

**COMMONWEALTH OF MASSACHUSETTS
BOARD OF EDUCATION
SPECIAL MEETING**

**WORCESTER HOLIDAY INN
500 LINCOLN STREET
WORCESTER, MASSACHUSETTS
Monday, November 22, 1999**

4:00 p.m. - 6:00 p.m.

BOARD OF EDUCATION

MEMBERS PRESENT:

Mr. James A. Peyser, Chairman, Dorchester
Dr. Roberta R. Schaefer, Vice-Chairperson, Worcester
Ms. Patricia Crutchfield, Southwick
Mr. William K. Irwin, Wilmington
Dr. Stanley Z. Koplik, Boston
Mr. Marcel LaFlamme, Chair, Student Advisory Council, Monson
Dr. Abigail Thernstrom, Lexington

Dr. David P. Driscoll, Commissioner of Education
Secretary to the Board

BOARD OF EDUCATION

MEMBERS ABSENT:

Mr. Charles D. Baker, Swampscott
Dr. Edwin J. Delattre, Boston

ALSO PRESENT:

Maryellen Coughlin, Registered Professional Reporter

1. Competency Determination (MCAS Grade 10 Passing Standard for Class of 2003)

CHAIRMAN PEYSER: This is a discussion meeting, not a business meeting. We're not taking any votes, so we don't have to be too concerned about the absence of a quorum. Obviously, I'd prefer to have all the members here.

This afternoon we want to do two things. The first is to continue the discussion that was started back in September around the graduation requirement as it relates to a passing score on the MCAS test for tenth graders, in particular for the Class of 2003. The initial vote on this is scheduled for tomorrow. We plan to have a two month period for public comment and response to that initial Board vote. We'll come back for a final decision and vote in January. The second topic up for discussion, assuming we have enough time, is teacher certification. We need insight into the work the Department has been doing in redrafting the certification regulations and the process by which teachers are certified.

In our discussion today we ought to revisit the alpha question: Should we be establishing a graduation requirement at all for the Class of 2003? I think we are in agreement that we should, but we ought to be explicit about that in our discussion. In September we talked about five or six "environmental issues" around setting the bar for an MCAS score: whether to average them, what subjects, whether they should have high stakes attached to them, and other issues like that. We ought to revisit these to make sure that we're still in the same place we were in September.

The larger discussion, which is the central component of the memo and the proposal the Commissioner and I are making, is to establish the competency determination or passing score for the tenth grade MCAS at 220, the breakpoint between Needs Improvement and Failing. The logical question, of course, is why 220 as opposed to some other number? My answer is twofold.

First, it's a reasonable starting point, and I emphasize the term starting point. Given the performance to date of eighth and tenth graders, it's clear that needs improvement is, unfortunately, a challenging standard for a very large percentage of students, especially in math. Setting the initial standard at Proficient would most likely result in too many unmotivated students and schools. At the same time it would undermine the widespread public and political support necessary to maintain progress of education reform. Proficiency is our objective, but we cannot reach it in a single step. In essence, we must strike a balance between lighting a fire under the system to accelerate improvement and throwing a bomb that would leave the system in chaos.

The second answer to that question is that it's easily explained and defended. Failing is failing, by definition. Our first objective should be to ensure that diplomas are not granted to students who lack the most basic knowledge and skills. The student work in this category is demonstrably unsatisfactory and inadequate for graduation, a conclusion that is reinforced by the strong correlation between failing MCAS performance and poor performance on other standardized tests. There is a temptation to set a higher threshold, although one short of Proficient, since much of the work in the lower reaches of Needs Improvement is also quite weak. Given the extensive process used to establish the breakpoints between the four performance categories, choosing any other starting point within Needs Improvement would be arbitrary and therefore difficult to defend. Another question emerges: Does 220 represent a lowering of our standards? The answer is a clear and unambiguous, "No". We're establishing standards where none exist. As the MCAS results clearly show, there are thousands of students graduating from high school each year who lack basic knowledge and skills. Moreover, we are explicitly recommending that 220 acts as a starting point, not an endpoint. We are not recommending that Needs Improvement be redefined upward as Proficient. Doing so would truly compromise the standards we have set. Instead, we are acknowledging that only through a process of continuous improvement will we reach our objective.

COMMISSIONER DRISCOLL: I would like to provide some context.

Going back to the second week of March 1999, James Peyser, as the new Chairman and I, as the new Commissioner, set out a very carefully planned schedule of events and decisions that we thought this Board should address. Some of them were of an emergency nature such as the second round of re-certification regulations that were ending that June. We went about the business of holding public hearings and so forth and we finished that. We set a schedule for the frameworks. In fact, we've stayed on schedule with our review of mathematics, science, health, arts and with English language arts being reviewed and brought before this Board in early spring. The history/social studies framework will be the final one reviewed, and the draft will hopefully come before this Board in June.

Central to all of that, of course, was establishing a passing threshold for a competency determination for the Class of 2003. It was clear to us that in order to be fair to young people and their families, and for that matter the school systems, the decision should be made no later than January. That meant a November vote with public hearings following Board discussion in September. I think it's very important to note that we followed a very careful process. All along the way we have looked at a tremendous amount of data that has been made available. Most importantly, as the Chairman referred to, the technical review of the 1998 MCAS results and the correlation between those results and other standardized nationally-normed tests, including the Stanford, Iowa, and the Metropolitan.

I'm very pleased that we have a joint recommendation. Board members indicated, back in March, that the more the Chairman and I could agree, the easier it would be for all of us. We tend to push each other and ensure that we are asking the hard questions. The hard question here can be likened to getting it right, that is, what I refer to as the "Goldilock's Effect". We don't want the porridge too hot; we don't want the porridge too cold. How do you make sure the porridge is just right? I feel better about this recommendation when I see that people will criticize it on both sides. Perhaps that shows that you have it right.

As the Chairman said, failing is failing. I challenge anyone to look at the work done by students scoring in the Failing category and tell me that those youngsters should be high school graduates. People need to take a look at the test. On our web site you can click on any question, including any open-ended question, at any grade level, in any subject from the 1998 test. We also have examples on the web of 1999 student work. You can click on the question. You can look at the question. You can look at the rubric for the response and click on actual student work from Advanced

right down to Failing. There is no secret with what we are labeling as Advanced, Proficient, Needs Improvement and Failing work.

The question, "Is it high enough?" becomes an issue of fairness. Hopefully the increase in scores that we saw at the grade four level is because those youngsters have had the advantage of the frameworks and standards since they began school in kindergarten. Whereas students currently in grades eight, ten and the Class of 2003, our current ninth graders, have not. Finally, I'm proud of the fact that in our recommendation to this Board we not only cite 220 as the threshold, but we indicate as part of the recommendation that it be increased over time. I think that's important because that is our commitment. No one should think that this is the final point we want students to reach in order to be high school graduates, but it is the initial point. If we're serious about our young people competing in the global economy in the 21st century, we have to be serious about getting our students to Proficient and Advanced. I'm very comfortable with this recommendation. It's been carefully crafted, reviewed, and discussed. It is important to emphasize once more that this is what it is -- a starting point. It's different from our goal. It's fair, and it's the right one.

