

## CHAPTER 4

### RESULTS

#### *Perspective*

*If I were measuring a child by the yard, a test score would be worth about an inch  
(Personal communication, Sam A. Robinson, 1969).*

The purpose of this study was to determine the opinions of Virginia teachers about the outcomes of high-stakes testing and measurement-driven instruction. A mailed questionnaire was sent to a systematic sample of Virginia teachers and in-depth telephone interviews were conducted with a small sample of teachers who received the mailed questionnaire. The following is a description of specific selection criteria for the interview sample as well as quotations and themes derived from the interviews.

#### Data Analysis for Interviews

##### Description of the Interview Population

One hundred sixteen respondents to the mailed questionnaire were willing to participate in a telephone interview to allow me to more fully explore teacher opinions about the outcomes of Standards of Learning testing. Potential respondents were categorized into a matrix with twelve categories corresponding to the following variables: SOL test grade (yes/no), tenure status (yes/no), and school SES (high, middle, or low). The population in each cell is presented in Table 9.

One respondent was randomly selected from each category to participate in a telephone interview for a total of 12 interviews. Therefore, approximately 10 percent of the population indicating a willingness to be interviewed were actually interviewed. All interviews were conducted in March of 2001.

##### Description of the Telephone Interview Sample

Participants in telephone interviews represented a range of demographic characteristics. Almost all interviewees were female, and most had reached continuing contract “tenure” status. The majority were teachers in the elementary grades, though the entire spectrum of elementary school, middle school, high school, and specialty staff was represented. Interviewees’ teaching experience was evenly distributed among the stipulated experience categories. Likewise, school SES was distributed approximately evenly across the SES categories. Teachers were evenly divided among those with and without SOL test grade responsibility. Specific characteristics for each interviewee are provided in Table 10.

Table 9

Populations and Samples for Conducting Telephone Interviews by SOL Test Grade, Tenure Status, and School Socio-Economic Status (SES)

Variables	<u>N</u>	
	Population	Sample
Low SES, tenured, SOL, test grade	10	1
Low SES, non-tenured, SOL test grade	2	1
Low SES, tenured, non-SOL test grade	10	1
Low SES, non-tenured, non-SOL test grade	3	1
Mid SES, tenured, SOL test grade	24	1
Mid SES, non-tenured, SOL test grade	3	1
Mid SES, tenured, non-SOL test grade	10	1
Mid SES, non-tenured, non-SOL test grade	8	1
High SES, tenured, SOL test grade	33	1
High SES, non-tenured, SOL test grade	3	1
High SES, tenured, non-SOL test grade	13	1
High SES, non-tenured, non-SOL test grade	3	1
Total	122	12

Table 10

Characteristics of Participants in Telephone Interviews

Participant number	Assignment	Experience in years <sup>a</sup>	Tenure status	Test grade status	Gender	School SES
14	K-5	11-19	yes	no	female	high
149	K-5	11-19	yes	yes	female	mid
158	6-8	0-3	no	yes	male	high
212	Art	20-29	yes	no	female	mid
264	6-8	4-10	yes	no	male	mid
265	K-5	20-29	yes	yes	female	high
280	9-12	0-3	no	no	female	low
344	9-12	0-3	no	yes	female	low
397	K-5	11-19	yes	no	female	low
406	K-5	30+	yes	yes	female	low
420	K-5	0-3	no	no	female	high
463	K-5	4-10	yes	yes	female	mid

<sup>a</sup>Data were collected in categories.

## Interview Questions

Interview questions focused on three domains first identified in the mailed questionnaire: (1) Teacher beliefs about the effects of SOL testing on instructional practices, (2) teacher beliefs about the effects of SOL testing on teachers, and (3) teacher beliefs about the effects of SOL testing on students. Questions were written to evoke neither positive nor negative responses. Content validity for planned interview questions was established with the assistance of practicing teachers and is presented in Tables G-1 and G-2 in Appendix G. Specific questions for each domain are in Exhibit 2 in Chapter 3. Some spontaneous probing or clarifying questions were asked in the interviews if respondents gave incomplete answers or if additional information was needed to establish their position on a particular topic. I have maintained a complete written transcript of all interviews for examination by future researchers. Additionally, all pertinent comments from interviews are presented in Raw Data Matrices in Appendix H. Pertinent comments recorded by teachers on the mailed questionnaire are included on occasion to help amplify and explain derived themes. Comments recorded on the mailed questionnaire are presented in the Raw Data Matrices.

## Themes Inherent in the Interview Data

Use of the Constant Comparative Method of data analysis produced a number of *outcome propositions* (Maykut & Morehouse, 1994, pp. 143-144). The authors describe outcome propositions as themes discovered after the categorization of data under propositional statements. Some propositional statements may stand alone as outcome propositions while several propositional statements may be combined to produce one outcome proposition.

Outcome propositions have been prioritized to consider their importance to the inquiry and their prominence in the data (Maykut & Morehouse, 1994, p. 158). I have termed outcome propositions from this study as *first order* or *second order*. First order outcome propositions are those supported by an extensive amount of data from throughout the written record and are characterized by numerous related sub-categories of thought. Second order outcome propositions, though important in understanding teacher opinions, are characterized by a less extensive written record and are not supported by extensive sub-categories of related opinion. The numerous propositional statements supporting outcome propositions are explained in the narrative. First and second order outcome propositions are listed below:

### First Order Outcome Propositions

1. SOL testing has resulted in a variety of negative consequences for educators.
2. SOL testing has resulted in a variety of negative consequences for students.
3. SOL testing has resulted in a variety of negative consequences for instructional practices.
4. SOL testing can result in positive outcomes for students, teachers, and schools.

## Second Order Outcome Propositions

1. Principal behavior influences the stress teachers feel as a result of SOL testing.
2. The long-term effects of SOL testing are unknown.
3. Parents often do not meet their responsibilities to help ensure student achievement on SOL tests.
4. SOL testing results in less joy in teaching and learning.

## First Order Outcome Propositions

### Proposition One: SOL Testing has Resulted in a Variety of Negative Consequences for Educators

After thoroughly reading and analyzing the data from teacher interviews, I view this outcome proposition as being supported most persuasively by the data. Seven sub-categories support negative consequences for educators.

(1) SOL testing has resulted in increased stress and loss of self-esteem for teachers. Teachers reported extensively that SOL testing was adding additional and often harmful levels of stress in their work and personal lives. Stress was reported as being obvious to others if not to teachers themselves. Dissatisfaction with teaching as a profession has become more evident and teachers described damage to their own well being.

(Interview 149) My daughter tells me, “Mom, I know this testing has an effect on you” because she could tell a difference when the writing tests would come around in March and then in May when we would test again. And, sometimes you are so wrapped up in your daily routine that you don’t even feel it yourself, but it’s there and other people notice it. (Raw Data Matrix E-1, Appendix E)

(Interview 212) I will tell you I have gotten several letters from the county and from the state for us to remind our friends and young people to go into education, and you know I don’t know if I can do that with a good conscience, I really don’t. Because they’re not getting the kind of pay for the pressure that they’re being put under. The kind of pressure some of these teachers are under, depending on their location, is every bit as great as someone on Wall Street, and they certainly aren’t getting the pay from it; they aren’t getting anything back from it. And you always have to ask yourself, what’s the payoff? Are you doing it because of the little lightbulb that goes off from knowing that you helped a child learn? I don’t even think you can notice the lightbulb anymore because teachers are so overwhelmed with the pressures of the SOLs and the paperwork. (Raw Data Matrix E-1, Appendix E)

(Interview 344) You’re breaking your neck. Even if we are successful with meeting the demands of these SOL requirements, you’ve broken your neck to do it. It’s a painful process, a very painful process. I want to make an analogy here. It’s like an obese person who wants to get slim. If you starve yourself to death and

you're anorexic and you get slim, you've taken away all of the happiness in your life—all the fun—all the health. You've gotten slim, but you're out of breath. What's left? It's a depleted feeling like, "Yes, my kids have passed the SOL tests. Now go ahead and shoot me so I can rest." And then you have people who complain that teachers get the summer off. They don't have a clue! (Raw Data Matrix E-1, Appendix E)

(2) Teachers feel controlled and manipulated by mandates, requirements, and rewards from those above them in the organizational hierarchy.

