Education Next*, for example, writes that new data suggest that the process for verifying eligibility for the program may be fundamentally broken and ineligible families may be participating. No proof of income, such as a pay stub or W-2 form, is required when parents apply, though each NSLP application contains a certification statement that parents or guardians are required to sign in which they promise that their reported income level is accurate. The only verification mechanism in place for the NSLP is outlined in the Richard B. Russell National School Lunch Act, as most recently amended by Congress in 2004. The Act requires school districts to try each year to verify the incomes of three percent (or 3,000 students, whichever is less) of participants considered “error prone,” meaning households whose reported earnings are within \$100 monthly or \$1,200 yearly of the income eligibility limitation. School districts can also qualify for an alternate sample size of one percent if they meet certain



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requirements. To verify eligibility, school officials request proof of income by mail from parents to justify the amount initially put on the application. If applicants fail to respond, it raises the possibility that they may not in fact be eligible, and officials terminate their benefits. If applicants respond with evidence that shows too high an income, officials reduce or terminate their benefits accordingly. In some cases, officials raise benefits if initial reports of income are too high.<sup>18</sup> This could raise problems for people, such as farmers or some teachers, whose paycheck amounts fluctuate seasonally.

However, a report by the USDA auditing income verification data shows that relatively few errors are made in the enrollment process: less than five percent of the cases they examined; this can be seen in Figure 1.<sup>19</sup> Of these errors, about three-fourths were cases of over-enrollment.

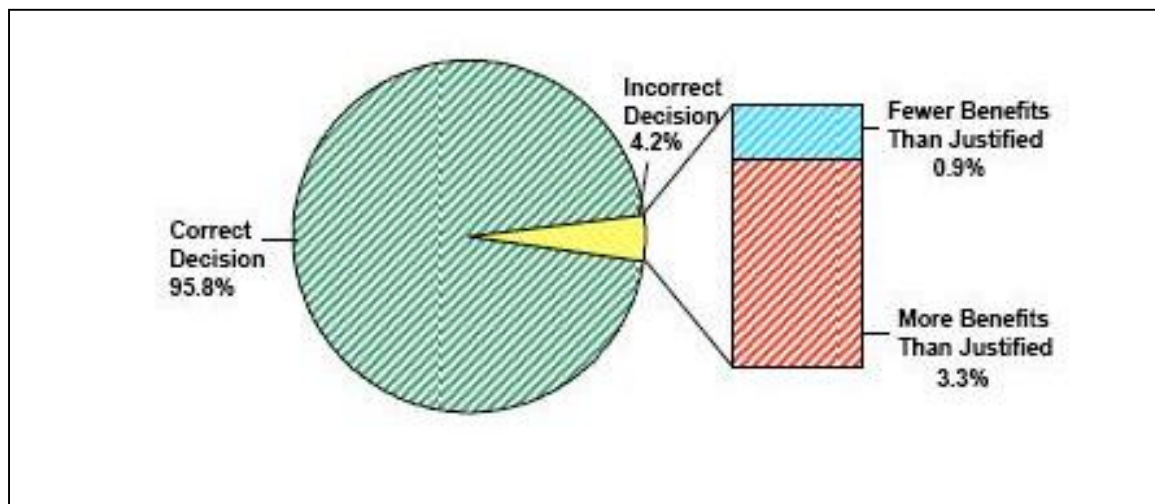


Figure 1. Accuracy of NSLP Benefit Status Determinations, AY2006-07

One other source leading to error in enrollment could be changes in income. The NSLP application form asks parents to enter gross income of each household member as it appears on the paycheck and state how often it is received either weekly, monthly, every two weeks, twice a month, or annually (see Appendix A). Eligibility may change throughout the year, which surveys do not reflect, and households tend to seek out public assistance when their income is unusually low.<sup>20</sup> Once a child is deemed eligible for free- or reduced-price lunch, he or she keeps that eligibility status for the remainder of the school year regardless of changes in his or her family's income during the academic year. However, the child's eligibility must be re-certified with a new application every school year.<sup>21</sup>

David Figlio, a professor at Northwestern University, analyzed Florida's voucher programs where income is audited for every application, but where people can qualify based on a month of data, and where the income threshold is also 185 percent of poverty.





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He found that errors are accounted by approximately half cases of fraud and half those of income volatility.<sup>22</sup>

Other studies have also found evidence of under-enrollment. A study in 2003 found that 12.8 percent of children under 130 percent of the poverty line were not enrolled in the program in 1998.<sup>23</sup> In 1993, one researcher found that over half of eligible nonparticipants believed they were ineligible, ten percent thought the certification process was too onerous, and twenty percent cited stigma.<sup>24</sup>

Despite these concerns and the issues with data, our analysis of the most recent data available suggests that Vermont may indeed have an under-enrollment problem. As stated above, we found that as many as 38,217 students could have been eligible in Vermont in 2010, compared to official statistics of 35,127 enrolled. While we cannot reject the hypothesis that enrollment actually exceeds eligibility, our analysis of the literature, including the studies described above, suggests that two problems are probably occurring simultaneously: failure of some whom are eligible to enroll, and enrollment by some who are ineligible.

### 3. UNDER-ENROLLMENT

#### *3.1 Causes of Under-enrollment*

In this section we explore two main factors that lead to potential under-enrollment in the NSLP. First is the complexity in filling out the form, which relates to families not understanding they would be eligible and to the tedious nature of the application. Second is the perceived stigma families feel when filling out the form.

One option to improve both our understanding of the extent of erroneous enrollment, and the causes behind, would be for Vermont to implement a pilot study of a few schools to audit all NSLP applications at these schools. Schools could be given an incentive such as higher meal reimbursements to participate. Such a study could show the extent of under-enrollment along with the extent of erroneous enrollment and income volatility in the schools. The results could be used to inform future policy, but powerful incentives might be necessary as the survey could cause participant schools to lose money in both extra administrative costs and fewer reimbursements.