DR. KOPLIK: I appreciate the thoughtfulness that you both put into this recommendation, and I support your recommendation. I think it's important, in terms of background as it relates to the confidence measure, to describe the nature of the students who perform on a level of 220. For example, I don't think people should be of the opinion that we have given away quality by establishing a standard of 220. If you look at students who score 220, you will see students who have, at least in my judgment, sufficient grasp of conceptual understanding, reading comprehension, ability to express themselves clearly and cogently. We created a label as Needs Improvement because we would like that performance to get better. I think that performance will get better for sure. I don't want an impression left that we have established this initial standard at a level that puts quality on some sacrificial pole. I don't believe that. I think that the determination that you have reached on 220 gives me, and I hope others, sufficient confidence that we're not letting loose a substantial number of students who will do dismally in future efforts. I don't believe that. I believe that they will measure up and achieve much more in subsequent years. I support the recommendation. I really appreciate, and I mean this genuinely, the consideration that the two of you have put into this, because I know that establishing this initial standard is an important threshold for all of us.

MR. IRWIN: I too, like Stan, really appreciate the work that's gone into it. I know that David and Jim have put a lot of work into it, as well as the staff of the Department and other people. I really look forward to the comments coming back when it goes out for public comment. There are a couple areas that we have to be looked at very closely such as, transfers, dropout rates and things like that. With 220 as the number we're starting out with, we can deal with all of that, especially as it affects the drop out rate. I just want to say that I support the decision.

DR. SCHAEFER: I concur with my other two colleagues on this. It seemed, from the technical report that we just had, that 220 is defensible. It indicated that students at that level were performing at about the 50th percentile on the nationally-normed tests. That is another indication that we're in the right ballpark. Average students should be getting a high school diploma. Thank you also for the work that's gone into this.

COMMISSIONER DRISCOLL: I would like to clarify that the data in the technical report, show 90 percent of the students who were scored in the failing category were scoring below the 50th percentile. A substantial majority was scoring at the 25th percentile or lower. I just wanted to clarify your point. It's clear based on that report that the students are scoring on the bottom half who are in the failing category on other exams. For the benefit of folks watching, perhaps we should go over what's in the proposal, not to belabor the point, but for purposes of public record. We could have Charlie DePasquale, Jeff Nellhaus, and Kit Viator come forward because there may be an issue that Board Members would like to address.

Everywhere I go I get the same question: "What are we going to do about the students that fail?" At a summit meeting with Senator Kerry this morning, I got the same question. From the very beginning, this program has been built on the fact that we would get individual student results and that the test would be a diagnostic tool that would point out every student's strengths and weaknesses. The first thing to be said is that we will know who they are and where they fall on the spectrum. The very first intention of the legislation for having a tenth grade test is for students to have an opportunity in the eleventh and twelfth grade to be able to pass. One of the issues, and maybe

the first one to start with, Mr. Chairman, is this whole issue of re-testing. Right now, the thinking is that we would give it once a year in May.

DR. THERNSTROM: I would like to add something to your comment regarding the question of who these students are. It's going to be like the homeless issue. It's not one group. It seems to me that we can't answer the question "What are we doing for these students?" -- at least not today. We need more data. They are going to be several subgroups. They're going to be students who simply don't show up for school. Until the data comes in, we can't possibly answer the question about what we'll do next. We are going to have to respond to the needs of different groups of students once we identify them.

CHAIRMAN PEYSER: I think the only thing I would add is that we need to send a clear signal that we are not going to slam the door on educational opportunities for these young people. We will continue to give them opportunities to learn and achieve at the levels we expect for graduation.

DR. THERNSTROM: There will be students who will prove not to be school learners but who will learn in life. They will learn on the job. A lot of people learn on the job. I don't think we want to keep kids in the classroom who are not getting anything out of the classroom.

CHAIRMAN PEYSER: Agreed. Let me back up one second to round out the motion that will be put on the table tomorrow. It establishes a competency determination threshold score of 220 for the English and math only. It would apply initially to the Class of 2003.

DR. KOPLIK: That's separately for math and English, right?

CHAIRMAN PEYSER: Yes. That score must be achieved in each of those subject areas, not a combined average. In addition, it would apply to students across the board, regardless of the category or the program they're in. It would apply to vocational/technical, special education and bilingual education. It would not permit local overrides so that other data can be brought in to compensate for a failing score on the MCAS in either of those categories. As the Commissioner mentioned earlier, the motion explicitly takes into account that the 220 score passing threshold would be increased over time. Finally, additional subjects will be introduced into the mix as they become ready, both in terms of the frameworks and assessments.

COMMISSIONER DRISCOLL: In your packet, we've also included a proposed amendment, because this is going to take a statutory change. The Chairman and I have been in contact with the leadership in the House, the Senate, and the Governor's Office to let them know about this recommendation. They are aware that we will need legislation which in the short run will allow the Board to make this kind of determination regarding subjects tested and when they should be phased in. This makes a great deal of sense, but we will need an amendment.

CHAIRMAN PEYSER: You had raised the issue of re-testing. Maybe Jeff could explain.

MR. NELLHAUS: What we're proposing, after exploring some of the technical challenges, is that we provide more than one opportunity for re-testing in grades eleven and twelve, at least two other opportunities per grade. This is based on evidence we have from other states where there are similar policies. Ohio, for example, had as many as 40 or 50 percent of the students failing their exit exam on the first time around. A high percentage of the students in the state eventually passed the test before the twelfth grade, and they gave multiple opportunities. We might have relatively high failing rates at the beginning, but you can get more students to pass the test eventually if you give enough opportunities. We would hope over the years that the number of students initially failing the test would also decline as schools and students became more familiar with the curriculum and expectations. We believe there could be at least another testing opportunity, perhaps in January or February, with the scores coming back to those students before the spring testing period. They would then know whether they needed to take it again in the spring.

CHAIRMAN PEYSER: If a student were to get above a 220 on the English and below on the math, they would only have to take the math portion of that. Is that correct?

MR. NELLHAUS: That's what we would assume at this point.

DR. THERNSTROM: Jeff, in the states to which you referred, what kind of tests were those students taking? Were they testing test-taking skills or were they testing to the degree to which we are, real substantive knowledge?

MR. NELLHAUS: They were testing real substantive knowledge. Granted those tests in Ohio were first administered in the ninth grade, not the tenth grade. It might be that we're covering more complex concepts in grade ten, and Ohio students did have an additional year in which to re-take the test, but I believe they're moving their test into the tenth grade as well. I don't know exactly where their passing score was set. They may have had a lower passing score initially. It's hard to equate the tests with respect to the difficulty level and the content, but they were tests in science and math, in reading, in civics and a number of different areas, and students had to pass in each of the areas.

DR. THERNSTROM: So you would say those students that subsequently passed those tests were in fact demonstrating a level of knowledge that they did not demonstrate before?

MR. NELLHAUS: I have to assume that, although I don't have a lot of data on that.

COMMISSIONER DRISCOLL: I think that's a very good point that you raised, Abby. We have to be clear that whether we're talking about an appeal process or re-testing, in all instances it's still about reaching those standards. It's not about a retest that's all multiple choice or an appeals process where you get two points if you've got 100 percent attendance. This is very important. Many of these kids are going to need a lot of time to get their performance up to a point where they're able to demonstrate significant improvement.