Teachers expressed strongly that they felt manipulated by a system they see as designed to produce higher scores by almost any means. Teachers often described this manipulation as pressure from those in power above them in their organizations with pressure beginning in the legislature and flowing through superintendents, to principals, and finally to teachers. Teachers noted a powerful system of rewards and consequences related to SOL test performance. Test score emphasis has resulted in lengthened school calendars and a fear that teacher pay scales will be tied to student performance on SOL tests.

(Interview 91) I think they [teachers] feel that the legislators are telling them what to do, when to do, and how to do, and these are people who have never been in a classroom, and that's very frustrating. (Raw Data Matrix E-2, Appendix E)

(Interview 149) Interviewer: What is the source of that pressure? Is it superintendents, school boards, principals, all of the above, or parents? How does that stress come about?

You know in our building we've actually been lucky because my principal seems pleased with what we've done and I don't feel that kind of stress from her because I feel she knows we're doing what we can to make it happen. But, I even see principals having this unbelievable amount of pressure on them too. And I think that filters through. So, I really think it's straight from the state to the superintendents, straight to the principals, and straight to us. And I hope it doesn't feed into the kids. (Raw Data Matrix E-2, Appendix E)

(Interview 212) I am an elementary Art teacher, so I see what happens in a lot of classrooms. Now, our school did pass SOLs last year, but by the skin of our collective teeth. And, we certainly want to pass this year because once you pass, if you don't continue to pass, there is a tremendous amount of pressure put on you. Schools that don't pass in our county go through a great deal of stress, pressure that is put on them to try to pass.

Interviewer: Where does that pressure come from?

The administration.

Interviewer: From the principal?

That would be from the highest levels, then through the principal—not because the principal wants it that way, but because their feet are being held to the fire. And because of that, our county has done very well with SOL tests.

As I mentioned before, teachers who did well last year got briefcases, and we got nothing. But this year we passed and we are going to have an assembly on Wednesday and it will be interesting to see if we get anything because we certainly didn't have any kudos given to us after we passed like other schools did. (Raw Data Matrix E-2, Appendix E)

(Interview 264) Just this past week they [administration] approved an extension of the school year. The students will be coming to school the week before Labor Day. They got the waiver approved by Richmond. Teachers will be coming two weeks before Labor Day. So, there is a lot of tension around the SOLs. The reasoning behind the extension of the school year was to improve SOL scores in the school district.

Differentiated pay scales have been discussed so your pay would be determined by student SOL test scores. They don't plan to do that right now, but reading the crystal ball, it looks like that's going to happen real soon. (Raw Data Matrix E-2, Appendix E)

(3) SOL testing has resulted in teacher perceptions of lost power, trust, and autonomy.

Teachers were clear in expressing that they no longer felt trusted to make instructional decisions and that they were powerless in the face of legislative and administrative mandates to alter their instruction to achieve benchmark SOL test scores. Morale has suffered because of this loss of trust and autonomy.

(Interview 14) I think it's [SOL testing] really brought teacher morale down quite a bit. First of all we feel powerless that we had no input into these. And, yes, they did have one or two teachers from each county supposedly making up this curriculum, but I think that teachers generally feel that this has been forced upon us. (Raw Data Matrix E-3, Appendix E)

Interview (91) Some people are very dissatisfied, and I think I'm one of them. It takes a lot of the excitement out of teaching. Teachers, I think, are used to being in the classroom, being in charge, and I feel like people don't trust me to be able to look at my students each September and say, this is what they need this year. And, I know we need to teach certain things at certain levels, but I am one person who didn't like it. I think teachers with strong personalities don't like it. But, I haven't met a lot of people who are thrilled with it. (Raw Data Matrix E-3, Appendix E)

(Interview 397) If the administrators would give teachers the opportunity for teaching the material and not pressure them for improving test scores, they could still be happy. I could be happy with taking the SOL manual and covering the material because I think there's some very interesting things in the curriculum.... I think that when the pressure is to improve the scores—you know, we had this percent last year, we've got to up that for this year, you're going to see some negative effects on teachers because the power is taken away from you, and it's almost as if everything is dictated to you. You have to do this. You have to do that. (Raw Data Matrix E-3, Appendix E)

(4) SOL testing has resulted in diminished job satisfaction for teachers.

Teachers reported a reduction in morale and job satisfaction as a result of SOL testing. SOL testing has resulted in a crowded curriculum that is more difficult to teach. Teachers complained that they had little opportunity to engage students in creative or innovative learning experiences. They reported that satisfaction is a function of the particular job they hold and of the student population they serve. Participants reported that teachers in schools with low SOL scores are likely to experience a reduction in job satisfaction.

(Interview 14) I think it's [SOL testing] brought morale down and it's taken a certain amount of our creativity away because we've got this jam-packed curriculum that we've got to cover, and there is very little time for us to explore our areas of interest or the children's areas of interest, so I think SOLs have affected teacher satisfaction in a very negative way. (Raw Data Matrix E-4, Appendix E)

(Interview 212) Interviewer: To what degree, if any, will SOL testing affect teachers' job satisfaction?

Well, it really goes back to the student population. In a school where the students are doing well and the teachers receive a great deal of praise because the students are doing well on the SOLs, I'm sure they have a very high rate of job satisfaction. In those schools where the teachers have to work a whole lot harder and never know if they will get the children to where they need to be, it may depend more on their inner strength. If they can see beyond that and know that they are doing a good job regardless of whether the child passes the SOL tests, then their job satisfaction may be coming from internal sources. But, they probably aren't going to be getting very much from external sources, and that's a shame. (Raw Data Matrix E-4, Appendix E)

(5) SOL testing negatively affects teachers' desire to remain in teaching.

Interview data suggests that SOL testing has a negative impact on teacher retention. Respondents said that teachers who are near or eligible for retirement are choosing this option as

soon as possible and that other teachers are looking for alternate careers. Some teachers are seeking other assignments within the teaching profession removed from SOL testing pressure.

(Interview 137) I'm in that group of teachers who are starting to retire now. And I see a lot of them looking for other avenues. Some of them—if they're staying in teaching—they're going into itinerant fields like reading specialists and gifted education resource teachers and so on so that they don't have to have that burden. (Raw Data Matrix E-5, Appendix E)

(Interview 212) I forget what our (SOL) ranking is, but it's very high. So we have been successful, but it has already caused a very high rate of early retirements. (Raw Data Matrix E-5, Appendix E)

(Interview 264) I think as the SOL requirements continue and teachers' pay and teachers' retention is going to be based on SOL scores, we are going to see teachers starting to leave the profession even faster than they are leaving now. (Raw Data Matrix E-5, Appendix E)

(Interview 265) I got on the Internet two nights ago, and downloaded some applications for Department of Defense and international schools, so I'm looking to go and do something else. (Raw Data Matrix E-5, Appendix E)

(Interview 420) Interviewer: To what degree, if any, will SOL testing affect teachers' plans to remain in teaching? (Raw Data Matrix E-5, Appendix E)

I think it depends on how much burnout you get from the constant pressure and the testing. I have definitely heard a lot of teachers say that it's just so difficult that they can't handle it and they might want to find alternate careers. (Raw Data Matrix E-5, Appendix E)

(6) Over-reliance on test scores to evaluate students, teachers, and schools is bad practice.