##### *3.1.1 Barrier of Complex Forms*

The literature shows that forms pose a significant barrier in the use of social programs, whereas enrollment increases when systems are enhanced by automatic or default enrollment.<sup>25</sup> The same phenomenon is seen in the NSLP.



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In order to enroll their children for the NSLP, parents usually must fill out a form and turn it at the beginning of each school year. The school is responsible for ensuring that parents receive the form and return it. The state works with the schools, providing the forms and operating the program. Although the federal government provides states with prototype forms, each state ultimately adopts its own form. A copy of Vermont's form is available in Appendix A.

The federal government has begun to address the complexity of filling out forms as a source of under-enrollment. In 2008, it approved more children to become automatically eligible for free school meals offered through the NSLP or the School Breakfast Program. The parents of these children or guardians are not required to submit income information to establish their eligibility for free school meals; instead the children are eligible based on their participation in another federal programs. This is referred to as "categorical eligibility." The system automatically enrolls students in the NSLP based on earlier documentation of family participation in other state or federal benefits such as Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF) cash assistance, or Food Distribution Program on Indian Reservations (FDPIR). These programs have income limits that are similar to the NSLP and have more rigorous application processes. Children from households receiving these benefits may be enrolled for free school meals by completing an application that lists a case number or they may be automatically enrolled. It is up to the school to decide whether a form is necessary or not, depending on the technology the school has available to directly enroll the students.<sup>26</sup>

Between the inception of expanded direct certification in 2008 and 2010, the enrollment rate increased by roughly seven percent in Vermont, but it is difficult to tell whether this increase is due to the policy change or the worsening of the "Great Recession" in Vermont during this same time frame.<sup>27</sup> The following graph shows the increase in NSLP participation from the past ten years in Vermont (Figure 2). Figure 3 shows the percent of children in poverty in Vermont. The percent of children in poverty has been steadily increasing over the past ten years, with a total overall increase of about two percent. Similarly, the percent of children receiving subsidized school lunch in the past ten years has steadily increased. However, this increase was more than ten percent. Looking more closely at the post 2008 increases in percentages when direct enrollment was expanded, the percent of children enrolled in school lunches has increased significantly more than the percent of children in poverty. This difference in increases is greater than in years prior than 2008. This suggests that removing the necessity of filling out a form or ensuring eligibility led to an increase in enrollment in Vermont. It is worthwhile to note here that the students automatically enrolled in the program necessarily had family income levels lower than the threshold. The cross listed programs of SNAP, TANF, and FDPIR from have greater financial constraints and more rigorous applications.



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Similarly, a Mathematica Policy Research study shows that direct enrollment in the National School Lunch Program has led to large increases in total enrollment. Direct certification increased the number of children certified for free meals by about 400,000 in the United States.<sup>28</sup>

Figure 2. Percentage of Students Receiving Subsidized School Lunch<sup>29</sup>

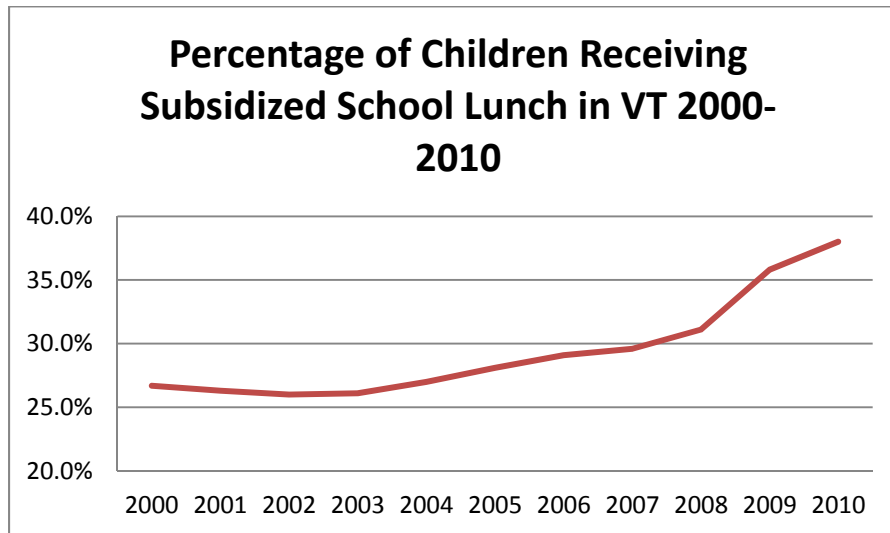
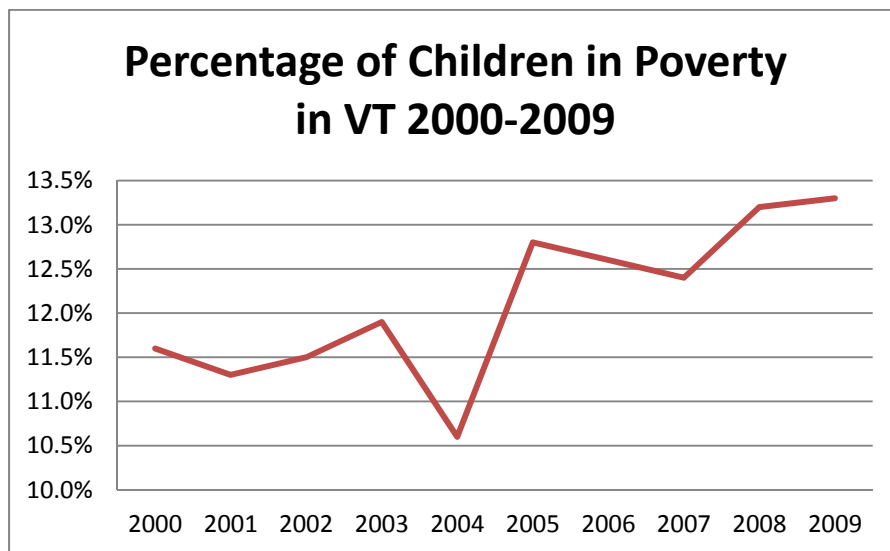