MR. NELLHAUS: The questions would change on each of those tests, so it's not a matter of memorizing answers.

DR. THERNSTROM: Oh, I understand that, but I think that we should not expect the same high percentages of students to pass the second or third time around as they were seeing in a place like Ohio simply because of the nature of the test that we are giving.

CHAIRMAN PEYSER: The second issue, which you just raised briefly, is the appeals process. I wonder if you, Commissioner, or anyone else might comment.

COMMISSIONER DRISCOLL: We want to make sure that we are being fair, but we want to be clear that the standard is not going to change. The appeal has to be based on something very clear. Of course we want to see how the public comment period goes. These just some of the issues the Board is going to have to deal with in the future. We're talking about appeals based on technical issues such as something that happens during the test administration. With the teacher test, it was around dictation. The tape was being played in two rooms, and the students could hear both at once, but they were five seconds off. You can understand the technical issues there. Or, if it were a very close thing, we could pull the test and look at it. Using the teacher test as an example, if we've seen someone one point off, we might look at the open-ended questions that account for a couple of points. These are some of the issues. I think perhaps there will be others raised during the public comment period.

CHAIRMAN PEYSER: Just to underline your comments, the remedy in any of those cases is either a re-evaluation of scoring, re-scoring or essentially re-testing. It's not the kind of thing where you appeal because you had inappropriate accommodations or technical glitches in the administration of the test and suddenly you're over the threshold. The remedy is really to take the test again, or in the case where there may be an allegation of a scoring error, we might look at the scoring.

DR. THERNSTROM: So what are we talking about in terms of offering re-testing opportunities? Let's say you take it in the spring of the tenth grade, at that point your second chance is the spring of eleventh grade. If you failed it again, retake it in the fall of the twelfth grade. But that also raises the question if you then fail it again in the spring of the twelfth grade, are we going to allow students to come back? Can a student come back and retake the test next year, whether that student is in school or in some sort of educational program or not?

MR. NELLHAUS: That's certainly an option to consider.

MR. IRWIN: But when a student doesn't graduate now, they stay back and they repeat the twelfth grade.

DR. THERNSTROM: But what if they choose not to? They don't have to do that.

MR. IRWIN: That would be their decision to make.

CHAIRMAN PEYSER: Your question is, if they're not enrolled in school, can they just come back and take the test again?

DR. THERNSTROM: Can they come back and take the test?

COMMISSIONER DRISCOLL: It certainly would be my recommendation. In fact, the next issue we explore is what happens for continuing education. As Abby said, there are some kids that are just not ready either academically or in maturity. They want to go to work. We have tremendous partners, many in Worcester. People have been wonderful. There is a group of business people who get together to work with local superintendents on this very issue. They're quite willing to take kids who the schools indicate have completed their requirements in terms of taking courses and showing up and so forth. They're quite willing to take these kids and work with them because these students have particular skills in certain areas. If they mature and develop skills in the academic areas, why not allow a retest? I think we should be providing the MCAS test to anybody who wants to take it if they've gone through our school system, even if they come back many years from now.

MR. IRWIN: Abby, I have to disagree with what you said earlier about just allowing the retest in the spring of the junior and spring of the senior year.

DR. THERNSTROM: No, no. I said fall of senior year and then spring of senior year, but not fall of junior year.

MR. IRWIN: One of the goals we have is to get a quick turn around on the tenth grade test results. The reasons for this are for remediation and to identify and act on the areas that need to be remediated. I think it's important to give the students as many chances as possible to show that if they work hard they possibly can get there. I think it's important that we get a quicker turn around.

Jeff, will there be a quicker turnaround on scoring and results so we don't wait until November? I know if you did a second test for people who failed there would be a smaller number to score, so it's easier to get a turnaround there. We need a quicker turnaround than what we have now.

MR. NELLHAUS: If you remember, this year we reported back to schools, around the middle of September, the item analysis information, which gives them quite a bit of information at the student level about how the students scored. From that information you could make a judgment about whether a student passed or not. You could identify the vast majority of students who probably didn't make the passing score. So even with our current schedule for reporting, I think we're getting a lot of information now much earlier than before. Once the tenth grade test counts, we could look at accelerating the reporting for the tenth graders even further. For example, we can score the multiple choice pretty quickly, and maybe from that, without having the open-response data to make a definitive determination, we could begin to identify students who are not likely to have passed the test based on their multiple choice results. There are many things we can play with to identify these students as quickly as possible.

DR. SCHAEFER: It seems to me that the first priority in scoring would be the tenth grade. Maybe there's some information that we could have back by the summer so that students could do something during the summer. It would then make sense to give it again in the fall.

MR. NELLHAUS: If we have re-testing it wouldn't necessarily be in September or October. We're talking about January or February rather than when they walk back into the school.

CHAIRMAN PEYSER: Although, there may be some students who were absent and missed the retest. I assume that's a small number.

DR. THERNSTROM: In grading the tenth grade assessments, would it be possible to first take those students who failed in eighth grade? After all, the tenth grade test is not going to be the first information we get on what the strengths and weaknesses of these students are and who's in need of remediation. Could we take that group of students and grade them first so that they get back the fastest information?

MR. NELLHAUS: There are lots of options we can explore. I don't know if that's the best way to do it. We will explore ways to make sure that we can get data back much more quickly on tenth graders.

DR. THERNSTROM: The reason I said no to the fall retesting in eleventh grade is that I don't want them to be blowing off the tenth grade spring test. I think that is a danger. At the point where they flunk it in the eleventh grade in the spring you'd want to let them take it again in the fall of the twelfth grade.

CHAIRMAN PEYSER: Maybe we ought to keep moving forward here. We have already touched on the notion of continuing educational opportunities for students who fail to meet competency determination before completing the twelfth grade. Maybe we ought to open it up for any further comment. Stan, do you want to comment on that?

DR. KOPLIK: We haven't figured out the precise logistics related to how you move those students from high school who are absent MCAS passage to community college, but it is an option. We know that developmentally and physically we may not want to leave students in the high school setting when in fact the same student might benefit and prosper in a different setting. You take the student who is past 18, as a young adult you might not want to put that student into an environment with other 14 and 15 year olds but with more mature students. That may be part of the prescription necessary for lighting the lamp in that particular student. So we're looking at options using the community colleges as places of learning for students who've had some difficulty getting past the MCAS exam. We will give very serious thought over the next few months as to how we do it in terms of logistics. David and I have explored this some. We'll explore it some more. Jim and I have talked about this idea at a surface level. The idea makes sense, but how we do it mechanically will be somewhat of a challenge. I really believe that moving students out of the high school setting into a community college setting will benefit them and us.

MR. NELLHAUS: That would be especially true for students who have fulfilled local requirements.

DR. KOPLIK: Jeff, that's exactly what we're looking at. We don't want students who have shortcomings with meeting the requirements for graduation other than the MCAS. There are a number of students, however, who will benefit if we transition them into a community college situation. I really believe that.

