What is NCSALL?
A federally funded research and development center focused solely on adult learning, the National Center for the Study of Adult Learning and Literacy (NCSALL) is a partnership of the Harvard University Graduate School of Education, Literacy Research and Information, Teachers’ College, Columbia University, Portland State University in Oregon, the Center for Literacy Studies at the University of Tennessee in Knoxville. NCSALL’s efforts are dedicated to improving practices in educational programs that serve adults with limited literacy and English language skills, and those without a high school diploma.

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The Relationship of the Component Skills of Reading to Performance on the International Adult Literacy Survey (IALS) John Guthrie, Kristen Yamamoto, and Diana Eicher

Key Finding
It is possible to identify how proficient adults need to be in word recognition and vocabulary to achieve level 2 performance on the International Adult Literacy Survey (IALS)—the level associated with greatly enhanced life opportunities in many domains.

Related Recommendation
- Learners whose vocabulary and word recognition are more than 3/4 of people in level 3 and above might be candidates for intensive, highly focused, direct instruction in the vocabulary encountered in written language and in rapid, accurate word recognition.

Key Finding
The IALS is an unrivaled literacy assessment containing real-world items embedded in a functional context. This has led some to argue that IALS performance is primarily a function of adults’ life experiences and their familiarity with the sociocultural context of the tasks. In short, for many years experts felt that well-known basic reading skills like word recognition and vocabulary play critical roles in real-life literacy performance, much as they do in more traditional academics, school-based literacy assessments. The good news about these basic skills is that, unlike life experience and cultural context, word recognition and vocabulary are readily teachable by AIL practitioners.

implications
- Pedagogies of strengths and needs in reading vary quite a bit among adults. Quick, easy-to-administer and easy-to-score tests of key reading skills, such as those used in this study, can be a useful tool in teachers’ strengths and needs. Assessing learners in these component skills is the necessary first step in planning efficient, focused instruction.
- For adults in IALS levels 1 and 2, governments should consider assessing not just IALS reading comprehension, but the key teachable components of comprehension—word recognition and vocabulary— that truly determine comprehension ability.

Class 3 is comprised of 93% non-native speakers of English, of whom 75% are enrolled in ESL classes. Their raw decoding ability (of pseudo-words) is nearly equal to that of participants in Class 1, but their vocabulary is much weaker. Twenty-two percent are in IALS Level 3, and 32% are Level 1.
- Class 4 is 99% non-native speakers of English, of whom 92% were enrolled in ESL classes. Primarily because of their weak English vocabulary, only 69% of Class 4 are in IALS Level 1 and only 29% are in Level 2.
- Class 5 is made up of 89% non-native and 11% native speakers of English. Among the largest group, many show signs of reading disability and report severe reading difficulties in childhood. Eighty-eight percent of the people in Class 5 are in IALS Level 1 and only 10% are in Level 2.

The Findings—Part 2
We performed a more advanced analysis of the test data to explore whether proficiency in vocabulary (PPC-IV), word recognition (PPC-WR), pseudo-word reading (PPC-EW), spelling, and short-term memory (WMS-PPC), could be used to describe patterns of reading strengths and needs among adult literacy students. That analysis yielded three patterns or classes of adult readers whose characteristics are summarized in the table below:

<table>
<thead>
<tr>
<th>Class</th>
<th>% of Total Sample (n=1034)</th>
<th>% Native English Speakers</th>
<th>% Non-Native English Speakers</th>
<th>IALS Free Literacy Level %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>Level 2</td>
<td>Level 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 1</td>
<td>48 (n=479)</td>
<td>86</td>
<td>14</td>
<td>9 (n=42)</td>
</tr>
<tr>
<td>Class 2</td>
<td>17 (n=174)</td>
<td>72</td>
<td>28</td>
<td>26 (n=96)</td>
</tr>
<tr>
<td>Class 3</td>
<td>13 (n=134)</td>
<td>95</td>
<td>5</td>
<td>33 (n=32)</td>
</tr>
<tr>
<td>Class 4</td>
<td>12 (n=123)</td>
<td>81</td>
<td>19</td>
<td>68 (n=38)</td>
</tr>
<tr>
<td>Class 5</td>
<td>5 (n=49)</td>
<td>31</td>
<td>69</td>
<td>83 (n=37)</td>
</tr>
</tbody>
</table>

Class 1, making up 46% of the sample, had the highest range of IALS skills, with 69% in Level 1 or above, 26% in Level 2, and 5% in Level 3. Native speakers of English predominated, making up 86% of the class. This group was also the youngest overall.