Figure 3. Percentage of Children in Poverty<sup>30</sup>



The complexity of forms also deters applicants, in part because of small print, complicated instructions, and the difficulty for some families at determining their



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“actual” annual income. The complicated directions are particularly problematic for parents with low literacy or new immigrants; thus the form intimidates some of the people with the greatest need.<sup>31</sup>

### *3.1.2 Stigma of Turning in Forms*

Stigma may also play a role in parents’ decisions to turn in forms, especially in small communities. Parents may not want to reveal that they do not understand the form or they may not want it to be known that they require assistance. Because families may frequently see school officials who process the applications, they may not want to reveal that they need assistance. Some families may feel that if they apply for subsidies, the entire community will know of their status. This issue is more pervasive in communities where students qualifying for free or reduced price lunch are a minority. Reducing the stigma and addressing the concerns of the parents may help increase enrollment in the program.<sup>32</sup> If children turn in the forms directly, this also brings student-level stigma into play, further driving down enrollment.

### *3.2 Solutions to Under-Enrollment*

In order to ensure that all who are eligible have enrolled in the program, states and schools have taken various initiatives to increase the number of forms turned in. These initiatives, which often address both the complexity and stigma barriers of forms, are described below. Costs and benefits are noted if available.

#### *3.2.1 State Level Initiatives*

In order to increase enrollment in NSLP, many states have implemented initiatives that maximize the level of confidentiality for households. States have made large investments in technological improvements that will increase the system’s accuracy in detecting children who qualify and communication between departments. Moving to an electronic system minimizes administrative costs due to reduced paperwork and saves time.

Oregon restructured the standard application forms to increase confidentiality. They use the Direct Certification method as a means to apply for NSLP and permit online submissions. They encourage wide publicity of the forms by posting the URL link on school home pages and newsletters, carrying it into conversations with parents during parent-teacher conferences and back to school nights, and mentioning NSLP in school articles. Most importantly, the state recommends that schools stress the benefits of returning the applications even if students choose not to participate or do not meet the eligibility criteria.<sup>33</sup>



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The following states have received grants from USDA to increase direct enrollment for families participating in various programs.<sup>34</sup> Vermont may want to consider undertaking such projects considering their various costs, to increase enrollment.

Massachusetts—\$583,200 to leverage their current technology and develop online applications to query TANF, SNAP and Medicaid participant databases so that they can expand their current direct certification and verification process and improve participation rates.

Nebraska—\$200,000 to create a database that will interface with state record systems and the Nebraska Department of Health and Human Services database to match children enrolled in SNAP and TANF programs.

Pennsylvania—\$630,132 to leverage state Geographic Information Software, Medicaid and State Children's Health Insurance Program information for data matching and streamlining enrollment verification processes.

Rhode Island—\$334,298 to enhance their existing software to validate and synchronize the school meal eligibility data.

Texas—\$177,433 to expand their existing direct verification system to provide matching capability with TANF, SNAP, Medicaid and State Children's Health Insurance Program (SCHIP).

Vermont may consider updating its technology to get matching funds from various programs. Currently, systems in Vermont's Department of Children and Families, which houses data needed to directly enroll NSLP students, do not communicate with the Department of Education.

### *3.2.2 School Level Initiatives*

Some Vermont schools have taken it upon themselves to increase anonymity and help remove the stigma for low-income students by encouraging all students, regardless of eligibility, to return the free/reduced price school meal applications. Moreover, they contact all parents and ask them to return the free/reduced form whether or not they have completed the application. Therefore, families who mistakenly think they are ineligible are reached.<sup>35</sup> Schools also offer the application forms in multiple languages and provide non-English speaking families assistance with filling the application.

The Rochester, NY School District serves approximately 32,000 students, of which approximately 28,000 (about 87 percent) are certified for free or reduced price meals. Approximately 13,000 students were certified through the district's initial direct certification data matching process at the start of the 2009-2010 school year. More than



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6,800 children who had not been enrolled for free or reduced price meals based on a paper application and were newly certified for free meals were identified as eligible for free meals. Currently, the district needs to only reach out to 9,764 students for applications. The process saves a large amount of money for the district when all things are considered such as mail outs, and staff to process applications. It also results in more state and federal reimbursement for the district. There was no cost to the district to use that system. The Superintendent of Schools signed a confidentiality agreement that the district adhered to and then the New York State Education Department sent the electronic file.<sup>36</sup>

Currently, all school districts in Vermont utilize the benefits from direct certification, but not all schools have the technology to do so digitally. The Orange Southwest Supervisory Union Food Service Director, Karen Russo, said that for her schools, “the single biggest factor in boosting enrollment levels was the implementation of Direct Certification,” though she was unable to produce concrete numbers. Adjusting other school’s technology practices and therefore eliminating the form requirement may produce both economic and social benefits similar to the ones in Rochester. Another option may be to require that all families fill out the form and thereby leave no leeway for families to avoid the paperwork.

Carol Brill, the Food Service Director at St. Johnsbury School states, “I send home the Free and Reduced form with the school news the first week with a letter. I ask every family to fill it out. If they know they don’t qualify, they write ‘not-qualified’, sign it and send it in.”<sup>37</sup> Robert Clifford, Food Services Director of the CCSU, also requires all forms to be turned in regardless of perceptions of eligibility.<sup>38</sup> School districts like the ones mentioned above have taken various initiatives to encourage students to turn in the form like sending home the form separate from other school mailings, campaigning with teachers by creating a goal to have all students returning the form and promising free breakfast for two weeks for the class, setting up open houses where parents eat free with their children and receive help filling out the forms, addressing the forms in parent teacher conferences, or making personal calls.<sup>39</sup>

Not all schools are so diligent about enrollment. At the Colchester School, students are not required to turn in the form; the material explaining the application for eligibility is mailed out, but there is little to no follow up if the papers never get returned. As an alternative, the school has taken an initiative to help those who don’t get approved after applying by giving those students five days of free breakfast to start.<sup>40</sup>

#### 4. UNDER-PARTICIPATION

While enrolling in the NSLP ensures a free or subsidized school lunch for children, students must actually eat the school lunch to receive benefits from doing so. A 1995 student-level study by Philip Gleason found that of those enrolled in free lunch programs,



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only 79 percent were participating, and only 71 percent of those enrolled in reduced lunch programs were participating. When looking at breakfast programs, these rates declined to 40 percent and 18 percent, respectively. Male students and older students are less likely to participate than female students and younger students, all other things being equal.<sup>41</sup>

This section identifies the potential barriers to participation for enrolled students, and analyzes the advantages and disadvantages of policy options targeted at improving rates of participation.