CHAIRMAN PEYSER: Maybe I should add one other thought here. I know we've had some discussions about possibly expanding the middle college model for students who haven't completed the twelfth grade, but may have completed the tenth grade, and not passed the MCAS. Even for students at that age, in the context of a sheltered program within a more mature setting, such as a community college, there may be some opportunities for getting them over the rung.

DR. KOPLIK: I think the point is that we've got several options to look at. The heart of the notion is that we're not going to leave people behind, especially those who, with additional intervention, might succeed.

CHAIRMAN PEYSER: Point D, on page 4 of the memo, talks about the acknowledgment of the accomplishments of the students. This is mostly about meeting local graduation requirements. Commissioner, Jeff, do you want to comment on that?

COMMISSIONER DRISCOLL: That's an issue people are recognizing now. It's one aspect of the discussion we had in September and the focus on a standards-based approach. Students are expected to meet the standard, so people have stopped trying to figure out ways to add points for things like community service. Once that sinks in, the issue becomes what happens to kids that don't get over the standard. A locally administered certificate, which

cannot indicate a graduate, because by law they have to pass the competency determination, can be issued. There's certainly nothing wrong with that. Other states have done it. A certificate of completion would indicate that someone has in fact taken all the courses or a certain number of courses. Their attendance record would be included, that kind of information. As I've stated earlier, I've had a number of businesses who have come forward and said that they we're willing to work with youngsters like that. I think there should be an acknowledgment of what they have accomplished, such as completing four years of high school, coupled with a particular proficiency in an area.

We're talking to the vocational superintendents. They have large numbers of special needs youngsters. These are kids who work hard and develop skills in certain areas. They would like to present to employers the fact that these kids have displayed certain skills. They want to show employable skills, and that they've completed courses, and done what they're suppose to do to satisfy local requirements. There are business leaders who tell me they hire them now, and they don't have the skills to be high school graduates. They hire them now. It's really not going to change other than the fact that they're not going to be able to be called high school graduates. Over the time they've worked with these youngsters some have gone on to further education. It is important for us to recognize that at the local level, people are talking about acknowledgment that local requirements have been satisfied. That's fine, as long as we make the distinction that that does not substitute for being able to pass the state standard required by law.

DR. SCHAEFER: I guess I'm a little confused then. I thought the diploma, the high school diploma, is issued by the district.

COMMISSIONER DRISCOLL: It is issued by the district. Historically, in this state, when you graduate from high school they give you a diploma. Our law says in order to be a high school graduate you must pass the competency determination. In the past, a diploma has meant high school graduation. It can't any longer unless they pass the MCAS. Whatever you call it, it can't indicate someone is a high school graduate unless they've passed our high school standard.

DR. SCHAEFER: But whatever it is that they're getting, is it still issued by the district if they pass the competency requirement?

COMMISSIONER DRISCOLL: That is correct. If they pass it, they're high school graduates.

DR. SCHAEFER: So the district would be issuing two different things?

COMMISSIONER DRISCOLL: It could.

DR. SCHAEFER: It's not that the competency thing is coming from the state?

COMMISSIONER DRISCOLL: In order to graduate from high school, you now have to satisfy our requirement at the state level. That doesn't guarantee that you're a high school graduate either, because the locals may have a number of requirements that they will impose as well.

DR. SCHAEFER: So the local district is going to be issuing two separate things if they decide to?

COMMISSIONER DRISCOLL: If they choose.

DR. THERNSTROM: The language of that certificate has to be clearly distinguished from a high school graduation diploma. I worry about the difference getting fudged.

CHAIRMAN PEYSER: I think that's a reasonable concern. The Department, at some point, ought to be issuing some guidelines.

DR. THERNSTROM: Some guidelines and some actual language.

CHAIRMAN PEYSER: Having said that, I don't think we're in a position to prevent districts from handing out certificates of some kind or another to their students. The only authority we have is to establish the necessary, although not sufficient requirement, for high school graduation, which is distinct from a certificate or some other document acknowledging the local criteria have been met. You're right, it's confusing.

DR. THERNSTROM: Or potentially confusing.

CHAIRMAN PEYSER: Potentially confusing.

Another item on the agenda for tomorrow is the Certificate of Mastery. What's being suggested here is a clarification of the decision we took, almost two years ago, to state that a score in the Proficient or Advanced category on the MCAS would qualify one for a Certificate of Mastery. This would do two things.

It would provide some incentive for students who did not reach the proficiency level in their first MCAS round to strive for higher performance in some subsequent test. Secondly, it would allow us to begin issuing these certificates immediately for the Class of 2000 because there are a numbers of tenth graders in 1998 who took that test and scored in the proficient and advanced categories. They would be eligible if they satisfied the other requirements having to do with scores on the AP test and the SAT 2s. I think that would be a valuable symbol and award for us to begin granting immediately to those who have demonstrated such excellence.

MR. LaFLAMME: Would those be issued by the districts, or would those be administered by the state or by the Department?

CHAIRMAN PEYSER: Good question. I think those would be more a state document than a local document.

COMMISSIONER DRISCOLL: Our sense of that, Marcel, was that it would be state issued.

CHAIRMAN PEYSER: I don't think there are any local components to the Certificate of Mastery.

There are three general questions in the conclusion section of this memo. Basically, they're designed to focus on the public comment we receive over the next couple of months. Obviously we're interested and will receive comment on all the parts of this memo and the proposal, but there are some specific areas where I think we can use a good deal of guidance.

One has to do with students who transfer in from out of state late in their high school careers and the extent to which these requirements apply to those students. Another is focusing on strategies for preventing dropouts. As you know, a lot of people are concerned that a student who receives a failing mark on the MCAS either in eighth grade or tenth grade will become discouraged and give up and drop out of high school, when perhaps under different circumstances they would have stayed the course and achieved to adequate levels by the twelfth grade. There are strategies for trying to prevent dropouts, and we ought to understand those as best we can to ensure that we're not exacerbating the problem. I would add that this is a problem that already exists and could conceivably get worse. I'm not convinced that the pool of students at risk of dropping out is likely to grow substantially. I'd be interested in hearing more information and a variety of perspectives on that point. I'd also like to learn more about what we might do to keep those students in school.

The last area has to do with the responsibility of a local district when a student fails MCAS but has completed the other graduation requirements that are locally determined. Do they have an obligation to continue providing services to those students if such students wish to attend school? What kinds of services and opportunities are most appropriate for those students? This is an area I'd certainly like to hear as much comment on as possible. Would anyone like to raise any further questions or are those specific questions useful for the public to comment on?

DR. KOPLIK: The comment period is roughly about 30 days?

CHAIRMAN PEYSER: Our final vote is in January. Obviously the holidays are coming up, and so I think it's fair to say that any comment we receive within a couple of weeks of our January meeting will be fully integrated into the discussion. As we all know, comments are accepted and heard up to the final minute. My view is that there's plenty of time for people to respond. This is a subject that's been on the table for a long time, and people have made their feelings well-known. It may be more an issue of putting them down on paper or elaborating on them.

2. Educator Quality : Outline of Proposed New System of Educator Preparation, Certification and Evaluation – Discussion

CHAIRMAN PEYSER: The next item has to do with the draft that the Department is working on, which is in its early stages, around revisions to the educator certification requirements, as well as the process for certification.