While interviewees were generally not opposed to the use of tests to evaluate students, teachers, and schools, they were frequently opposed to the use of test scores as the sole determinant of success. Among other issues, they noted that teachers must test a different group of students with different backgrounds, talents, and abilities every year and that the test cohort changes during the year. They see that holding teachers responsible for increasing levels of performance for differing cohorts to be unreasonable. Teachers questioned the validity of assessing teachers and students according to an agenda initiated by politicians.

(Interview 14) (O)ur superintendent has mandated that each school every year has to raise its SOL scores by five points. Which many, many people have gone to him, including principals, to say, you know, if you are already at the top, mathematically you can't get higher every year. Not only that, you are not testing the same groups of students every year, and he has not taken that into account. So, every year we

are given a new target index and this year I think our index was supposed to be 70 and we didn't make it. So, every year it's a different group of kids that's tested, so it's really comparing apples to oranges. And we have a high level of special education students in our school. And some of their parents want them to take those tests, so that can change things dramatically. (Raw Data Matrix E-6, Appendix E)

(Interview 149) Well, having a daughter who is now in college, she had a 4.1 GPA when she graduated, but she didn't pass one of her science SOL tests. So, if you have an honor student with a high GPA who doesn't pass an SOL test in high school, you're telling me they shouldn't be allowed to graduate? Well, I disagree with that one. (Raw Data Matrix E-6, Appendix E)

(Interview 212) The down side is that if a school has a large mobile population, you may find that the people you test in May are only two-thirds of the people you started with in September. And, of course, your test scores will not be reflecting how hard the teacher has worked all year. (Raw Data Matrix E-6, Appendix E)

(Interview 344) I feel really bitter about SOLs. I'm completing my third year of teaching. It's totally unfair to say that if a student passes an SOL test, the credit should be given to the teacher, and if they don't pass, the teacher should get the blame. It's just totally unfair to hold a teacher accountable for the performance of a student on a test. From another perspective, yes, you have to have standards, and you have to have some criteria for holding students accountable for what the school system is doing. But to have it totally reflect back on teachers is bogus! That's a good word. (Raw Data Matrix E-6, Appendix E)

(7) Teachers in SOL test grades feel greater stress and may seek to avoid teaching in these grades.

While teachers at all levels may feel some pressure from SOL testing, teachers in SOL test grades are seen as being most affected by SOL testing requirements. Teachers in these grades may be retiring in greater numbers, transferring to non-SOL test grades, or seeking specialty positions where their names are not associated with students' SOL test results.

(Interview 91) It [SOL testing] affects third and fifth grade teachers differently. Even though we all say that every year is important and we're building up to those years, those teachers' names are the ones that are on those scores. Yes, there is definitely more pressure. And, you know, it does make some people not want to teach those grades. (Raw Data Matrix E-7, Appendix E)

(Interview 137) A day doesn't go by when I walk down a hall in a school that I don't hear the word SOL. You don't ever eat lunch with the teachers in the lounge when you don't hear: I can't get this all in. The tests are the second week in May or the third week in May and I don't see how I'm going to get all the math in. I can't just open up their heads and pour it in. I mean, I'm hearing this every day,

especially I've heard this a lot from fifth grade teachers lately. They feel the pressure most, I guess. I don't know why—the content is based on other grades also. But they feel like they're carrying the burden. (Raw Data Matrix E-7, Appendix E)

(Questionnaire 184) Teacher transfers if scores are low. Because teachers will transfer out of SOL test grade levels or subjects, there will be a shortage of qualified professionals who are willing to move into these areas. (Raw Data Matrix E-7, Appendix E)

### Proposition Two: SOL Testing Has Resulted in A Variety of Negative Consequences for Students

#### (1) SOL testing can negatively affect students with disabilities.

Interview respondents expressed a variety of concerns about the impact of SOL testing on students with disabilities. A common complaint was that all students are going to be required to receive the same passing scores regardless of the disabilities that may be affecting their learning. Concern was expressed that students with disabilities are often exempted from SOL testing to raise a school's passing rate. However, this practice limits schools' ability to accurately assess these students' progress and to implement intervention programs.

(Interview 14) (T)he people who have administered those tests have told me how painful it is to be in the room with those little kids who don't understand what's being asked of them. Some of these children are labeled mentally retarded, but they are taking these tests because their parents want them to get a regular diploma from high school. (Raw Data Matrix H-1, Appendix H)

(Interview 265) (N)ow you've got tests that say that you've got to pass this—Algebra is one of them in our school district. Everybody had to pass it—even if you're EMR [educable mentally retarded] and that just seems so absurd. It would seem like such a waste to have a student come through your school system and to have potential in some way to go out and be a meaningful person in society, and to have maybe restaurant skills or construction skills, or car-fixing skills and because they couldn't pass Algebra they didn't graduate with a diploma and now maybe they aren't employable. We all know that kids without high school diplomas can stay in dead-end or low-paying jobs. So, I think that students with disabilities might be more inclined to fall into that category. (Raw Data Matrix H-1, Appendix H)

(Interview 397) I know the laws in testing them (students with disabilities) seem to be in the developing stage, but from what I've seen in more than one school, the tendency is going to be to exempt these students from testing in order to improve the school scores. I think the time taken away from the basic reading and math would be detrimental to them. If we do have to go to a mode where they are tested

in all areas, it could be like trying to cram facts into them, which is not what I think they need. (Raw Data Matrix H-1, Appendix H)

(Questionnaire 326) If Virginia continues on its mandate that special education students should take the SOL tests, they are absolutely wrong! Students working on kindergarten curriculum in a third grade placement have no chance of being able to answer questions on the third grade SOL test, even if the teacher is allowed to read the test. It's nonsense! Special education is for students to be taught at the level where they will be able to learn, not to throw them into a level [at which] they can't comprehend. (Raw Data Matrix H-1, Appendix H)

(2) SOL testing can have specific negative effects on low socio-economic students.

Teachers described the impact of requiring one standard for all students, particularly those who had limited language and enrichment experiences in their homes. Students receiving less parental support at home or who live in families with social or marital problems were thought to be at-risk to do poorly on SOL testing. Some students may perceive that expectations to pass SOL tests are simply beyond their abilities. Students in schools with low SES may experience a less satisfying school experience due to the pressure placed on teachers to raise test scores.

(Interview 91) I think some of these kids come from homes where their parents are working two or three jobs. They may want to be involved. They may care very much, but they can't. Or, there are a lot of kids coming from families with all kinds of either drug or marital problems, whatever. It's hard enough for adults to go through these things, but when we tell little kids who are going through these things, we're saying on top of it, you have to learn. That's kind of ridiculous, too. Yes, we want them all to learn, but each child doesn't come to school well-fed with two parents giving them a kiss out the door. (Raw Data Matrix H-2, Appendix H)

(Interview 149) Typically the ones we have seen not doing well, not being in the 70% group who pass, are the more disadvantaged kids. Now what does that say about the testing or the SOLs? I don't know, but it seems that these kids are the ones who don't do well because they don't have the language skills to begin with. They may not have parents who are as educated to help them. I've had parents tell me, this math is beyond me. I can't help them any more. (Raw Data Matrix H-2, Appendix H)

(Interview 212) I think we are very much going to see a split where children who are in the economically affluent areas are doing well and all the kudos go to them, and children who are economically poor will often be struggling, and the pressure will be put on them by the teachers because pressure is being put on them, and the children are not going to be happy. That, I think, is going to cause them to find the school experience to be much less positive than it was in the past. (Raw Data Matrix H-2, Appendix H)

(Interview 344) You could say I was from an economically disadvantaged background where I didn't have a computer. I didn't have access to going places and doing things, and I could tell the difference right off. That's because I had a consciousness about what I wanted. Some students will not be able to propel themselves over that gap like I did. But if you don't have an inner push to want to succeed, some will think: This bar is way too high for me to jump. Why should I attempt it? (Raw Data Matrix H-2, Appendix H)

(3) SOL testing can result in increased levels of stress and lowered self-esteem for students.