Class 2 had weaker IALS skills with only 33% scoring at IALS Level 3 or above, 65% in Level 2, and 10% in Level 1. The non-native English speakers on the group had good English skills and were predominantly enrolled in ESL or ABE rather than in ESL classes. The native English speakers in Class 2 had weak print skills and some signs of reading disability.

Class 3 is comprised of 95% non-native speakers of English, of whom 75% are enrolled in ESL classes. Their raw decoding ability (of pseudo-words) is nearly equal to that of participants in Class 1, but their vocabulary is much weaker. Twenty-two percent are in IALS Level 3, and 32% are Level 1.

Class 4 is 99% non-native speakers of English, of whom 92% were enrolled in ESL classes. Primarily because of their weak English vocabulary, only 69% of Class 4 are in IALS Level 1 and only 29% are in Level 2.

Class 5 is made up of 89% non-native and 11% native speakers of English. Among the largest group, many show signs of reading disability and report severe reading difficulties in childhood. Eighty-eight percent of the people in Class 5 are in IALS Level 1 and only 10% are in Level 2.
The study also continues work done by Scarbrough and NCSAL’s Rosalind Davison to develop reading profiles of IALS Levels 1 and 2 adults that will be informative for teachers, administrators, and policymakers in the field of adult literacy.

Goals
The study’s first goal was to see if specific levels of proficiency—coping points—in the aforementioned reading components might prove higher levels of reading comprehension. To explore this question, the researchers compared the reading component skills of subjects at Level 1 and 2 of the International Adult Literacy Survey (IALS) with those of Level 3 students. Level 5 is the IALS level associated with increased civic participation, increased economic success and independence, and enhanced opportunities for lifelong learning and personal literacy.

The second goal was to determine whether levels of proficiency in the key components of reading could be used to describe the strengths and needs of readers at Level 1 and 2 adults, and therefore to use teachers, administrators, and policymakers to guide assessment design and instructional decisions.

The Sample
The study sample was a convenience sample rather than a representative sample. It included 900 adult learners from five states who were enrolled in adult basic education (ABC), adult secondary education (ASE), and English for Speakers of Other Languages (ESOL) classes. Forty-eight adults who had completed high school or above were added to the household sample for comparison purposes, for a total of 1,234 participants. Beginning ESOL learners were not included in the study because we did not have the capability to interview them in their native languages. Otherwise, the sample was generally comparable to the nationally enrolled adult literacy population with respect to gender, age, and representation of major U.S. ethnic groups.

All participants were assessed in 15 receptive (oral vocabulary, 2 reading-reading for accuracy and speed, 5 pseudo-word reading for accuracy and speed, 4 spelling), 5 rapid naming of letters, and 6 short-term working memory. They also comprised pre- and document literacy tasks from the IALS and a modified version of the IALS background questionnaire covering educational history, employment, reading habits, etc.

Risk factors for the population were alternative testing, language differences, inclusion of reading-disabled students in regular classes, and lack of adequate resources and training for teachers or school administrators.

Key Finding
Adult literacy students can be grouped into five distinct classes of readers:

Class 1: Proficient ABC, ASE, and Household Sample readers with very strong reading and decoding skills that tend to underperform on three vocabulary skills.

Class 2: ABC and ASE students with weaker decoding skills that tend to underperform on three vocabulary skills.

Class 3: Advanced ESOL students with strong decoding but noticeably weaker English vocabulary skills.

Class 4: Intermediate ESOL students with moderate weaknesses in decoding and vocabulary skills in English.

Class 5: Low-intermediate ESOL students and reading disabled ABC native speakers with marked needs in decoding and vocabulary skills.