COMMISSIONER DRISCOLL: I should point out before we switch to this, that while it was nice of Board Members to give both Jim and I kudos on this, Jim really deserves more of the credit in my judgment, because it's easier for me in many ways. This is a very difficult decision for the Board. It's a historical decision. I think the way in which the Board has conducted itself has lent great credence to the decision-making process.

My second kudos go to Sandra Stotsky. The issue of certification regulations has been bandied about for quite some time. Someone in higher education told me it's been seven years at least. It's not been easy amidst all the things we've asked Sandra to do since she came to us, to look at all of the content of the teacher test. Certainly, this has been a tremendous task.

What you have before you will change, but it's our best shot at the time of this board meeting. There is a reordering of things that Sandra wants to do. This represents not only tremendous work on Sandy's part but on the part of others in the Department as well. I'm very pleased. I think what we now put before the Board is something you can at least react to and help shape.

The larger issues Sandy has laid out are important steps forward. So much hinges on our certification regulations. As we try to recruit, train, and retain qualified people in our school system, we need to make sure that we don't have unnecessary barriers. This will help with the teacher test and identifying what we expect from our people. You have before you a concept paper. Sandy, do you want to make any remarks?

MS. STOTSKY: Yes. Thank you very much. I would like to agree that we have a committee that certainly deserves mention and praise for their involvement in this work. I want to mention their names both today and tomorrow because I don't want anyone to ever think that this was a solo act. It couldn't have possibly been a solo act. So let me just mention the names of the committee people: Carol Gilbert, Margaret Cassidy, Margaret Regan, Peg Wood, Melanie Winklosky, and Georgia Parafestas. Their thinking and experience have been invaluable to me as we worked through this document.

I would like to reinforce what David just said about this as a concept paper. We felt it was important to meet the almost impossible deadline that Jim had set for this document because we want to get it out to the field if possible. This is why we hope that you will approve this for release to the field, tomorrow.

There are substantive pieces of information and questions buried in almost every part of this document. We would like to get input from the field. It isn't humanly possible for us to meet with the 30 to 45 different groups of educators and others who have an interest in this document. I hope by getting this concept paper out, though not a fully developed draft, we will provide an opportunity for people to respond before a full revision, embedded in statutory language, comes out. I want to do three things, at this point. With your permission, I would like to proceed.

I would like to go through the first two pages and highlight the major directions of change in this entire document. Secondly, I would like to run through the table of contents so that you have a sense of what is here. You will be able to maneuver yourself back and forth through this document when you look at it tonight in preparation for tomorrow's meeting. I'd like to give you a scenario of what prospective teachers might do in going through the major pieces of this document. That will provide what this document means for a prospective teacher and how it will affect them at

different points along the path. It should help you understand what all of this very abstract language means. If I could do those three things today, that will help you all raise better questions for us to think about.

Let me start with the first two pages. You will see various name changes, if you're familiar with the old documents. For example, changing the word "certificate" to "license." We're doing that to give the whole document a fresh look, and to conform in some ways with a word that is used in many other professions, license instead of certificates. We thought we'd give the document a whole new look starting with terminology that has fewer syllables and therefore takes up less space on the page.

DR. KOPLIK: It's harder to spell.

MS. STOTSKY: You've got to learn the C and S difference.

You will see where Provisional Certificate with Advanced Standing has been reduced to two words, so that is a major change right there. We are trying to have, in this document, four different routes to licensure.

Options are something we are very concerned with, so we're trying to create different ways for the prospective teacher to become licensed. For the stage we are calling Professional License, what use to be called Standard Certificate, we are requiring one year of employment and a passing score on a performance assessment. We are recommending that this be done locally. I will tell you more about that when we get to the actual route that a prospective teacher might take. This is going to be one of the major changes made.

We have tried extremely hard to separate pedagogical information from subject matter knowledge, certainly for secondary school teachers. This is not something you can do as easily for early childhood and elementary, but you will see where we have tried to clarify subject matter knowledge as opposed to pedagogical knowledge.

If you recall, we have had two different documents. A purple book, that dealt with certification regulations and a yellow book that dealt with the principles of effective teaching and evaluation. We have combined them into one document which we're showing you here. You will see professional standards for teachers as well as professional standards for administrators in this document. In this way we have replaced that entire yellow booklet.

COMMISSIONER DRISCOLL: I'm hoping the Board will allow Sandra to pick the color.

MS. STOTSKY: Certainly not a mixture of yellow and purple.

We also show how we will maintain consistent standards all the way through and incorporate them into other programs started by the Department, such as the Mentor Program and the Signing Bonus Program. We're going to be able to have what we develop in this document run consistently through a number of documents and have a unified approach through a variety of different areas of the Department.

We are clearly strengthening subject matter knowledge for the various licenses where it seems as if we needed to refocus in some cases. You will see where we have really strengthened the elementary license in particular. We have done a lot to strengthen requirements for reading instruction because that is the fundamental subject that must be taught well in the early grades. We have strengthened requirements in several certificates for reading instruction as a subject matter.

We have tried to remove some professional barriers as well. You will see that in particular when I talk about the professional support licenses and the reason why we feel we can do that. We have updated licenses, and we have tried to reduce some of those that we do not feel are academically desirable anymore. We haven't finished developing Master Teacher; it will take a while longer to work out the details. We have tried to add another, Academically Advanced or the old Gifted and Talented. I would hope to be able to pass out something for you to see by tomorrow. You will see that piece as part of an attempt to have a well-rounded group of licenses. Now, let me go into the table of contents so that you can see what is in this document.

We are working from a document that has a draft date of 11/16/99. I want to be sure that people in the audience all on the same page with us as far as a draft document of 11/16/99. In this document you will see:

- (1) Definitions which are required by law to be there such as the route, pre-practicum and practicum requirements. Those areas will need program approval.
- (2) Professional standards of teachers and administrators. This is where the old yellow book is basically centered.
- (3) In Section 2, all of the teacher licenses for various levels, some of which we've altered slightly.
- (4) Specialist teacher licenses, as we are calling them, almost all of which require one year of employment.
- (5) The administrator licenses. In the new reordering, the superintendent will be first. You do see the six administrator licenses here.
- (6) Professional support licenses. You will see two different categories. These aren't new. They have always required program approval. They are certificates or licenses for which approval continues to be needed by the Department of Education.
- (7) We have a group of licenses that we no longer believe require DOE program approval. We feel we can accept the program approval that the profession itself bestows upon these particular licenses. We've researched carefully to make sure that these are areas for which there is professional approval from the very professions to which these people belong. Of course, we will continue to stay on top of whatever they do professionally for their own program approval, process, and criteria.
- (8) In Section 3, the Evaluation of Teachers and Administrators, you will see no more than two pages because it also refers back to those standards in part one.
- (9) In Section 4, you'll see we are not going to be developing re-licensure. This is where we place the re-certification regulations you have just approved. We inadvertently put it in to be developed. They are to be put in here. We're not developing them all over again. We're using what you have just approved for that piece of the document.