Respondents reported concern about students' psychological well-being because of SOL testing. Students, even in elementary grades, were reported to be more nervous and anxious, and teachers complained that the stress felt by teachers was being transferred to students. Frequent references to SOL testing in the media added to student stress. Medical symptoms such as those associated with attention deficit disorder, anxiety, and physical complaints may have increased.

(Interview14) From my experience, I think children are basically very anxious about them [SOL tests]. I teach second grade and they mention in second grade we know we have to take those SOL tests next year and we heard that they're hard. And I just encourage them to do their best, but for the most part they're very anxious. (Raw Data Matrix H-3, Appendix H)

(Interview 91) What I've observed is even the brighter students—I was teaching gifted—get nervous about them because I think there is a lot of undue pressure that's put upon them. There is an awful lot of anxiety about being ready and am I going to pass and am I going to pass in the early elementary grades. (Raw Data Matrix H-3, Appendix H)

(Interview 265) My experience and impression so far is that it is a negative impact. Students are really feeling stressed out. All the stress that administrators and schools and teachers might be feeling is being transferred to students. A neighbor told me just the other day, her little girl is in fourth grade, and she was crying while doing her homework. She said, Mom, this is just too much. I'm just too stressed out. And I think kids are really starting to feel that way. And, instead of having a joy for learning and becoming lifelong learners and readers, it's all about the test. (Raw Data Matrix H-3, Appendix H)

(Questionnaire 282) At a recent doctor visit for my son, the doctor reported an increase in teacher referrals for ADD/ADHD (my son included in that) as well as an increase in visits for anxiety and stomach problems. She says she thinks it's the pressure placed on students. My son attends an accredited school. (Raw Data Matrix H-3, Appendix H)

(Interview 463) You know how in high school the kids worry about the SAT to get into college. I think the SOLs have become that kind of influence on the kids where they have so much pressure to do well on the SOLs. You know I think the pressure comes from everywhere. I think it comes from them hearing about it all the time—from teachers and other students and in the paper. (Raw Data Matrix H-3, Appendix H)

(4) Students come to school with different backgrounds and differing levels of support, making it harder for all of them to reach the same standards.

Teachers expressed concern that differences in populations were not considered when setting benchmark passing scores on SOL tests. Students whose families had many resources and who provided them many learning experiences predictably score higher than students without those advantages. Students may suffer a disadvantage in learning if their families are mobile or transient, and some students may not score well on SOL tests due to their differing learning styles. Finally, though some students may excel in vocationally oriented curricula, these skills are not valued in the present SOL testing environment.

(Interview 14) (T)he school that I'm in is in a very high socio-economic neighborhood. There's a lot of parent support starting from the time they are in kindergarten. Parents make sure their children are prepared and that they read and they follow up on homework, and we live in the D.C. area, and these parents expose them to the museums and Mount Vernon and things like that versus children in that lower SES group in this same community maybe three schools over, you know, their parents aren't as likely to do that. (Raw Data Matrix H-4, Appendix H)

(Interview 212) The downside is that if a school has a large mobile population, you may find that people you test in May are only two thirds of the people you started with in September. (Raw Data Matrix H-4, Appendix H)

(Interview 344) I want you to know that I'm trying to meet the demands of these SOLs, but I'm shaking as I talk to you because I want the people who are in charge of this thing to know how important it is to be fair. And, the SOLs are just totally unfair because all students do not learn the same way. (Raw Data Matrix H-4, Appendix H)

(Interview 463) You know when you've got kids starting schools, you've got kids who start out with a background of preschool, and kids who start out with nothing and some may say that those kids aren't as intelligent. Well, not necessarily. I've got kids in my room that know all the parts of a tractor and I don't know that. Does that mean they have less intelligence because we don't consider that a skill? (Raw Data Matrix H-4, Appendix H)

(5) Teachers will teach directly to SOL tests to help ensure higher scores.

Teachers reported that the emphasis on SOL testing may result in students being taught a narrowed, testworthy curriculum rather than helping children to engage in independent and creative thinking. The emphasis on raising test scores in all areas for all students may cause a reduction in the emphasis on reading and math instruction for students who are behind in these areas.

(Interview 149) We really do have to focus on teaching to the test that sometimes the creative process isn't there the way you'd like it to be. (Raw Data Matrix H-5, Appendix H)

(Interview 397) (T)here will be a group of students where the emphasis will be just on improving scores. Their education will be sort of centered on a limited thing there and their focus will be limited to improving scores, and since more and more of the time will be devoted to social studies and science and to getting those scores up, maybe the reading and math will be cheated to a certain extent. (Raw Data Matrix H-5, Appendix H)

(Questionnaire 41) Teachers are teaching to the test and limiting the curriculum. (Raw Data Matrix H-5, Appendix H)

(Questionnaire 307) Teaching the test rather than educating the student. Teachers are forced to march ahead leaving lost students behind. (Raw Data Matrix H-5, Appendix H)

(6) SOL testing limits student enrichment opportunities in favor of "testworthy" curriculum.

Teachers expressed concern that SOL testing will limit student access to enriching experiences; however, this will largely be true only in schools with lower SOL scores. Therefore, students who need enriching experiences most will be least likely to receive them. Teachers related that experiences not directly associated with SOL testing are not seen as worthwhile. There is less time available for activities that used to be fun.

(Interview 149) (I)nstead of being able to take a group that needs and can handle enrichment in a certain area, you feel like you don't have as much time. (Raw Data Matrix H-6, Appendix H)

(Interview 212) I think that enrichment will suffer, but it won't suffer in those schools where the children already get so much enrichment anyway. That is the sad thing. It is actually weighted to deprive the children who need it most because so much time has to be given to teach the basics. (Raw Data Matrix H-6, Appendix H)

(Interview 397) (T)here's not a lot of time left for the "fluff" I guess—for things that used to be fun. For example, if you wanted to do a unit on dinosaurs in kindergarten, teachers say it's tough to work that in. (Raw Data Matrix H-6, Appendix H)

Proposition three: SOL testing will result in a variety of negative consequences for instructional practices.

(1) SOL testing results in an emphasis on the teaching of isolated facts and rote memorization.

Teachers discussed concern about teaching practices designed to produce higher test scores at the expense of more meaningful learning experiences. While creative "hands-on" learning experiences were thought to be critical to enhancing learning, SOL tests were thought to engender the teaching of isolated facts.