Related Recommendation
The adult education system can begin to use these adult reader profiles to identify related instructional profiles as a step toward more focused and differentiated reading instruction for adult learners. Short, easy-to-administer tests that give information about the learner’s component reading skills will help identify the reader’s profile and enable teachers to choose appropriate instructional approaches.

Key Finding
Simply reading a learner’s score on a reading comprehension test usually does not give teachers enough information to plan efficient instruction that is focused on the root causes of comprehension difficulties.

The following relationship of scores in the five key components of reading proficiency on the IALS prose literacy assessment (a-axis) revealed an interesting pattern. At the extremities points between IALS Level 2 and IALS Level 5 (just before 270), readers score 75 to 85 percent correct on the components of vocabulary, real-world reading, and spelling. This suggests that 75 to 85 percent proficiency in those components may be the minimum level of skills needed to attain higher levels of performance in real-world comprehension. In short, this pattern begins to answer an important question: “How proficient do IALS/ESOL readers have to be at vocabulary and word recognition in order to read at high school levels and above?”

The idea also showed that up to IALS 273 (Level 5), the non-native speakers of English read English pseudo-words better than the ASE and ASE learners. Many reading researchers consider difficulty with reading pseudo-words to be an indication of the core phonological deficits that is at the root of most reading disabilities. Researchers’ responses on the background questionnaires confirmed the ABE/ESOL native English speakers reported a very high incidence of childhood reading difficulties, while non-native speakers of English reported a very low incidence of childhood reading problems.
**Key Finding**
Adult literacy rates can be grouped into five distinct classes of readers:

- **Class 1:** Proficient ABLE and ASE, and Household Sample readers with very strong reading and vocabulary skills
- **Class 2:** ABLE and ASE students with weaker reading skills that tend to undermine their vocabulary skills
- **Class 3:** Advanced ESL students with strong reading but noticeably weaker English vocabulary skills
- **Class 4:** Intermediate ESL students with moderate weaknesses in reading and vocabulary skills in English
- **Class 5:** Low-intermediate ESL students and reading disabled ABLE native speakers with marked needs in reading and vocabulary skills

**Related Recommendation**
The adult education system can begin to use these adult reader profiles to identify related instructional profiles as an improvement towards more focused and differentiated reading instruction for adult learners. Short, easy-to-administer tests that give information about the learner’s component reading skills will help identify the reader’s profile and enable teachers to choose appropriate instructional approaches.

**Key Finding**
Simply knowing a reader’s score on a reading comprehension test is not usually enough to give teachers enough information to plan efficient instruction that is focused on the root causes of comprehension difficulties.

The study also continues work done by Stracher and NCALL’s Rosalind Davidson to develop reading profiles of IALS Levels 1 and 2 adults that will be informative for teachers, administrators, and policymakers in the field of adult literacy.

**Goals**
The study’s first goal was to see specific levels of proficiency—termed proficiency ranges—for the aforementioned reading components might propel higher levels of reading comprehension. To capture this question, the researchers compared the reading component skills of students at Levels 1 and 2 of the International Adult Literacy Survey (IALS) with those of Level 3 students. Level 3 is the IALS level associated with increased civic participation, increased economic success and independence, and enhanced opportunities for lifelong learning and personal literacy.

The second goal was to determine whether levels of proficiency in the key component of reading could be used to describe the strengths and needs of readers at Level 1 and 2 adults, and therefore to useful to teachers, administrators, and policymakers to guide assessment design and instructional decisions.

**The Sample**
The study sample was a convenience sample rather than a representative sample. It included 950 adult learners from five states who were enrolled in adult basic education (ABE), adult secondary education (ASE), and English for Speakers of Other Languages (ESOL) classes. Forty-six adults who had completed high school or above were added to the household sample for comparison purposes, for a total of 1,294 participants. Beginning ESL learners were not included in the study because we did not have the capability to interview them in their native languages. Otherwise, the sample was generally comparable to the nationally enrolled adult literacy population with respect to gender, age, and representation of major U.S. ethnic groups.