Let me now try to describe what a route might be. Let's say we have somebody who is now attending a college or a university who thinks that he or she would like to become an elementary school teacher. That person is going to have to seek a Bachelor's Degree, which is the second arrow here, with an arts or sciences major.

COMMISSIONER DRISCOLL: Excuse me, Sandy, can I interrupt to make sure everybody is on page 4? We went through the document and now we're going to jump back. We're all on page 4, and Sandy is walking us through number one.

MS. STOTSKY: A person who goes through university and wants to become an elementary school teacher will see that they are going to have to have a major appropriate to their license. If they are going to go for the elementary school license, what we are suggesting is that they major in one of the areas taught in the elementary school in an effort to upgrade the teaching of elementary school in general. We are suggesting that be mathematics, English, history or another social science, such as economics, political science, geography, because they're in the frameworks. This is all linked to the frameworks. English, history, mathematics, or a domain of science are the majors that we are looking for the elementary school teacher. Interdisciplinary majors must consist of combinations of these disciplines. This, of course, in no way precludes other kinds of liberal arts subjects being taken. Universities and colleges may add to those requirements. We are trying to make sure that our elementary school teachers are well grounded in one of the major subjects taught in the elementary school.

CHAIRMAN PEYSER: At our last meeting we had a discussion about philosophy, religion, that is, other kinds of core liberal arts majors which don't seem to be represented here. I know you're using "e.g." instead of "i.e.", so it's not necessarily limited to those, but I'm wondering if a more expansive list would be helpful.

MS. STOTSKY: The "e.g." is to highlight those areas that would be for special areas that students don't typically major in a liberal arts discipline. The business major is not considered a typical liberal arts major. Based in part on comments made by Dr. Delattre, we decided that if you open the door to philosophy or religion, for example, there is no reason to exclude psychology or sociology. Those have become two of the most popular majors for elementary school teachers, and in many ways, much less useful than the major subject areas. This has been the problem. If you open it up to the other areas, such as philosophy, religion, the arts, et cetera, you then have no principled reason for refusing to allow a psychology or a sociology major.

CHAIRMAN PEYSER: Although you may have a historical reason, in terms of the development of liberal arts colleges and curriculum, that philosophy, religion and majors of different names around similar subjects, represent in some ways the root of the system rather than one of its lay branches. I put it on the table, but I certainly would like to get Ed's comments on that.

MS. STOTSKY: Sure. We would certainly welcome more comments. Remember, we're only talking about the elementary school teacher here.

DR. THERNSTROM: I agree with Sandy on this. You can't dismiss psychology as some kind of junky field. It's not. If you're drawing lines, it seems to me this is the right line to draw. I'm just curious about something, does anybody have any idea at DOE how many of our elementary school teachers today would meet this standard?

MS. STOTSKY: A major in one of these areas?

DR. THERNSTROM: Yes.

MS. STOTSKY: That I don't have as information at my fingertips.

CHAIRMAN PEYSER: Actually, the more precise question probably has to do with new teachers entering the profession. There's no question that there are a lot of teachers out there who do not have this as a requirement. The requirement now is less clearly defined. The question now is -- What kind of majors are teachers bringing into the system today?

DR. THERNSTROM: What's the timing of therefore introducing these requirements?

DR. SCHAEFER: I wanted to make a minor point. In this route one where you say "for those without a BS degree," I was wondering whether you might want to change that language to "for those working toward a BS degree." I think that looks a little bit confusing.

MS. STOTSKY: Sure. It sounds a lot better. That's what it really means.

CHAIRMAN PEYSER: Route one here is the more traditional path that people have been following. They're going to college, they want to become teachers, they are majoring in liberal arts subjects but also taking education courses.

MS. STOTSKY: We would imagine that the preparation of most early childhood and elementary school teachers will still continue this way, through route one. I don't anticipate that they will be developed by alternative means. This will be the route for most of them as far as I can see right now. If we have these majors, the prospective student would then have to think about majoring in one. The student could then look at all of the components. If you then go to what the elementary major needs to do on page 15, you can see that in addition to majoring in one of these areas, we have specified, as carefully as we can, what subject matter knowledge that elementary school teacher should have. Reading would be taught at some point. We would expect a prospective teacher to have studied English language arts, mathematics, et cetera. Here you can see that we are relying upon our framework in mathematics to get at what we think the elementary school teacher should know. We've also mentioned concepts and processes related to algebra and geometry. For the elementary school teacher, this is what we really want them to understand, the structure of mathematics that would include algebra and geometry for grades two through six. Remember, we're talking about people who will teach grades two through six. We're making it as clear as we can in history and social studies what they should know in that area. The elementary school teacher, as you can see, is a generalist. They have a lot to learn in a variety of areas if they are to truly be a well-educated person capable of dealing with all of the subjects they are responsible for. Science and technology/engineering is a growing area of importance for the elementary school teacher. We want to be sure that we emphasize that these are the kinds of courses that they should take. Remember colleges can always require more.

DR. THERNSTROM: You are requiring college level courses in science but you are not requiring college level courses in math. I wonder whether you really need college level courses in science for elementary school. There are a lot of very smart students whose last science course was in high school but are perfectly capable of teaching elementary school science. Isn't that the assumption you're making with the math? You're making two different assumptions here.

DR. SCHAEFER: Are you saying that most of our colleges do not require any kind of science?

DR. THERNSTROM: At Brown and Lesley they don't require science courses.

CHAIRMAN PEYSER: They don't require two. Some do require at least one.

DR. THERNSTROM: Some of them require none.

MS. STOTSKY: It varies from school to school.

DR. KOPLIK: You can bypass it. It is probably on some list of suggested curriculum, but you can bypass it.

DR. THERNSTROM: You can bypass everything at Brown.

DR. SCHAEFER: Well, I have often said that if we do this right it could drive changes in colleges as well.

CHAIRMAN PEYSER: I would underline the point that we ought to seek specific comment around the requirement of two lab courses in science. I do think it is a major departure from the general preparation.

DR. THERNSTROM: It's out of synch with the math.

MR. LaFLAMME: I'm just wondering why? Science and technology/ engineering seems to be the only category which even mentions required courses in college. I'm a little unclear.

MS. STOTSKY: I will explain that anomaly. Mathematics is cumulative. At the college level, you're going to be taking either calculus or beyond. It didn't seem reasonable to expect an elementary school teacher to have to take that level of mathematics because they will not be using it in the elementary school. Mathematics is different from science in that respect. It was more important for the elementary school teacher to understand that range of mathematics that they are apt to be teaching in grades two through six given the normal range of students and their abilities. So there didn't seem to be any particular reason to require that they take a year of mathematics at the college level and go into differential equations. That would not strengthen what they need to understand for grades two through six. They do need to have special courses that give the prospective elementary school teacher the understanding of mathematical structure and concepts that will be useful for them. This is where higher ed. people could help us out considerably, making sure that mathematicians as well as math educators are involved together in the structuring of those courses.