(Interview 14) (I)f they interpret those test scores and see scores going up in some schools and seeing some schools consistently doing well, then they may believe that they are increasing student achievement. But, overall, when you look at education and everything that education has to say about measuring student achievement, it's not by rote memory. It's not just by memorizing facts. So, I don't think that these tests are any indication of achievement. It's just whether certain children can remember certain facts from year to year. And that's not a true measure of achievement or growth in a child. (Raw Data Matrix G-1, Appendix G)

(Interview 265) (W)hat I hope to see is that teachers will realize that the way to truly get to children is through a lot of creative endeavors. A lot of the gifted strategies work for every child. Those are ways that have them up and moving in hands-on activities, writing their own plays, but so far the teachers that I've talked with or been in classes with, it seems like they don't have time for that, when, actually, I think that's how your time is best spent. So, I think that teachers are just having to drill and kill to get the facts memorized, but kids don't learn that way. They have and they never will. (Raw Data Matrix G-1, Appendix G)

(Interview 397) I don't think the SOLs have anything against teaching critical thinking. But what I see is that there is a strong tendency in grades where there is testing, just to shove the facts out. There is so much to cover. You've got to go back and review and, I guess social studies is probably the worst area. Where you know that the questions that have been put out in the past—other than graph reading—a lot of them are just retention of facts that children may have been exposed to in kindergarten or first grade. I can see people getting caught up in, you know, you're trying to get all that material out as quick as you can, and that's the quick way to do it. (Raw Data Matrix G-1, Appendix G)

(Questionnaire 134) I deplore the lack of higher level thinking skills in curriculum focused on rote memorization. (Raw Data Matrix G-1, Appendix G)

(2) SOL testing has resulted in a crowded, rigid curriculum that prevents teachers from using their judgement about what students need.

Teachers expressed concern about the power of SOL testing to influence what is taught to students. The goal of teaching has often become to produce correct answers to state-developed tests. Little time is left for creative learning experiences. Children will not be exposed to activities unless they are directly related to the SOL curriculum. Teachers expressed concern that the need to cover so much material prevents them from spending the time necessary to ensure student understanding. Additionally, teachers worried that the curriculum they were required to teach was inappropriately difficult or complex for students.

(Interview 91) I moved from Florida and we didn't have SOLs. We called them benchmarks there. We didn't quite handle it the same way Virginia does, so when I came here it was a shock and not only as a teacher, but as a parent, and I think mostly as a parent, watching how it's affecting my kids. I really feel like they're missing out on some of the joys of education, and being able to do some of the in-depth studies and projects because they're doing these little worksheets and I'm not happy with it. (Raw Data Matrix G-2, Appendix G)

(Interview 14) (I)n our timeline we were allowed three weeks for us to teach 17 explorers. And so we are supposed to teach the country they sailed from, their destination, what problems they had on the trip, what their objectives were, what they were hoping to achieve, and that is too much knowledge for seven year-olds to retain or to understand. (Raw Data Matrix G-5, Appendix G)

(Interview 264) One of the things that is happening is that teachers find themselves tied down too specifically to what the SOLs are requiring them to teach. They're setting up the curriculum; they're setting up their lesson plans all around what is required for SOLs. And, it sort of restricts how far they would want to go with a class. It also requires them to cover X amount of material within a given time frame so slower students could cover that material so the teacher could say that, yes, everybody covered the required material. (Raw Data Matrix G-5, Appendix G)

(Interview 344) (I)f I, say, I have three blocks to teach the French Revolution, then I am supposed to have three blocks to teach the French Revolution. So, if you miss the bus, or the SOL train, you missed it. You can't go back and remediate...there's no time. And if you do, you're going to put the crunch in teaching World War I. Forget seven days. You're going to have to teach World War I in two days. Therefore, read page 56 of our resource guide. Otherwise, the train is gone. (Raw Data Matrix G-5, Appendix G)

(Questionnaire100) The tests are not in sync with out students' abilities or cognitive potential. (Raw Data Matrix G-6, Appendix G)

(3) SOL testing results in a significant amount of time being devoted to preparing for tests rather than learning new material.

Teachers expressed concern that the need to achieve higher test scores caused them to actually reduce the amount of time spent teaching so that more time will be available for review. More time is now being spent in test practice and orienting students to SOL test formats.

(Interview 149) There's a lot of teaching to the test—a lot of teaching how to test, how to take tests, and sometimes that interferes with the creative process, I think. You spend so much time in preparation for the tests—we pretty much end our teaching of any new material about three weeks before the SOL tests, and we spend two to three weeks going over the SOLs we've taught. So, although you have to do something to enable kids to pass those tests, that's time that could be spent in doing other things rather than this. (Raw Data Matrix G-3, Appendix G)

(Interview 265) Right now I've spent about seven weeks out of the school year doing some kind of test that prepares students to do better on the SOL tests. We call it quarterly tests in language arts; we call it pre- and post-tests in math, and we have pre- and post-tests in social studies. And, this testing has nothing to do with the regular chapter tests and quizzes. This is all an aside to whatever you used to do. (Raw Data Matrix G-3, Appendix G)

(Interview 397) Now we are being given manuals with volumes of test practice stuff and being told to be sure that kids practice test-taking, even down into kindergarten and first grade. Edu-test, being told that you have to do that. And, even though the test-taking grades are third and fifth in the school where I am, the other grades are strongly encouraged to make use of it [Edu-test is a computer-based program designed to improve test-taking skills]. And, that particular test is very difficult and it seems to include things that are not part of the SOLs themselves. But, you're still told that your students need to do this. (Raw Data Matrix G-3, Appendix G)

(Interview 420) I know they quit after they finish the first semester and just keep going over the material again and they pretty much don't learn anything new for the rest of the school year. I think our SOL testing starts in May, so they probably start going over this stuff in February. (Raw Data Matrix G-3, Appendix G)

(4) SOL testing causes a reduction in opportunities for students to engage in critical thinking.

Teachers noted a reduction in the emphasis on critical thinking activities as a consequence of SOL testing. Though *critical thinking* was not defined in the interview question, the term has commonly come to be associated with open-ended processes such as comparing, contrasting, analyzing, and evaluating. Critical thinking activities often require students to engage in divergent thinking, rather than activities that result in a single, predetermined answer or response. As a result, we may not be educating the problem-solving workers that businesses need.

(Interview 14) Me, I equate it [SOL testing] to playing Trivial Pursuit: Learn these facts, remember these facts for two years until your next test. So, for many years our trend was to teach these kids how to think, higher level strategies, but it seems that now we're going backwards to just rote memorization. (Raw Data Matrix G-4, Appendix G)

(Interview 91) I think it [SOL testing] will have a very detrimental effect on (critical thinking skills), not just from a teacher, but as a parent. I have a child that took the third grade SOLs last year and I think spent the whole year preparing for those tests and having to learn isolated facts, everything from ancient Egypt to government to this and that and nothing was tied together. Of course, she did well on the tests, but we don't spend enough time on the higher level skills at all. There's no time for it. And that's very, very sad. (Raw Data Matrix G-4, Appendix G)

(Interview 344) I think what it's coming to is that you're going to teach toward the test. Critical thinking is going to have to be developed somewhere else. The books we use may emphasize Bloom's Taxonomy, from knowledge through evaluation and synthesis. But realistically, you're teaching your kids toward that test, because if they fail it, it's going to reflect back on you. Who told you to teach critical thinking when your resource guide says teach Robespierre was head of the French Revolution? It doesn't tell you to discuss *why*. Critical thinking? No. (Raw Data Matrix G-4, Appendix G)

(Questionnaire 136) Students will not be the problem-solving, initiative-taking workers businesses are looking towards to hire. (Raw Data Matrix G-4, Appendix G)

(5) SOL testing results in a complicated, crowded, rigid curriculum that prevents teachers from using their judgement about what students need.