<table>
<thead>
<tr>
<th>Male/Female</th>
<th>U.S. DOE OAE* Data</th>
<th>Level 1 Sample</th>
<th>Level 2 Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age Distribution</td>
<td>16-24</td>
<td>25-44</td>
<td>45-65</td>
</tr>
<tr>
<td>Read/write for accuracy and speed</td>
<td>40%</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>Proficiency level for accuracy and speed</td>
<td>40%</td>
<td>44%</td>
<td>48%</td>
</tr>
<tr>
<td>Spelling</td>
<td>7%</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>Short or error reading accuracy</td>
<td>14%</td>
<td>4%</td>
<td>9%</td>
</tr>
<tr>
<td>Short or error reading accuracy</td>
<td>7%</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>High or error reading accuracy</td>
<td>30%</td>
<td>25%</td>
<td>30%</td>
</tr>
<tr>
<td>Readers</td>
<td>40%</td>
<td>38%</td>
<td>40%</td>
</tr>
</tbody>
</table>

All participants were assessed in 1) receptive (oral vocabulary, 2) real-world reading for accuracy and speed, 3) pseudo-word reading for accuracy and speed, 4) spelling, 5) rapid naming of letters, and 6) short-term working memory. They also completed prose and document literacy tasks from the IALS and a modified version of the IALS background questionnaire covering educational history, employment, reading habits, etc.

**The Findings—Part 1**

Floating the relationship of scores on the five key components of reading proficiency on the IALS prose literacy assessment (x-axis) revealed an interesting pattern. At the extremes points between IALS Level 2 and IALS Level 3 (just below 270), readers scored 75% of the population correct on the components of vocabulary, real-world reading, and spelling. This suggests that 75% is a proficient proficiency in those components may be the minimum level of skills needed to attain higher levels of performance in real world comprehension. In short, this is the point where one begins to answer an important question: “How proficient do ABLE/ESOL readers have to be at vocabulary and word recognition in order to read at high school levels and above?”

The idea also showed that for IALS 275 (Level 3), the non-native speakers of English read English pseudo-words better than the ABE and ASE learners. Many reading teachers consider difficulty reading pseudo-words to be an indication of the core phonological deficit that is the root of most reading disabilities. Participants’ responses on the background questionnaire confirmed this: ABLE native English speakers reported a very high incidence of childhood reading difficulties, while non-native speakers of English reported a very low incidence of childhood reading problems.

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The study also continues work done by Struck and NCES’s Rosalind Davison to develop reading profiles of IALS Levels 1 and 2 adults that will be informative for teachers, administrators, and policymakers in the field of adult literacy.

Goals
The study’s main goal was to use specific levels of proficiency—ranging from the aforementioned reading components to multiple levels of reading comprehension—to explore this question. The researchers compared the reading component skills of students at Levels 1 and 2 of the International Adult Literacy Survey (IALS) with those of Level 3 students. Level 3 is the IALS level associated with increased civic participation, increased economic success and independence, and enhanced opportunities for lifelong learning and personal literacy.

The second goal was to determine what levels of proficiency in the key components of reading could be used to describe the strengths and needs of reading at Level 1 and 2 adults, and therefore to use the teacher, administrators, and policymakers to guide assessment design and instructional decisions.

The Sample
The study sample was a convenience sample rather than a representative sample. It included 950 adult learners from five states who were enrolled in adult basic education (ABE), adult secondary education (ASE), and English for Speakers of Other Languages (ESOL) classes. Forty-eight adults who had completed high school or above were added to the household sample for comparison purposes, for a total of 1,254 participants. Beginning ESL learners were not included in the study because we did not have the capability to interview them in their native languages. Otherwise, the sample was generally comparable to the nationally enrolled adult literacy population with respect to gender, age, and representation of major U.S. ethnic groups.

The idea also showed that as high as IALS 275 (Level 3), the non-native speakers of English read English pseudo-words better than the ABE and ASE learners. Many reading researchers consider difficulty with reading pseudo-words to be an indication of the core phonological defect that is at the root of most reading disabilities. Participants’ responses on the background questionnaires confirmed the ABE/ESOL native English speakers reported a very high incidence of childhood reading difficulties, while non-native speakers of English reported a very low incidence of childhood reading problems.