### *4.1 Barriers to Participation in the NSLP*

#### *4.1.1 Social Stigma*

The issue of social stigma reduces participation in the NSLP. In 2008, a New York Times article told the story of a fourteen-year old boy, Francisco Velazquez.<sup>42</sup>

“Although Francisco Velazquez, a 14-year-old freshman with spiky hair and sunglasses, qualifies for a free lunch at Balboa High School here, he was not eating. He scanned the picnic table full of his friends in a school courtyard one day a few weeks ago, and said, “I’m not hungry.” On another day, a group of classmates who also qualify for federally subsidized lunches sat on a bench. One ate a slice of pizza from the line where students pay for food; the rest went without. Lunchtime “is the best time to impress your peers,” said Lewis Geist, a senior at Balboa and its student body president. Being seen with a subsidized meal, he said, “lowers your status.”

Velazquez is not alone in feeling the social stigma of eating a reduced price lunch. The USDA, in a publication about the school lunch program, writes of the importance of reducing the stigma of participating in the program. Officials at Vermont’s Department of Education express similar opinions.<sup>43</sup>

Increasing participation, both through encouraging applications for free and reduced-price meals, and by using electronic payment to reduce the potential for stigma associated with participation, does more than just expand the benefits of the program. Higher numbers of participants increase reimbursements for free and reduced-price meals, which are often critical to covering fixed costs of meal service in a school district. The USDA also suggests that that perceived stigma associated with free lunches, when it exists, is more prevalent in older teens. Policies reducing the barrier of stigma can help increase enrollment and participation in the NSLP in some communities.<sup>44</sup>



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### *4.1.2 Other Barriers to Participation*

Other barriers to participation are numerous, including lack of outreach, limited menu options, student preferences, lunch service capacity, and open campuses.<sup>45</sup> They also observed that students could be identified as paying full price, reduced, or receiving free lunch by which line they stood in, form of payment, or items on their tray. The most prevalent issue they noticed, however, was the availability of foods competing with the NSLP such as snacks from the vending machine and a la carte meals.<sup>46</sup> Because a la carte meals, or meals from the hot lunch line not including at least three of the following items: grain, protein, vegetable, fruit, and milk, do not qualify for subsidies, students must pay for these meals or make sure that their trays are filled with USDA approved meals.<sup>47</sup>

During a time when the healthiness of school food was questioned, one researcher observed that significantly fewer students participated in the NSLP when the fat content in the food was below 32 percent.<sup>48</sup>

Another point of concern is the time allotted for students to eat.<sup>49</sup> Short meal periods at lunch might discourage some students from waiting in line to get a meal. Additionally, short meeting times encourage students to get quick a la carte options or incomplete meals (e.g., vending machine purchases) not qualifying for subsidies.<sup>50</sup> In the morning, some schools may have trouble providing breakfast if there is limited time between when students get off of the bus and when they need to be in class.<sup>51</sup>

### *4.1.3 Reasons Why Some Vermont Schools Opted Out of NSLP*

In addition to these systemic disincentives to participation, some schools have opted out of the NSLP altogether. In order to explore why some schools opted out of the NSLP, we looked at reasons why fourteen of the public schools in Vermont have chosen to not participate in the Federal School Breakfast and/or Lunch Program.<sup>52</sup> We found that these schools have chosen to opt out for a variety of reasons, some of which were mentioned above. Most of these schools are geographically isolated and therefore only serve a small student population. These two characteristics seem to render federal options inefficient.

Francie Marbury, principal of the Marlboro Elementary School in Windham County, has said that, Marlboro has a very small kitchen, which is not adequate to prepare a quality lunch.<sup>53</sup> Representatives for schools such as Elmore and Windham explained that their resources (i.e., one-room school house without a kitchen) automatically prevent them from providing students with lunch. By taking on the Federal Lunch Program, the school would only add more costs for their already small, working budget.<sup>54</sup> A representative for Dummerston also added that besides resources, the school simply couldn't afford to provide lunch for their students and decided it was best to discontinue the program.<sup>55</sup>





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Scheduling has also been highlighted as a reason behind opting out of the Federal Lunch Program. Sarah Walker, administrative assistant at Pomfret Elementary (or “The Promfret School”), stated, “we don't participate in the Federal School Breakfast & Lunch program because we do not offer lunch.”<sup>56</sup>

These schools span across four counties: Bennington (1), Lamoille (1), Windham (5), and Windsor (7). Below is a table that identifies the specific schools and the Federal programs they have opted out of.