Teachers expressed concerns about the nature of the curriculum they are required to teach as a result of SOL testing. They felt that the curriculum is often developmentally inappropriate for children and the rigid pacing required to cover the content prevents them from using their professional judgement about how much time to devote to curriculum topics.

(Interview 14) There is no time for anything fun or just to explore something if they're interested in it. I don't have the leisure time to do that any more because I have to complete this very rigorous curriculum. (In our timeline we were allowed three weeks for us to teach 17 explorers. And so we are supposed to teach the country they sailed from, their destination, what problems they had on the trip, what their objectives were, what they were hoping to achieve, and that is too much knowledge for seven year-olds to retain or to understand. (Raw Data Matrix G-5, Appendix G)

(Interview 149) (W)hen you're teaching a colonial unit in history, you may want to veer off and give the identified gifted kids some further projects you know they want to research further in certain areas. Well, you just don't have time to do that because it's not truly a part of that curriculum. (Raw Data Matrix G-5, Appendix G)

(Interview 212) I have a friend who is teaching in the classroom and she says that, basically, she has gone back to the whole group approach. It is critical that you not waste time dawdling about how to get information to students. (Raw Data Matrix G-5, Appendix G)

(Interview 344) (I) believe that without the tests I would have time to say, let's go back and make up this test. You all have missed something. Let's just turn the page and I would take one day or two to go back and remediate and then pick up. The SOL factor is a speeding train, and if you miss it, you just miss it. (Raw Data Matrix G-5, Appendix G)

(Questionnaire 308) SOL testing severely limits our students' knowledge to the narrow range of facts that they will be tested on. (Raw Data Matrix G-5, Appendix G)

(6) SOL testing has resulted in the teaching of curriculum that is not suitable for some students.

The SOL curriculum does not match the needs of the wide range of students who attend public schools.

(Interview 14) They should be studying those explorers back up in fifth and sixth grade where it's a little more meaningful to them. I am forced now to teach all those subjects that I think are developmentally not appropriate. I have to teach colonization. I have to teach economic terms like interdependence that they can't spell, let alone read, and we have to teach all these social studies concepts that are just meaningless to a seven year-old at this point. (Raw Data Matrix G-6, Appendix G)

(Questionnaire 67) We are set up to fail. Testing should be a positive affirmation of work well done. (Raw Data Matrix G-6, Appendix G)

(Questionnaire 100) The tests are not in sync with our students' abilities or cognitive potential. (Raw Data Matrix G-6, Appendix G)

(Questionnaire 420) I feel that Virginia needs Standards of Learning, however, it is too stressful for teachers and students to perform based on standards that do not reflect age appropriate content and knowledge base. (Raw Data Matrix G-6, Appendix G)

Proposition Four: SOL testing can result in positive outcomes for students, teachers, and schools.

(1) SOL testing has resulted in a consistent statewide curriculum.

A consistent curriculum was seen as valuable to inexperienced and experienced teachers alike. It helps produce a continuity of instruction from grade-to-grade, and helps to ensure that teachers don't spend time on unrelated "pet" units or topics.

(Interview 91) Interviewer: Is that [a crowded curriculum] a good or a bad thing in your view?

It can be good if you have maybe a young teacher or a teacher who's not as strong. You are definitely going to be covering things that children need. (Raw Data Matrix F-1, Appendix F)

(Interview 149) I think they [students] are probably learning more-you know, less gaps from grade level to grade level in skills. (Raw Data Matrix F-1, Appendix F)

(Interview 212) Teachers are now very single-minded in what they need to teach. It's very clear what they are supposed to teach, and they do that...and that may not be all bad. In the past you may have had certain teachers who would say if they didn't get to a topic in math or in history, it really didn't matter. (Raw Data Matrix F-1, Appendix F)

(Interview 265) Personally, I like having standards. Like, having the enduring understandings and the essential questions in front of me, that's kind of an outline or a guide for me. There's a lot of other things I want to teach too, but I want to make sure I do nail those. (Raw Data Matrix F-1, Appendix F)

(Questionnaire 371) More standardized teaching of curriculum. (SOLs) give teachers a guide. Less time will be spent teaching "pet" units. (Raw Data Matrix F-1, Appendix F)

(2) SOL testing has resulted in positive outcomes for disadvantaged students.

Teachers expressed that the emphasis on basic skills for all students is of special benefit to disadvantaged students who may have been overlooked in the past. These students may now benefit from extra help through compensatory programs. Disadvantaged students who in the past might have been exposed to only part of their grade level curriculum will now have exposure to the entire curriculum.

(Interview 91) I think that they [economically disadvantaged students] are the ones who are targeted with this. In one way it's good because you are forcing some teachers who might not focus with these kids. (Raw Data Matrix F-1, Appendix F)

(Interview 137) You know, the students who are economically disadvantaged are getting a little extra help—you know, tutors or after school programs, or parents coming in and helping. (Raw Data Matrix F-2, Appendix F)

(Interview 264) Interviewer: What effects, if any, will SOL testing have on economically disadvantaged students?

If anything, I think that's the arena where SOLs may help the most. Students that fall under that area, it gives them an equal balance. Now we are more certain that they will be exposed to the entire curriculum and now they can show what they can actually do. And, just because Mom and Dad don't make X amount of money, there are a lot of very intelligent students who are economically in a disadvantage. So, a curriculum required for all students will allow them to show what they can do because it's more of an equal footing for all. (Raw Data Matrix F-2, Appendix F)

(3) SOL testing has resulted in clearer educational standards.

SOL testing has allowed teachers to gear their instruction toward known assessments. Standards are important to ensure that children are indeed learning. Children who pass SOL tests can be assumed to have learned.

(Interview 265) I personally like having a standard as long as the curriculum and the test are going to be aligned, and I know that what I'm teaching is truly what's going to be evaluated, I don't mind. (Raw Data Matrix F-3, Appendix F)

(Interview 265) I know that all kids are not going to be able to pass standardized tests. But at least you know if they pass the test, at least they got some of what was expected. (Raw Data Matrix F-3, Appendix F)

(Interview 420) I have always liked having standards because this is my first year of teaching, but it's been helpful for me to make my lesson plans. (Raw Data Matrix F-3, Appendix F)

(4) SOL testing results in increased accountability for students and teachers.

Teachers related that prior to SOL testing, the curriculum and expected learner outcomes were varied and difficult to quantify. Students may have been given passing grades for sub-standard work. Some teachers were not assuming responsibility for student achievement. Higher standards will allow poor teachers to be weeded out, and other teachers will experience greater self-esteem and recognition.

(Interview 463) I think there are standards that teachers should meet because obviously some teachers are not doing the job that should be done. And because of that, I think that's why the standards have come up. We've got teachers who are just going through the motions, and kids are getting out and they can't read and write. And that's a problem. (Raw Data Matrix F-4, Appendix F)

(Interview 463) I think it's (SOL testing) got good qualities. I don't think it's a bad thing to hold teachers accountable. (Raw Data Matrix F-4, Appendix F)

(Questionnaire 119) Accountability that is measured is here to stay. "I'm OK, you're OK, everybody gets an "A" is out. (Raw Data Matrix F-4, Appendix F)

(Questionnaire 232) I feel that VA will pull up nationally in rank. I feel that teachers who don't want to work hard will be routed out, and that is good! Finally we can weed out the lazy teachers if tenure does not let them hang around. (Raw Data Matrix F-4, Appendix F)

Second Order Outcome Propositions

Proposition one: Principal behavior influences the stress teachers feel as a result of SOL testing.