Fluent reading of a series in the first key component (reading comprehension proficiency on the IALS prose literacy assessment (4-az) revealed an interesting pattern. At the minimum points between IALS Level 2 and IALS Level 3 (just below 275), readers’ scores fell to 75 or 85 percent correct on the components of vocabulary, real-word reading, and spelling. This suggests that 75 to 85 percent proficiency in those components may be the minimum level of skills needed to attain higher levels of performance in real-world comprehension. In short, these results begin to answer an important question: ‘How proficient do ABE/ESOL readers have to be at vocabulary and word recognition in order to read at high school levels and above?’

Key Finding
Adul literacy students can be grouped into five distinct classes of readers:

Class 1: Proficient ABE, ASE, and Household Sample readers with very strong decoding and vocabulary skills

Class 2: ABE and ASE students with weaker decoding skills that tend to undertake the few vocabulary skills

Class 3: Advanced ESLI, students with strong decoding but notoriously weaker English vocabulary skills

Class 4: Intermediate ESLI, students with moderate weaknesses in decoding and vocabulary skills in English

Class 5: Low Intermediate ESLI, students and reading disabled ABE native speakers with marked needs in decoding and vocabulary skills

Related Recommendation
The adult education system can begin to use these adult reader profiles to identify related instructional profiles as a step towards more focused and differentiated reading instruction for adult learners. Short, easy-to-administer tests that give information about the learner’s component reading skills will help identify the reader’s profile and enable teachers to choose appropriate instructional approaches.

Key Finding}
Simply learning a reader’s score on a reading comprehension test does not give teachers enough information to plan efficient instruction that is focused on the root causes of comprehension difficulties.
The Findings—Part 2
We performed latent class analysis of the test data to explore whether proficiencies in vocabulary (PPVT-V), word recognition (CTOPP), word attack (CTOPP), spelling, and drawn-sentence memory (MDAM 200K) could be used to describe patterns of reading strengths and needs among adult literacy students. That analysis yielded two profiles or classes of adult readers whose characteristics are summarized in the table below.

<table>
<thead>
<tr>
<th>Class</th>
<th>% of Total Sample (n=1,034)</th>
<th>% Native English Speakers</th>
<th>% Non-Native English Speakers</th>
<th>IALS Free Literacy Level %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1</td>
<td>50 (50%)</td>
<td>67</td>
<td>33</td>
<td>96</td>
</tr>
<tr>
<td>Level 2</td>
<td>42 (42%)</td>
<td>88</td>
<td>12</td>
<td>77</td>
</tr>
<tr>
<td>Level 3</td>
<td>8 (8%)</td>
<td>25</td>
<td>75</td>
<td>90</td>
</tr>
</tbody>
</table>

Class 1, making up 45% of the sample, had the highest range of IALS skills, with 43% in Level 1 or above, 44% in Level 2, and 2% in Level 3. Native speakers of English predominated, making up 96% of the class. This group was also the youngest overall.

Class 2 had weaker IALS skills with only 35% scoring at IALS Level 3 or above, 63% in Level 2, and 2% in Level 1. The non-native English speakers on the group had great English skills and were predominantly enrolled in ABE or ESL rather than in ESL classes. The native English speakers in Class 2 had weak print skills and some signs of reading instability.

Class 3 is comprised of 95% non-native speakers of English, of whom 75% are enrolled in ESL classes. Their raw decoding ability (of pseudo-words) is nearly equal to that of participants in Class 1, but their vocabulary is much weaker. Twenty-two percent are in IALS Level 3, and 32% are in Level 1.

Class 4 has 99% non-native speakers of English, of whom 92% were enrolled in ESL classes. Primarily because of their weak English vocabulary, 68% of Class 4 are in IALS Level 1 and only 29% are in Level 2.

Class 5 is made up of 95% non-native and 5% native speakers of English. Among the largest group, many show signs of reading difficulty and report severe reading difficulties in childhood. Eighty-four percent of the people in Class 5 are in IALS Level 1 and only 16% are in Level 2.

Implications
Patterns of strengths and needs in reading vary quite a bit among adult readers. Quick, easy-to-administer and easy-to-score tests of key reading skills, such as those used in this study, can be a useful tool to expose learners’ strengths and needs. Assessing learners in these component skills is the necessary first step in planning efficient, focused instruction.