Now, for science there is a different knowledge base, and that is why science is different from mathematics. Much will depend upon the high schools that these people have come from, and whether they had good laboratory courses. We don't know that. At least if they are taking two good laboratory courses at the college level, they will have an intensive experience, acquiring the knowledge they will need for the higher level demands in our science framework for upper level elementary school. The knowledge base in science is acquired differently, and it comes through differently from the knowledge base in mathematics. That's why we're trying to differentiate math and science. We are open certainly and welcome suggestions.

CHAIRMAN PEYSER: Abby, I just would make one comment here, which is according to my watch we have about 25 minutes until 6 o'clock. We will have an opportunity to discuss this tomorrow as well.

DR. THERNSTROM: All right. Just one brief comment, Sandy. With your two college level science lab courses, you're probably eliminating from the pool of possible elementary school teachers I would guess 70 to 75 percent of the students who are undergraduates at Harvard College.

DR. SCHAEFER: You're required to take science.

DR. THERNSTROM: You are not required to take two college lab courses. In fact, you're not even required to take one science lab course since both my kids went to that school.

CHAIRMAN PEYSER: The only comment I would make, and then we should move on, relates to the discussion we just had. Most of the standards listed in here are essentially competency standards rather than based on course selection. Overall, I think that's the right approach. Perhaps this is an exception.

MS. STOTSKY: We couldn't figure out how to have a competency that dealt with laboratory experience. You're right, everything else here is predicated on the fact that these will become the guiding principles for the competency test. I want you to keep that in mind. You have mentioned that these become the basis for generating items on the subject matter tests. What we tried to do is compress the detail and highlight those important areas so that you don't have competency tests that spread out over 40 to 50 items when you want to concentrate on major topics within. You will see this for the other disciplines more clearly. For the elementary school teacher, you do have to hit every one of these areas in some way if you're going to have a competent elementary school teacher.

CHAIRMAN PEYSER: Sandra, maybe you ought to go back to where we were in the process, because I'm not sure we're going to get through.

MS. STOTSKY: All right, let me go back now.

So the person understands that these are the kinds of courses that he/she has to take. He would take an appropriate program, and at some point, during the final two years, they would have a pre-practicum and a supervised practicum, in the range of grade levels he's thinking about in the elementary school. He/she would have seminars or courses on professional knowledge and skills. We're putting those two words there, at all times. At the end of that preparatory program, there will be a joint assessment of student teaching performance conducted by the supervising teacher, whoever provides that preparatory program, and the school administrator. We will then have some assessment of pedagogical skill. Finally, this person will have to take the licensing test on communication, literacy and subject matter knowledge. For that individual, we now have some sense of his/her pedagogical ability, competence in a major, and, for the elementary school test, competence in general of all of the areas. That would take place for the initial license. Then in June, he/she is ready to be hired for fall by some school system.

Following that he/she must complete the second item under professional license: a one-year induction program with a trained mentor holding a relevant license. This is built into every one of the routes. This is where we are going to be trying to strengthen the capacity of the local schools to do with their new teachers what we know new teachers need. The Induction Program is another name for the Beginning Teacher Program. We are trying to develop mentors through summer institutes as much as we can. We are hoping to help school systems, in as many ways as possible, develop programs that will help the mentored teacher stay in the school for more than three years. They typically last three years before they drop out of teaching altogether. The recommendation for licensing should take place within three years of obtaining the initial license. That's the time limit we are putting on it. This is when tenure normally kicks in. We are suggesting that's when this performance assessment will take place, before tenure. We will develop guidelines for this locally-based assessment which is done by two different supervisors. We're also suggesting who those supervisors should be. It will include a portfolio and classroom observations because we feel strongly about the importance of classroom observations. Then a recommendation of passing or not is made to the Department. Our mechanism, which remains to be worked out, will include auditing to make sure that these recommendations are appropriate. We will use our school accountability teams that go in, to take a look at what is happening at the local level. We are suggesting that it is very important to build up the local school district's capacity to evaluate its own personnel. It is a function they are supposed to do anyway. This is part of what administrators are supposedly

trained for. We are going to develop it even more so that they are the ones who determine what good teaching means in the context of their school.

CHAIRMAN PEYSER: I want to say this is a huge departure from historical practice, not just here, but pretty much everywhere else. It's a very positive one. The only question I raise, at this time, is whether the people doing the evaluation should be within the school or the district. Is it possible to have enough distance from the human relationships that are inevitable within the context of a school or a district? Have you given any thought to regional arrangements whereby schools and districts could swap evaluators back and forth to do the evaluations?

MS. STOTSKY: We certainly could consider that for one of the supervisors. We have to think about the logistics for that sort of thing.

DR. SCHAEFER: I think if a school district is large enough you can do it within the district. But if you're talking about a district that has one or two elementary schools and one high school, maybe there should be some kind of arrangement.

MR. LaFLAMME: Going to other districts also has the advantage of getting new evaluators that might have some parallel experience too. If you have a high school teacher in a certain subject, then someone with background in that same subject might be found in another district.

CHAIRMAN PEYSER: I suggest that this particular subject be one that you give more thought to and solicit explicit comment.

MS. STOTSKY: That would be very useful.

DR. THERNSTROM: It raises a question that the Board may not wish to discuss. I've been looking at a series of very successful schools that are educating highly disadvantaged kids. One of the things they do in the elementary school is have a math or science teacher or teachers who don't teach anything else. They don't have the expectation that all their teachers have the huge range of knowledge we're suddenly asking of elementary school teachers. We've already got a teacher pool problem as it is. We're increasing the difficulty of filling the teaching slots in the future.

MS. STOTSKY: Let me say that we're not asking them to do any more than they have been doing. The range that you saw for the elementary school teaching certificates is the range of subjects they have been expected to teach all along.

DR. THERNSTROM: I'm saying that's the wrong assumption.

CHAIRMAN PEYSER: I mean, it's certainly true that there are specialists who do nothing else but those narrow fields. I guess the question is twofold. Should those people have a broad range of skills anyway, not only in the interest of the children they serve, but in terms of their own career path over time? I guess the second part has to do with the simplicity or complexity of the system. There are trade-offs here, that if we create elementary school specialists, are not only making the licensing system more complex, but encouraging elementary schools and teachers to be too narrowly focused, not just in terms of specialists but the non-specialists.

DR. THERNSTROM: I bet you'll get better math instruction from somebody who teaches just math to all schools in all grades.

COMMISSIONER DRISCOLL: May I say that I'm very interested in these models that you are witnessing. These are tremendous stories. Because if people are doing it in some of the poorest districts in this country, and they can get results, then that should end all excuses. Having said that, we are trying to develop a certification or a licensing system across this state, and there are those school districts who believe in looping, that an elementary teacher should be with their children two or three years in a row. It would take a lot for me to have a licensing process that was exclusive. I would rather see something that's inclusive. If we could have licensing practices that allow for specialists at the elementary level, I think that would be great. Restructuring should be looked at, by the way, across

the board. To suggest that we're going to have specialists is a big leap from where we are today. The reality is that most of our elementary teachers, and elementary teachers across this country, are expected to handle a series of disciplines. While it is worth looking at, Abby, we have to be careful that we have a licensing program that fits the situation.

MS. STOTSKY: In some ways we do. I want to point out that if you look at, for example, mathematics, you have to get teachers who are trained first. You can't have the specialists there unless you have the people available. You could begin at grade five in these specialist areas if you wanted to, but you have to have the option for the self-contained classroom for schools because that's the way they are.