While teachers did relate that stress was an unwanted byproduct of SOL testing, they also indicated that principals can mitigate stress by the way they approach SOL testing and achievement mandates. Though teachers acknowledged the role principals can play in reducing the negative impact of SOL testing, they understood that principals themselves cannot necessarily act as a buffer in cases where higher test scores are demanded at all costs. Principals may keep misbehaving students in the classroom to maximize their exposure to the curriculum and to increase the probability of higher test scores.

(Interview 137) There's one or two of the principals I work with that are a little bit more laid back and their attitude is we all have to do this. Let's do it and not worry about it, and I know you're doing a good job—that kind of stuff. And these teachers don't look as harried as the teachers in the other buildings. (Raw Data Matrix A, Appendix A)

(Interview 344) You can't teach discipline while trying to teach SOLs. Because you have to teach SOLs and so you kick the student out who is causing a blockade. I have to get these SOLs taught by the end of the week. You're sitting here acting silly, so get out. The principal is saying, "Keep the student in class so they can learn these SOLs." (Raw Data Matrix A, Appendix A)

(Interview 397) I think an administration that puts emphasis on the teaching process and not on the testing process could take some of the pressure away, maybe most of the pressure. I think there is still going to be some pressure there, but I think the administration can make it worse.

Question: If school boards are demanding test scores and superintendents are demanding test scores, do you think your school leader will be able to keep that pressure away from folks at the local school level?

Well, I don't know. Really, if the central office people were pushing for test scores and if you had a principal who said, "Well, you know, I'm not going to do this. I want my students to be able to read and think." To some superintendents that principal could be seen as being ineffective, and I don't know if I were a principal if I would want to put myself in that position either. It would be a rough call for him or her. You could almost consider it, you know, refusing to do what they're telling you to do. (Raw Data Matrix A, Appendix A)

Proposition two: The long-term effects of SOL testing are unknown.

Teachers expressed uncertainty about the end results of SOL testing. While testing may result in some positive outcomes, teachers opined that students may also be harmed and that the tests may eventually be dropped as were the previous (Literacy Passport) tests. Students not graduating may initiate lawsuits claiming that the SOL testing process has treated them unfairly. In the end, teachers wondered if the whole SOL testing process will be helpful or harmful to students.

(Interview 149) Really, I do feel in some ways positive about what's going on, and in other ways very negative about it. I guess we'll find out in the end what is the right thing to do. (Raw Data Matrix B, Appendix B)

(Interview 149) The bottom line with us is that we can do this. We know we can do this, but that's not an issue. With us, the issue is what's going to happen to the whole testing process? How is it going to be used? To what end will it help or hurt students? We haven't had enough time into it. (Raw Data Matrix B, Appendix B)

(Interview 397) What I think will happen is when it comes to that year when children are denied diplomas, that there may be some lawsuits, and maybe by that time they'll have to step back and say, maybe we need to do something different. (Raw Data Matrix B, Appendix B)

(Questionnaire 89) Schools will get better at taking the tests as the years pass and eventually the SOLs will be scrapped as were the Literacy Passport Tests. (Raw Data Matrix B, Appendix B)

Proposition three: Parents often do not meet their responsibilities to help ensure student achievement on SOL tests.

Teacher comments indicated that parents should also be accountable for student attainment of the SOL curricula. Teachers said that parents should be committed to developing their children's readiness to learn.

(Interview 212) What we did at our school—we did an informal study—and we found that children who did not do their homework did much poorer on SOL tests than those who did. And we have a lot of children who do not do their homework on a regular basis, and of course, that comes from the home. And that is really out of the power of the teacher to control. (Raw Data Matrix C, Appendix C)

(Interview 212) You know, I find that everyone says we are going to raise test scores. The president says so and that schools are going to be held accountable, and of course, by that they mean principals and the teachers. I want to know, and all the teachers want to know—schools that are barely passing and schools that are not—when are the parents going to be held accountable for their end of the deal? When are the parents going to be responsible for letting their children go to school without doing their homework? (Raw Data Matrix C, Appendix C)

(Questionnaire 350) Parents will continue to blame others for what they are not doing at home. Teachers will need more support from the home and they will NOT get it. (Raw Data Matrix C, Appendix C)

Proposition Four: SOL testing results in less enjoyment in teaching and learning.

Teachers expressed concern that SOL testing has resulted in a less enjoyable, more businesslike teaching-learning environment in which the importance of test scores is omnipresent. Teachers said they are not comfortable with exploring creative or tangential learning experiences as they felt constrained by a rigid curriculum. Teachers believed that stress to achieve ever higher test scores will result in fewer joyful, creative learning opportunities for students.

(Interview 14) There is not time for anything fun or just to explore something if they're interested in it. I don't have the leisure time to do that anymore because I have to complete this very rigorous curriculum. (Raw Data Matrix D, Appendix D)

(Interview 91) I really feel like they're missing out on the joys of education and being able to do some of the in-depth studies and projects because they're doing

these little worksheets and I'm not happy with it. (Raw Data Matrix D, Appendix D)

(Interview 212) I'm afraid that when the pressure is really on you are going to find a lot more children who find school to be not at all fun—which is a sad thing, because elementary school should be fun and you can't have fun when your teacher is yelling at you because you aren't doing well and your principal is on your back and it's not your fault to begin with. (Raw Data Matrix D, Appendix D)

(Questionnaire 191) Gifted, honors, and higher achieving students will neither reach the levels of competence because time is wasted on lower level thinking skills, nor will they enjoy classes as much as in the past. (Raw Data Matrix D, Appendix D)

(Questionnaire 448) No more fun activities. More parental referrals to special education. My daughter hates what the tests do to her classes and how teaching styles have changed. (Raw Data Matrix D, Appendix D)

### Summary

Following the advice of Wolcott (1990), I have avoided drawing conclusions solely from the interview data, opting instead to simply offer a summary of related outcome propositions as determined by the constant comparative method of data analysis (Maykut & Morehouse, 1994). Wolcott's concern with drawing conclusions was that this step might tempt the researcher to exceed the limitations and power of the data actually available, and I agree that the temptation to do so has been great.

Teachers expressed concern about a variety of potentially unfavorable consequences related to Standards of Learning (SOL) testing. The single most significant negative outcome appeared to be related to consequences for teachers themselves. Negative outcomes included increased teacher stress, a diminishment of self-esteem, and loss of professional autonomy. Teachers expressed worry about negative consequences for students and for instructional practices as well.

Teachers also reported that SOL testing can result in positive outcomes for students, teachers, and schools. Positive outcomes included the development of a uniform statewide curriculum, greater emphasis on helping disadvantaged and struggling students to succeed, enhanced evaluation standards, and greater accountability for teachers and students.

I realize that the interviews reported in this section of the study included the views of only 12 individuals. Though I believe that teachers who participated in interviews were sincere and truthful, and though I tried to be honest and impartial in my analysis of the data, no claim is made that these views and themes can be unquestionably generalized to the larger population of teachers in the state. I do feel confident in saying, however, that the rather overwhelming level of concern expressed by teachers does call for a more extensive effort on the part of other

researchers to discover the concerns of educators in the Commonwealth. Similarly, other researchers can help amplify teacher opinions about the potentially positive outcomes of SOL testing.

## Data Analysis for Questionnaires

### Description of the Questionnaire Population

Four hundred sixty-four questionnaires were mailed to a systematic sample of teachers throughout the state of Virginia in November of 2000. Three hundred fifty-two usable questionnaires were returned by the cut-off date in February of 2001. A 76% return rate was achieved. The sample was an experienced group with two thirds having taught for more than ten years. Only ten percent had less than four years of experience. Respondents were stratified proportionally by assignment; however, elementary teachers were represented at a rate higher than middle school and high school teachers. Thirty-five percent of the group were elementary teachers. Over 80% of the sample had reached continuing contract (tenure) status. Teachers were approximately evenly divided between those who did and did not teach in an SOL test grade. Respondents were twice as likely to teach in medium or high SES schools as in low SES schools. Totals are in tables I-1 through I-11 in Appendix I.