Figure 4. Schools Opting out of the NSLP

County	Not Taking Part in Federal School Breakfast Program	Not Taking Part in National School Lunch Program	Total Student Enrollment	Grade Levels
<i>Bennington County</i>				
Stamford Elementary	X		77	K-8
<i>Lamoille County</i>				
Elmore School	X	X	<100	1-3
<i>Windham County</i>				
Dummerston Schools	X		168	K-8
Halifax School	X		53	K-8
Marlboro Elementary		X	100	K-8
Wardsboro ES		X	67	PreK-6
Windham ES	X	X	20	PreK-6
<i>Windsor County</i>				
Albert Bridge School	X	X	78	K-6
Barnard Central	X	X	67	PreK-6
Hartford High	X		627	9-12
Marion Cross	X	X	307	PreK-6
Ottauquechee School	X		200	PreK-5
Plymouth ES	X	X	13	K-6
Pomfret School	X	X	74	K-6



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### *4.1.4 Survey to Determine Most Influential Causes of Under-participation in VT*

In order to further determine which causes affect Vermont's participation in NSLP, a state-wide student-level survey would be helpful. Each school is unique – serving student populations of diverse demographics, employing teachers with a varying range of skills, and implementing different strategies. Therefore, the policies the district or schools adopt should be tailored to fit its specific needs. By collecting quantitative and qualitative data, the study could show the relative effects of the various causes of under-enrollment and under-participation more specific to the needs of Vermont's school districts. Some causes that should be further examined are stigma in the lunch room, stigma in filling out forms, the complexity of filling out forms, food quality, amount of time to eat, administrative issues, and availability of a la carte options.

Past research has tried to find the root of the issue by testing several barriers to participation. One approach sought to identify what kinds of foods attracted students, the nutritional quality, and used an index of the school environment to analyze changes in participation.<sup>57</sup> The researchers simulated three reforms: (1) discontinue offering reduced-fat and whole milk, (2) offer fresh fruit daily, and (3) implement a comprehensive reform that consists of discontinuing reduced-fat and whole milk, offering French fries and similar potato products no more than one day per week, offering fresh fruit daily, no longer allowing juice to be served, and offering dark green or orange vegetables at least two days per week. Their simulation results showed that Reform 1 is likely to decrease the percentage of calories from saturated fat, but also predicted to decrease participation of elementary school students at lunch and secondary school students at breakfast, yet increase participation of elementary school students at breakfast. Reform 2 increased the frequency that fruit was served or selected in elementary schools at lunch, but had the unintended consequence of decreasing its selection in secondary schools at lunch. In addition, the reform is predicted to increase fruit servings at breakfast and decrease participation at both lunch and breakfast. Reform 3 is predicted to increase servings of fruit and vegetables other than fried potatoes, particularly, dark greens and orange vegetables. It is also likely to decrease consumption of fluid milk, thereby decreasing the consumption of energy from saturated fats, and decrease participation.

### *4.2 NSLP Participation Solutions*

In order to ensure that all who are enrolled in the program participate in the program, states and schools have taken various initiatives to reduce stigma and other associated issues. These initiatives are described below. Costs and benefits are noted if available.



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### *4.2.1 Regional Level Initiatives*

The National School Lunch Program is administered by the U.S. Department of Agriculture's Food and Nutrition Service and run by the school districts. Since NSLP is overseen by the federal government, there aren't many fundamental differences in the program across the states.

The main requirements the USDA set for its operation are:

- 1) The public should be notified, including all households of schoolchildren, local news media, and the unemployment office, that NSLP is available in the schools and of the eligibility criteria.
- 2) The application form must contain the Use of Information Statement, a box for the last four digits of the applicant's social security number, and the Attesting Statement. USDA has sample notification letters and application forms on their website.
- 3) An eligibility determination must be made, the family notified of its status, and the status implemented, within 10 working days of the receipt of the application.<sup>58</sup>

Even though the purpose and procedures are established, the state, school districts, and non-profits have the option to take it upon themselves to find out how they can increase participation, consequently leading to slight variations in the forms or methods of payment. In order to find effective variations to the federal program, we explored both Vermont and other states' approaches at increasing the participation rate in NSLP.

In May 2010, the D.C. Council passed the Healthy Schools Act, a law designed to improve the health and wellness of students attending District of Columbia Public Schools (DCPS). Title II of the Act specifically required all of DCPS to make breakfast free for all students. Since then, the DCPS has also made after school supper are free for all DCPS students.<sup>59</sup> In the first year of the Act's implementation, the District experienced a 34 percent increase in school breakfast participation, from 21, 493 students to 28, 884 students, that yielded an additional 7,400 students on average eating breakfast each day. For the second year, the District predicts further increases in program participation by at least five percent.<sup>60</sup> No data could be found that showed the increase to be attributed solely to needy students.

Universal meal provision reduces the stigma, making participation more attractive to children. Universal breakfast provision, for example, has proven to be an effective strategy for increasing student participation and also for enabling the implementation of breakfast in the classroom, which has an even larger impact on participation.<sup>61</sup> Also, currently, legislation proposals are being developed by Robert Clifford and Doug Davis, Co-Chairs of FDA (Food Service Directors Association of Vermont), to establish a Universal Feeding program, which they estimate will cost roughly \$24,773,674 to implement. Hunger Free Vermont, which is developing a project to study the impacts of



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universal feeding with plans to propose legislation in 2016, estimates that it would cost the state of Vermont over \$30 million a year to make free breakfast and lunch available to all students attending Vermont schools.

As an alternative to providing universal lunch, some states give additional subsidies to the schools. Colorado gives schools with a high percentage of students on subsidized lunch an additional 28 cents for each free and reduced price breakfast served as an incentive to encourage participation.<sup>62</sup> Schools that have a National School Lunch Program make more efficient use of their food service department by also operating a SBP. While numbers were unavailable, such a policy incentivizes schools to participate in the program, thus serving students they would not otherwise. In Rhode Island, children between 130 percent and 185 percent of the poverty level to be eligible for reduced-price meals of 30 cents or less. This is automatically 10 cents lower than the federal threshold of 40 cents.<sup>63</sup> No concrete evidence shows that having a lower price of 30 cents increases participation in the NSLP, but such an example shows prior state initiative to have reduced meal costs for students qualifying for reduced price meals.