For adults in IALS levels 1 and 2, governments should consider assessing not just IALS reading comprehension, but the key teachable components of comprehension—word recognition and vocabulary—that are the direct comprehension ability.

The Relationship of the Component Skills of Reading to Performance on the International Adult Literacy Survey (IALS)

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The Relationship of the Component Skills of Reading to Performance on the International Adult Literacy Survey (IALS)

Key Finding
It is possible to identify how proficient adults need to be in word recognition and vocabulary to achieve level 2 on the International Adult Literacy Survey (IALS) or the level associated with greatly enhanced life opportunities in many domains.

Related Recommendation
Learners whose vocabulary and word recognition are not those of people in level 3 above might be candidates for intensive, highly focused, direct instruction in the vocabulary encountered in various language and in visual, accurate word recognition.

Key Finding
The IALS is an unrivaled literacy assessment containing word-level items embedded in a functional context. This has led some to argue that IALS performance is primarily a function of adults’ life experiences and their familiarity with the socioeconomic context of the items. In short, for years adults’ reading proficiencies and their known basic reading skills—like word recognition and vocabulary play critical roles in real life literacy performances, much as they do in more traditional academic, school-based literacy assessments. The good news about these basic skills is that, unlike life experience and cultural word recognition and vocabulary are readily teachable by IALS practitioners.

The Research Brief highlights key findings that form a subset of a larger study being conducted jointly by NCSAL’s John Strickler and Kentaro Yamaamoto and Erwan Kersch of the Educational Testing Service (ETS). This study builds on the proposition that a reader’s comprehensive performance is largely determined by how or by virtue of abilities in two areas—print components and meaning components—and that learners’ skills, and therefore instructional needs, vary depending upon their relative strengths and weaknesses in these component areas. Print components include decoding accuracy and fluency; meaning components include oral vocabulary skills.

NCSAL National Center for the Study of Adult Literacy and Learning
A NCSAL Research Brief
May 2005

T his Research Brief highlights key findings that form a subset of a larger study being conducted jointly by NCSAL’s John Strickler and Kentaro Yamaamoto and Erwan Kersch of the Educational Testing Service (ETS). This study builds on the proposition that a reader’s comprehensive performance is largely determined by how or by virtue of abilities in two areas—print components and meaning components—and that learners’ skills, and therefore instructional needs, vary depending upon their relative strengths and weaknesses in these component areas. Print components include decoding accuracy and fluency; meaning components include oral vocabulary skills.
The Relationship of the Component Skills of Reading to Performance on the International Adult Literacy Survey (IALS) **

John Stroger, Karen Yamamoto and Brenda Kirsch

Key Finding

It is possible to identify how proficient adults need to be in word recognition and vocabulary to achieve Level 2 performance on the International Adult Literacy Survey (IALS) — the level associated with greatly enhanced life opportunities in many domains.

Related Recommendation

Retrieve these vocabulary words, by phonetic spellings, since they are more common to those who recognize the word than to those who pronounce the word correctly. In addition to retrieving these words, vocabulary instruction should include other related skills — e.g., spelling, root words, and affixes.

Implications

The component skills of reading are highly correlated with overall skill levels, and each feeds back into the others. In other words, improving the skills of any one component will lead to improvements in the others. Therefore, strategies that address both the component skills and whole-language reading instruction are likely to be more effective than those that focus on teaching only individual skills.

For adults in IALS Level 3 and 2, governments should consider assessing not just IALS reading comprehension, but the key teachable components of comprehension — word recognition and vocabulary — that can deeply improve comprehension.

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What is IALS? A federally funded research and development center focused solely on adult learning, the National Center for the Study of Adult Literacy and Literacy (IALS) is a partnership of the Harvard University Graduate School of Education, University of Minnesota, Kent State University, University of Wisconsin Madison, University of Tennessee in Knoxville, UC Berkeley, Oregon State University, UCLA, and the University of Tennessee in Knoxville. NCSALL’s efforts are dedicated to improving practice in educational programs that serve adults with limited literacy and English language skills, and those without a high school diploma.

The Research Brief, along with practical and policy recommendations, can be downloaded free from NCSALL’s Web site at www.ncsall.net.

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