CHAIRMAN PEYSER: For example, I was in an elementary school in Dorchester a couple of weeks ago observing a second grade class. A science specialist came in, which she does twice a week, and provided science instruction. It was a level of science instruction that is quite rare in elementary school, certainly in second grade. I would, concur with Abby's concern that we may be undermining the adoption of such staffing models by requiring all elementary school teachers to have the full canopy of skills and knowledge. I would bet that the science instructor I saw could meet the other requirements, but there may be others who are equally competent in science instruction but may lack the skills in some of the areas. I don't have an opinion about it, but I do think it's worthy .

COMMISSIONER DRISCOLL: Rather than looking at it as undermining, we want to go back and understand. If the early retirement law passed, we would be dealing with it today perhaps. We are a year or two away from the crisis we will face in this Commonwealth in trying to get qualified mathematics and science teachers in our high schools and middle schools, let alone our elementary schools. Build whatever boat you want, but let's build a big enough boat. I just want to mention the practicality. I don't think it's one versus the other. If we can show, through research, that subject matter specialists at the elementary school makes an enormous difference, then that would be very compelling to me. Again, we need to make sure our system is working.

DR. SCHAEFER: I was just going to make the same point. What may work in these particular schools are fine models, but we're talking about an entire public education system. I question whether you can find enough specialists at that level to be able to cover the range.

CHAIRMAN PEYSER: I'm not suggesting that you could. I'm just suggesting that we shouldn't necessarily foreclose those options.

MS. STOTSKY: We haven't.

DR. THERNSTROM: We also shouldn't foreclose the English major in college who is super smart but can't do math or science. You really don't want to narrow the pool so that you are excluding young people from considering teaching as a profession who have certain academic strengths and not others.

MR. LaFLAMME: But if they're expected to teach those subjects on a consistent basis --

DR. THERNSTROM: Let's say that at one school we do require that teachers have had two lab courses. This doesn't mean it should be a requirement for every teacher in the Commonwealth. There are going to be a lot of potentially good teachers out there who don't have those skills but can work in elementary schools where you will have a math and science specialist.

MS. CRUTCHFIELD: Then I wonder how we keep track. I'm not very fond of polarities. Yes, we need a pool, and we need to be as inclusive as we can be, but how then do we keep track of what standards we use? How do we evaluate? How do we make decisions? I'm certainly in agreement with the notion that we need to avoid polarities. I'm concerned about how we do that and meet the varying demands of the school districts. I absolutely agree that we would have better science programs if they were taught by specialists. Do we allow systems to have their pool of specialists and their generalists at the elementary school system level? How do we do that? Do we change the paradigm here is?

DR. THERNSTROM: I don't want to exclude good potential teachers from the pool.

MS. STOTSKY: We're not. We haven't gotten through the other routes. There are three other ways that people can get in, and some of the kind of people you're thinking about are going to be able to enter through these other routes.

CHAIRMAN PEYSER: Except in terms of the subject matter test, which they would all have to pass.

DR. THERNSTROM: Yes, and I'm objecting to that, Sandy.

MS. STOTSKY: All right, then you have to be able to figure how you excuse some teachers who are going to teach, say, third grade from understanding the mathematics they need to know. Remember, the math portion will be one portion of the entire competency test. There are one or two areas that they might not do as well on. If their strength comes through in all the other areas, they can fudge one or two.

CHAIRMAN PEYSER: Well, the issue has been raised. We can come back to it tomorrow.

MS. STOTSKY: I want you to understand there are three other routes.

Route two is for people who are not undergraduates anymore. Here, we have people who have a degree already. One way to do things is through a program with a practicum taken during the summer. It could be a Master's program or any postgraduate program. They can do this within whatever program meets the professional standards that we have laid out for teachers. This way you have the opportunity to get a variety of people. Then, all they have to be able to do is pass a subject knowledge test. They could have been any kind of major at all. They will have to pass the subject matter knowledge test for whatever particular license they want to teach.

CHAIRMAN PEYSER: Just to clarify, it's quite possible that these programs may not be part of the school of education, although presumably many of them would. For example, the Department offers a summer institute. It could be associated with something like that. It could be other providers that enter the field. As long as they meet whatever the standards are for program approval, they would be in the mix.

MS. STOTSKY: Right. We're trying to encourage different ways of preparing teachers. This is one of the ways in which aspiring teachers can be prepared after they have gotten a degree

Route three is where somebody decides in June they really would like to teach, and they find a wonderful teacher in grade four, say, in some school system, and that person is willing to take them on as an apprentice. They are under that teacher's total guidance and supervision. After taking coursework given by some provider, and doing well "on the job" for, say, six months they pass a joint assessment at the end of this apprenticeship. Then the school system can continue to employ them as a teacher of record. In route three, a candidate hasn't had to do any of the earlier work because they came late to a decision to become a teacher. It is a legitimate route they can take with the safeguard built in by our requiring that they have course work, apprenticeship, and the joint assessment. Of course, they still have to take the subject matter competency test in addition to the communications and literacy skills test. That's the synonym for all routes, they must know something about an area that they want to be a teacher in.

Route four involves waivers, or what we refer to as options. We are giving an option for what does happen through a waiver. Someone can come right into a classroom and be the teacher. It might be in a very particular area. An engineer can teach calculus. It happens now, something happened to the school calculus teacher on September 1st and they need a replacement. In route four, there must be an induction program with a trained mentor who is available to give that person support. They are the teacher of record, they are responsible. This is a route that doesn't require anything in advance except passing the subject matter competence, and communication and literacy skills test. This is probably more likely at the secondary level. They would go through the same route within three years of obtaining their professional license.

These are four different routes that require different degrees of preparation through pedagogy seminars or courses or practica in order to get into the schools. Much depends upon the school's capacity to hire these people, supervise

them once they are there, give them support, mentors et cetera. With these alternative routes, very few people would be precluded.

CHAIRMAN PEYSER: I think we're at six o'clock. I don't want to go over. I would make two points here. One is that this has been presented in a slightly different but similar form to that of the Joint Commission of Educator Education. There are other parts of this draft, which I will mention tomorrow in my opening comments, that do reflect some of the recommendations you've received from the Joint Commission.

There will be further recommendations from the Joint Commission involving such things as the assessment of teachers as well as the preparation of teachers. That will be part of the mix. I think the timing should work out pretty well here in terms of where we are in this process. The two can inform one another. The only other thing I'd mention has to do with the licensure of administrators. I have a concern in this draft that it's harder to become a principal than a teacher, which is not necessarily a bad thing. However, the number of alternatives seem to be far more constrained. The ability for districts to bring in superintendents or principals who have unusual but relevant experience seems to be greatly constrained by the licensing process.

MS. CRUTCHFIELD: I think that's one area you would need to open up.

MS. STOTSKY: I would welcome any thoughts or questions about that.

CHAIRMAN PEYSER: Maybe tomorrow or at a subsequent time. Any closing comments from anyone else? With that, we will adjourn until tomorrow morning.

The meeting was adjourned at 6:00 p.m.