The NGA Center for best practices lists a number of regional initiatives addressing under-enrollment in the NSLP, which reflects (to some degree) desirability of participation. The New York City Department of Education, funded by state grants, collaborated with public and private sector experts to redesign the school food program. By revitalizing menu offerings to include culturally relevant foods, improving the lunchroom environment, and creating a business culture, NSLP enrollment rates for the city were at an all-time high at over 75 percent.<sup>64</sup> Increased revenue from the higher enrollment rates allowed the Department to hire a professional chef, improve kitchen facilities, provide training for kitchen managers, and nearly cleared previous program deficits.<sup>65</sup>

Iowa has a payment system called *PaySchool*, which operates similar to the arrangement of a debit card.<sup>66</sup> The schools receive electronic payments from parents who can automatically pay for meals online, eliminating the distinction between students who get full-price, reduced, or free lunch. Parents can monitor what their children eat and even control the meal plan by either limiting some foods entirely or restricting the number of portions each week. Parents were flabbergasted, however, that their children, some as young as five years old, needed to memorize a four digit PIN number.

To discourage competitive food offerings, such as vending machines or a la carte foods, which have been shown to negatively affect student participation in NSLP, some states including Pennsylvania, Rhode Island, and Maine have increased the nutrition standards for outside vendors, manufacturers, brokers, and distributors.<sup>67</sup> In 2007, Connecticut legislatively changed its school code to provide bonus lunch and breakfast meal reimbursements to schools that complied with the new standards.<sup>68</sup> While a la carte options help schools offset the costs of providing school lunches, students do not qualify



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for subsidies if they choose these options and thus may not be able to eat from the a la carte line.<sup>69</sup>

New Hampshire was listed as one of the ten states with the lowest participation rate in the NSLP in 2010, but has since achieved a double digit growth by mandating that each school board make a meal available during school hours to every pupil and offering an incentive of \$0.03 for every breakfast served by districts that have adopted the federal wellness policy requirement of the 2004 Child Nutrition and WIC Reauthorization Act.<sup>70</sup>

### *4.2.2 School Level Initiatives to Increase Participation*

Engagement with respected teachers or administrators may help to reduce stigma, if engagement can happen without compromising enrollee identity. For example, in one school where breakfast was eaten only by students in the National School Lunch Program, the principal sat with the students and made an effort to get to know each and every one of them. He was able to effectively reduce the stigma felt by students eating the breakfast.<sup>71</sup>

Philadelphia schools use a Universal Feeding Program in efforts to reduce stigma. In short, the Universal Feeding Program uses a socioeconomic study to determine the percentage of children in each school eligible for free or reduced-price school meals. If a high percentage of children in a particular school qualify for free or reduced-priced meals, the entire school receives “universal service” (i.e., free meals for all students). By doing this, low-income families do not need to submit a separate meal application for their children to qualify for free meals. Additionally, the school district does not have to make an individual determination of eligibility for each family. This method eliminates cumbersome paperwork for administrators and parents and ensures that every child is able to receive meals at no cost. By all accounts, the school district’s Universal Feeding Program has been extremely successful in reaching its goals to: (1) reduce the administrative cost of managing individual meal applications, (2) increase access to school meals in low-income communities, and (3) increase participation in school meals, especially in high schools, by providing universal service and reducing the stigma associated with free school meals.<sup>72</sup> Schools in Vermont that display similar high percentage levels of low income students may benefit from adopting a similar policy.

California’s Linking Education, Activity, and Fitness pilot found that investment in expanding electronic payment technology helped increase participation overall, especially among free and reduced-price meal recipients.<sup>73</sup> Specific numbers resulting from expanding technology are not readily available.

Other Vermont schools have also taken similar measures to decrease social stigma associated with school lunches. Many school systems in Vermont use debit systems. Parents set up an account and prepay or are billed. Students are issued a swipe card or a



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personal identification number that they present to cafeteria workers who bill the account as students fill their trays.<sup>74</sup>

In the Colchester School District, each student has a cafeteria account. Parents deposit funds into this account, so all meals are pre-paid. Students purchase their meals electronically using a PIN number. This number is entered into a keypad at the end of the cafeteria line. All five schools in this district currently use this PIN System. Steve Davis, Food Service Director of Colchester School District for the past eight years, brought forth this technological initiative when he entered the job. This system, which he purchased from WebSMART, cost \$35,000 to install initially in all five schools, and then costs \$5,000 a year for annual upkeep and maintenance. He considering switching to a new system called NutriKids however, which would provide a report showing the eligible students in the district who are not participating, allowing further investigation of barriers to participation. This company would still use a PIN system. Davis agreed that “the biggest reason for lack of participation” was the social stigma of being identified by his peers as a poor student receiving assistance.<sup>75</sup>

Randolph Union High School, along with four other schools in the Orange Southwest Supervisory Union (OSSU), has a similar program where each student has a PIN number. The PIN account tracks money received, meals purchased and a la-carte items. Parents and students are responsible for the account to stay at a positive balance at all times. Food Service Director Karen Russo asserted that since the implementation of their PIN system twelve years ago, issues of social stigma or overt identification have played minimal parts to under-enrollment in subsidized lunch programs.<sup>76</sup> Though unable to provide the specific trends over the past twelve years, Russo did report that the average participation in the NSLP is at a record high for the district currently at seventy percent for reduced and free together. Their system, purchased from Comalex, was just revamped this past year with a fixed cost of \$13,000, and their regular maintenance cost is about \$600-\$700 each year. Russo believed that the social stigma concept is fading, because even though with her school district’s system, no one can tell who is receiving subsidized meals, “the kids are pretty lax about telling each other” if they’re on a government plan.<sup>77</sup> This school district has a more centralized system of communication about who is using these programs: only the Food Service Director, the approval officers in the individual schools, and the bookkeepers know who is receiving support. Russo commented that the biggest asset to overcoming the difficulty of filling out the applications and boosting eligibility was direct certification.