### Questionnaire Responses

Teachers responded to questionnaire statements on a four-point scale with a score of one indicating a strongly favorable opinion of outcomes from SOL testing and a score of four indicating a strongly unfavorable opinion of outcomes from SOL testing. All scale mean scores were above the neutral score of 2.50 and were, therefore, weighted toward less favorable opinions of the outcomes of SOL testing. The scale mean scores for each of the five domains showed little variance among the categories of independent variables (years of teaching experience, primary teaching assignment, tenure status, SOL test grade status, and school SES). The only exception to this generalization was in cases where the number of respondents in a teaching assignment was small such as for librarians ( $N = 4$ ) and guidance counselors ( $N = 10$ ). Teachers' mean scores showed greater variance *across* domains. Higher mean scores, and, therefore, relatively less favorable opinions of SOL outcomes, were noted in domains measuring outcomes for teachers and outcomes for instructional practices. These data are in Tables I-1 through I-11 in Appendix I.

### Analysis of Variance

I had predicted that teachers' opinions about Virginia's program of high-stakes testing and measurement-driven instruction would vary according to the independent variables of tenure status, school SES, and SOL test grade status. Several related hypotheses seemed reasonable. First, I believed that teachers' opinions might vary according to their tenure status alone. Hypothetically, tenured teachers would have less reason to fear the consequences of low student test scores, and their experience might help them view testing and related requirements expressed in the SOA in the context of previous transitory reform initiatives.

Secondly, I hypothesized that teachers' placement in an SOL test grade might cause them to look at Virginia's reform initiatives differently from teachers in non-SOL test grades. When schools distribute test score results for internal review, it is, after all, teachers in SOL test grades who have their names directly associated with student scores. And, at the very least, teachers in SOL test grades are widely known in their communities to be associated with the test results achieved by a given grade.

A third hypothesis was that teacher opinions would vary according to the SES of the communities they serve. Many researchers have documented the relative difficulty of attaining passing test scores in predominately low SES schools, and this phenomenon has certainly been evident in Virginia.

A fourth hypothesis was that SOL test grade status and tenure status might interact to affect teacher opinions. One can easily imagine, for example, that a tenured teacher in a non-SOL test grade might have a less stressful teaching experience than a non-tenured teacher in an SOL test grade, and that this difference might shape opinions about school accountability.

Fifth, I hypothesized that the predominant socio-economic level of teachers' schools might interact with tenure status to result in differing levels of concern about SOL testing. Tenured teachers in high SES schools might worry less about the likelihood of negative consequences if their students achieved lower test scores than would non-tenured teachers in low SES schools.

A sixth hypothesis was that the interaction of school SES and SOL test grade status might cause teachers to view SOL testing and related issues differently. A teacher in an SOL test grade in a low SES school might be more worried about students' final SOL scores than a teacher in an SOL test grade in a high SES school, as high SES schools have had an easier time of meeting or surpassing state benchmark scores. One can also envision differences in the professional life of a teacher in an SOL test grade at a low SES school when compared to a teacher in a non-SOL test grade in a high SES school. Again, it seemed likely that these differences might produce differences in opinions about issues related to testing and accountability.

Lastly, I hypothesized that the interaction of tenure status, SOL test grade status, and school SES might combine to produce differences in teacher opinions. For example, a tenured teacher teaching in a non-SOL test grade in a high SES school would seem to be in a much more favorable situation than a non-tenured teacher in an SOL test grade in a low SES school. Again, I hypothesized that these differences were likely to result in different opinions about SOL testing and related SOA requirements.

A three-way ANOVA was conducted for each hypothesis for each of the five dependent variables: student outcomes, instructional outcomes, outcomes for schools, outcomes for public confidence, and outcomes for teachers. The three independent variables were school socio-economic status, SOL test grade status, and tenure status. Each independent variable had two levels. The ANOVA data are in Tables J-1 through J-5 in Appendix J.

The null hypotheses and the statistical decisions associated with them are in Table 11. Significant effects were found for two independent variables in the public confidence domain at  $\text{Alpha} = .05$ : school socio-economic level and tenure status. Teachers in high socio-economic level schools viewed outcomes as being more unfavorable than did teachers in low socio-economic schools ( $\underline{M} = 3.11$  for high SES schools compared to  $\underline{M} = 2.96$  for low SES schools). These data are found in Table I-5. Tenured teachers were somewhat more likely to see unfavorable outcomes for public confidence than the non-tenured teachers ( $\underline{M} = 3.09$  for tenured teachers compared to  $\underline{M} = 2.94$  for non-tenured teachers). These data are found in Table I-3. However, though the differences in means were statistically significant, the differences were so small as to be of no practical significance. There were no differences in teacher beliefs about the effects of SOA and SOL on student outcomes, instructional outcomes, outcomes for schools, or outcomes for teachers.

### Summary

Teacher opinions were gathered about the likely outcomes of high-stakes testing and measurement-driven instruction in Virginia. Teachers responded to a mailed questionnaire containing 52 statements in five domains. No practically significant main effects or interaction effects were found as a result of the analyses of variance. Simply put, teachers responded to questionnaire statements with remarkable similarity irrespective of their school's socio-economic level, their SOL test grade status, or their tenure status. Decisions linked to null hypotheses are described in Table 11 below:

Table 11

Decisions Linked to Null Hypotheses

Null hypothesis	Decision based on ANOVA				
	Student outcomes	Instructional outcomes	School outcomes	Public confidence	Teacher outcomes
1. Teachers' opinions about measurement-driven instruction and high-stakes testing do not differ based on their tenure status (tenured, non-tenured).	Fail to reject	Fail to reject	Fail to reject	Reject	Fail to reject
2. Teachers' opinions about measurement-driven instruction and high-stakes testing do not differ based on their SOL test grade status (SOL test grade, non-SOL test grade).	Fail to reject	Fail to reject	Fail to reject	Fail to reject	Fail to reject
3. Teachers' opinions about measurement-driven instruction and high-stakes testing do not differ based on the predominant socio-economic level of their school (low, high).	Fail to reject	Fail to reject	Fail to reject	Reject	Fail to reject
4. Teachers' opinions about measurement-driven instruction and high-stakes testing do not differ based on the interaction of SOL test grade status (SOL test grade/non-SOL test grade) and tenure status (tenured, non-tenured).	Fail to reject	Fail to reject	Fail to reject	Fail to reject	Fail to reject
5. Teachers' opinions about measurement-driven instruction and high-stakes testing do not differ based on the interaction of the predominant socio-economic level of their school (high, low) and tenure status (tenured, non-tenured).	Fail to reject	Fail to reject	Fail to reject	Fail to reject	Fail to reject
6. Teachers' opinions about measurement-driven instruction and high-stakes testing do not differ based on the interaction of school SES (high, low) and SOL test grade status (SOL test grade, non-SOL test grade).	Fail to reject	Fail to reject	Fail to reject	Fail to reject	Fail to reject
7. Teachers' opinions about measurement-driven instruction and high-stakes testing do not differ based on the interaction of school socio-economic level (high, low), SOL test grade status (SOL test grade, non-SOL test grade), and tenure status (tenured, non-tenured).	Fail to reject	Fail to reject	Fail to reject	Fail to reject	Fail to reject