Essex Junction has taken a different approach to the problem. There, students press their finger to a finger imaging scanner which then charges the meal, whether subsidized or not, to that student’s account. Whenever the child begins his/her education at the school, his/her finger is scanned into the system in a process that takes 15-20 seconds. This is called a finger imaging process and not a finger printing process because the machine does not enable the administrating figure to produce fingerprints if demanded by any



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external actor. The result is total confidentiality of who is enrolled in the NSLP. The new system for six schools cost approximately \$28,000 in fixed costs bought from a Pennsylvania company called Food Service Solutions Inc. It costs an additional \$2000 each year to maintain. The finger print option has the added benefit of avoiding lost debit cards or forgotten PIN numbers.<sup>78</sup> Once enrolled in the school, the parents have the option to enter their children into the district's biometric system. If a parent decides not to enroll their children in the program, the student would just give their name and the cashier would search for it manually. The program was implemented in 2004-2005, and since then, the schools have seen roughly a ten to fifteen percentage point increase in the percent of children enrolled for free lunches and roughly a forty percentage point increase in enrollment for reduced price lunches. A small number of students have chosen not to take part in the program or are unable to have their hands read for scanning.<sup>79</sup>

Two Vermont schools, the Sustainability Academy and the Integrated Arts Academy in Burlington take part in the Provision 2 program of the NSLP for lunches. These schools were selected for the program because they had a high percentage (at least 70-80 percent, although 85 or more is better) of students qualifying for free or reduced price lunch. By participating in the program, all students enrolled in the school automatically receive free lunch; there is no money transfer. This option has proved to be effective in these two schools as all students receive a free lunch and the schools have faced minimal costs to provide the service. While the schools have incurred some cost, much of it has been offset by additional reimbursements provided by participation in the NSLP and reduction of costs associated with determining eligibility and payment structures.<sup>80</sup>

## 5. CONSIDERATIONS FOR VERMONT: A SUMMARY

### *5.1 Analysis of Advantages and Disadvantages to Select Policy Options*

Various state and school district policies have attempted to increase enrollment and participation in the NSLP. The following shows the advantages and disadvantages of some of these policies along with a continuum on which Vermont and school districts may choose to select policy options from depending on the apparent need of the community.

#### *5.1.1 State Policy: Enrollment and Participation*

On the enrollment side, one key state level policy that many states have enacted is to increase the number of students who can be enrolled for the NSLP through direct certification methods. These methods help parents bypass some of the confusion in filling out forms. They come at a substantial cost to state governments. Nevertheless, some of these costs may be one-time only as they are related to setting up infrastructure, and federal support might be available.



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The state could also mandate that schools advertise the program, which could be costly depending on the venue used. Alternatively, the state could require that all students turn in the form, addressing the complexity of filling out forms at minimal costs. While enforcement may come at some cost, such a mandate would help ensure 100 percent participation.

Another option is to provide free meals to all eligible for subsidized meals. Vermont has already implemented this option for breakfasts and could do so for lunches for an added \$300,000. While it costs the state a fairly large sum to implement such a policy, more children would enroll and participate in the program so more children would have access to free food. In order to encourage program enrollment by further subsidizing the meal, but not making it free, the state could attempt to achieve similar results at a lower cost.

On the participation side, the state might also consider creating a state-wide infrastructure for anonymous payment methods to ensure that no overt identification exists to create a social stigma for those on school lunches. This will come at a substantial cost to create a standard system for the variety of schools and needs across the state, and erodes local autonomy. Another option would be to revise, at the state level, nutritional guidelines for *a la carte* menu and vending machine options.

### 5.1.2 School Policy

Schools could play a substantial role in both reducing social stigma to increase participation and reducing the barrier of forms to increase enrollment.

On the enrollment side, schools could also require all parents to turn in forms regardless of eligibility and increase outreach to increase enrollment. At a higher cost, schools could invest in technology or methods to directly certify students with no forms necessary. Such an option may be more worthwhile for larger districts with high numbers of students qualified for subsidized lunches.

Additionally, teachers, principals, and lunch room supervisors can play a role in making sure all students have adequate lunches and feel comfortable, particularly at the elementary school level. While this option affects staff lunch times, it comes at little other costs.

On the participation side, the biggest concern is reducing stigma. Schools have taken various approaches, primarily using technology to create anonymity, to increase participation. Technologies such as PIN numbers, debit cards, or finger imaging have infrastructure costs in machines, software, and training. The relative costs of these technologies vary by school size and contractors. The PIN number and debit card technologies have the disadvantage of requiring students to remember a number or card. These disadvantages can be helped by storing cards in the classroom or providing





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cashiers with a hard copy of students' PIN numbers that they could look up if students forgot their numbers. Schools could also look into the Provision 2 option making lunch free to all students, which would be very beneficial, but difficult to enroll in as it is a federal program.

### **CONCLUSION**

In light of the recent economic downturn, child food security in Vermont has worsened. The National School Lunch Program addresses the issue of child food insecurity. However, our research has shown that some needy families are not taking advantage of this opportunity. Policy options exist to reduce both enrollment and participation, at varying levels of effectiveness and cost, but further targeted research on both issues might be particularly helpful to policymakers.

The biggest problem our research unearthed was the level of uncertainty in the data available, and the lack of Vermont-specific data, on the nature and extent of the enrollment and participation problems. A state- or county-wide student-level survey, possibly done in collaboration with the USDA or academic researchers, could allow policymakers to ascertain the degree to which enrollment is erroneous and the degree to which under-participation is a problem in a variety of schools using different implementation methods. Policy based on such data would be much more informed, allowing better estimates of costs and benefits.



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APPENDIX A. VERMONT NSLP FORM



Vermont Department of Education

**APPLICATION FOR FREE AND REDUCED PRICE SCHOOL MEALS 2011-2012**

To apply for free or reduced price meals, complete this form, sign it and return it to the school.  
If you have any questions, or need help to fill this form out, please call the school.

<b>Part 1. List each child's information.</b>				
<b>FULL NAME(S) of student(s)</b>	<b>Name of School</b>	<b>Grade</b>	<b>Check box if a Foster Child</b>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	
			<input type="checkbox"/>	
<b>Part 2. Benefits:</b> If any member of your household received 3SquareVT or ReachUp assistance, provide the name of the head of household and the case number for the person who receives benefits. If no one receives these benefits, skip to part 4.				
<b>Name:</b>		<b>Case Number:</b>		
<b>Part 3.</b> If any child you are applying for is Homeless, Migrant, or a Runaway check the appropriate box and contact your school Homeless Liaison or Migrant Coordinator. <input type="checkbox"/> Homeless <input type="checkbox"/> Migrant <input type="checkbox"/> Runaway				
<b>Part 4. INCOME Eligibility</b> (if you completed 3SquareVT or ReachUp section of Part 2 above, skip to Part 5)		Enter gross income (before deduction) of each household member and state how often it is received (Weekly, monthly, every two weeks, twice a month, or annually)		
<b>Name of household member</b> List names of all household members, including students listed above	<b>Gross Earnings from work - before deductions</b>	<b>Child Support, Alimony or Welfare</b>	<b>Social Security Pensions Retirement</b>	<b>Any other Income</b>
Sample: Jane Smith	\$ 249.00 / weekly	\$ 300.00 / month	\$ _____ / _____	\$ _____ / _____
	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____
	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____
	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____
	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____	\$ _____ / _____
<b>Part 5. SIGNATURE AND SOCIAL SECURITY NUMBER:</b> I certify that all of the above information is true and correct and that all income is reported. I understand that this information is being given for the receipt of Federal funds that school officials may verify the information on the application, and that deliberate misrepresentation of the information may subject me to prosecution under applicable State or Federal laws.				
<b>Signature of Parent or Legal Guardian</b>		<b>Social Security Number:</b> XXX - XX - _____ <input type="checkbox"/> I do not have a Soc. Sec. number		
<b>Street/Apt No.</b>		<b>Home Phone</b>		
		<b>Work Phone</b>		
<b>City/State/Zip</b>		<b>Date Signed</b>		
<b>Other Benefits:</b> For information on free or low-cost health insurance contact Green Mountain Care at 1-800-250-8427 or <a href="http://www.GreenMountainCare.org">www.GreenMountainCare.org</a> . For information on 3SquareVT to help with food costs, call 1-800-479-6151 or visit <a href="http://www.vermontfoodbank.com">www.vermontfoodbank.com</a> .				
<b>FOR SCHOOLS USE ONLY OR PLEASE DO NOT WRITE BELOW THIS LINE</b>				
<b>Household Size:</b> _____	<b>Total Income</b> _____ <b>Per Time Period</b> _____		<b>NOTE: Annual Income Conversion -</b> Weekly x 52 - Every 2 weeks x 26 - Twice a Month x 24 - Monthly x 12	
<b>To be valid, this form must be signed and dated.</b>		<b>Eligibility Determination:</b> (Check the box and circle the reason)		
<b>Signature of Approving Official</b> _____	<b>Date</b> _____	<input type="checkbox"/> <b>Free Income</b>		<input type="checkbox"/> <b>Denied Over Income Incomplete Form</b>
<b>Signature of Confirming Official</b> _____	<b>Date</b> _____	<input type="checkbox"/> <b>3SquareVT / Reach-Up</b>		<b>Temporary Approval:</b> _____ <b>Free (30 days)*</b>
		<input type="checkbox"/> <b>Migrant/Runaway/Homeless</b>		<b>Elig. Start</b> _____ <b>through End Date</b> _____
		<input type="checkbox"/> <b>Name Of Foster Child</b> _____		<b>Follow up required after 30 days</b>



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### APPENDIX B. MATHEMATICA POLICY RESEARCH, INC. SURVEY PROCESS

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Mathematica Policy Research, Inc. conducted field-based research rather than data analyses by contacting families who refused to submit verification materials for an interview.<sup>81</sup> The researchers analyzed the detailed information they collected about household size and income to determine the accuracy of the NSLP certification process. They reviewed records such as the families' original applications and asked in-depth questions about each member including:

- Household size
- Monthly income
- Number of students
- Name, school, and grade level of one student from the household (randomly selected in cases with more than one student)
- Whether participation in the Food Stamp Program, TANF, or FDPIR was reported on the application (yes/no)
- Whether the application reported that the child was a foster child (yes/no)
- District's initial determination of eligibility status (free, reduced-price, denied, missing)
- Result of verification process (no change, free to reduced-price, free to paid, reduced price to free, reduced-price to paid, missing)
- Reason for status change, if applicable (change in income, change in household size, change in food stamp/TANF/FDPIR participation, refusal to cooperate or no response, other, missing)

Based on the families' responses, they were then split into either category (1) verified and maintained certification status, or (2) not verified and thus terminated from NSLP, and asked questions with a focus on household composition, household income by person and by source, and documentation of reported income.

The researchers also used the following methods of obtaining data: (1) they sent surveys and conducted follow-up telephone interviews with School Food Authority Directors (SFAs) to obtain information on district characteristics, verification procedures and outcomes, number of students enrolled, meals served, and other relevant information. (2) Field interviewers completed in-person interviews with the parents of 2,950 students certified for free or reduced-price meals and 453 students who applied for but were denied meal benefits to collect information on household composition and size as well as detailed information on the sources of income of family members. Each household's true eligibility status was determined by verifying documentation of each family's sources of income and amounts reported in the interview along with the data abstracted from the household's free or reduced-price meal certification application or from direct



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certification documents. (3) Field staff collected data on students' identifying information, household composition and income, qualifying program participation, and the districts' certification decision from acquired copies of or abstracted data from application forms and direct certification documents for a sample of 6,806 students certified for free and reduced-price meal benefits and 1,040 students who applied for but were denied meal benefits to determine sources of certification error. (4) They also collected other administrative records data from SFA directors on the sample used to estimate certification error including students' enrollment start and stop dates and any changes in certification status during the school year, students' monthly meal program participation during the school year. (5) They observed approximately 100 cashier transactions at each of the 245 schools participating in NSLP to estimate the degree to which cashiers accurately classified meals as reimbursable or not.



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