Room 319 Session II
Facilitator. Phil Brookhouse
Name of presenter: Tom Tracy
Topic of session: Elements of a comprehensive plan to improve math education K-12 in Maine

I just started the recording and we are lucky that we have a small enough group that we can have real good participation. And there is stuff floating around for people to look and we are really lucky, go for it.

Well my name is Tom Tracy and I...my own background is that most my career have been about publishing and about 6 years before I started navigating the real word and some of my publications will be sent around. I have worked in the alternative program at Bonnie Eagle High School so I have done technology stuff from that perspective. I have worked on, you know, pretty much purely unmotivated as of the educational spectrum, the high school and the reason that I started navigating around the world was that I was seeing that coming from mostly was my career with not in education but it became so clear to me that our students have no idea what follows schooling. And therefore they make their decisions based on almost complete ignorance, basically what their buddy is thinking and they don't know what really goes on and therefore it is kind of like we have a lending system, you know, the last _____ are taught into this years class and therefore they are marching off to the various efforts to cross the atlantic. And, uh, but anyway I won't go into all that, but we will do a couple of the…as we look at this issue of whose succeeding and beyond high school, the academic subjects or the skill areas that huge are writing and math. That if we can't do those things you are taking remedial classes when you get to SMCC or something like, if you start remedial classes you are basically screwed. You chances of graduating are miniscule not to mention you are paying for things you don't get credit for which is not exactly a high motivator. So looking at that, we have a system…one of the people we interviewed was Lynn Miller who is a professor at USM and she did research on college readiness and she gave the acuplacing test which is _____ used to determine if you need remedial classes. She gave that to all the juniors in thirteen Maine High Schools, 76% failed and this is juniors…the reason she gave it to juniors because a lot of math, there is a 3-year math department, so the thinking was, gee we give it to them now…the reason they were failing, you know, whatever a year and a half beyond that was because they hadn't had math for a while, well here they hadn't had math for a day and so that is just grim and when you look at that you know, it is somewhat of an oversimplification to say math and writing and you can do those…that is all we taught in high school, wouldn't that be great. But people, you know, nobody majors in science if they are frightened of math, you know, it just isn't going to happen, you're not going to make it for very long. So we have a system right now which is at the elementary level is populated way too much by people who are uncomfortable with math and at the high school level we have the math majors, you know, if you like being in math and you like math courses then you majored in math. Well that is a skewed sample of how math is used in the worked. As a mater of fact it doesn't overlap and not used in the world much at all and so looking at that…and then there are other dimensions of how…so we started to look at, well what can be done, what is happening at other places,

you know, it can't be that everybody has the same thing. Well nationally there is a big problem with math but there are some good models out there of places that are…organizations that are doing really good things. One example is…I hear Jim Lewis, he is a professor in Nebraska and he has focused for about 20 years on elementary and middle math education. And what they do in Nebraska if you are going to be an elementary teacher you take four courses in teaching math for practicum with somebody who is really a good math teacher at that level. In Maine it is one course. As a result we have very few faculties in Maine who are teaching math because of course there is only one course. And, you know, it sort of compounds. So that is clearly to me, you know, if we want people to teach, if we care about it then we are to have it in certification requirements and there ought to be a possibility of taking more than one math course, I mean more than one math teaching course. You know taking more and more calculus is probably not going to help you in third grade. One of the things that one of the people were talking with Jim, another program that was really interesting is _____ John Euwing and he is Math for America. And Math for America has this really substantial effort going to create…they want to have one thousand math and science master teachers in New York City as a model for doing it everywhere. They got a big grant from the Science Foundation who was a mathematician who made literally billions and he is putting…but that program, a master program, and this is something in New York, it is not just you raise your hand if you are a master teacher or you get a degree or something, it is really something about what you can actually do and your knowledge and your skill level. But so you become, you know, this is a legitimate screening process not controlled by your _____ and it is…and they are paid $15,000 a year on top of whatever their pay is. I personally think you would not have to have that much of a premium to have it be value in Maine but of course the pay scale is a little different in Maine but the idea of paying someone more, recognizing them, and having a place where teachers can aspire to that recognizes them for their legitimate achievement. To me, we ought to do that. You know, if we were serious about math and science, you know we ought to seriously look at how we could do something like that. I know anything that costs money, of course everybody runs for cover but if we are serious about…we aren't going to change if we don't do anything differently, you know. Because I think that was one of the slides this morning but anyway another person that I interviewed was Gemella Riser who is in Delaware and she heads up an effort for the last five years specifically targeted at improving the teaching of math at the secondary level so it is really about pedicachie(?) and you know they have been at it for five years and they have made very substantial progress on that and to me that is a pretty interesting model to. One of the things that I heard, I haven't really gone to many conferences to experience this but it tends to be that the people who show up at math conferences are more likely to be middle school teachers than they are high school teachers and to some degree it is the rigidity of our system, if you are the pre-calc teacher you fit into a spectrum and to be able to do something different at that level is really hard, you know, you can't really be revolutionary when you are Stage III in a five-step process or something like that, may be part of the problem. But anyway that was interesting and the last person of four that I interviewed was Sol Garfunkel with the head of Comak which is a consortium from mathematics and its applications has been around for a good while and I ran across him because he wrote a column, co-authored, which was in the New York Times on improving math education

based on how math is used. Each math through its applications is mantra for a long time and to me that fits very well with STEM. What is STEM it is math being used, you know, and so, but anyway I have run across those things just over the last probably four months or so that I have been sort of looking around and it seems to me in a broad way, I mean if we want to change things, you know, if you are an administrator in a school system and get beaten up based on what is coming down with common core of how those assessments are and the universities they are deliberating, and they are doing what the certification requirements told them to, but the combination of these things, you know, really results in we got mediocre performance and mediocre results and again it is not because people are evil, but I think our system, you know, from pre services to what are our recertification requirements. We don't make any demands on anybody it is as though nothing really matters more than anything else. We just did a conference on Friday on effective writing instructions in the common core and our subtitle was Writing Really Matters, it is not just another learning consultant and, you know, I think we have taken literally a hundred of those damn things and it is like they are all equally important and therefore who cares, you know, because you can't possibly deal with all these things. If we are producing people that can't write and frankly our colleges are doing that also and that would be something colleges could do is actually make sure that their graduates can write and in math and be able to use math. You know, the way math is taught it is so much…so abstract as well as a weak beginning. So I am interested, I don't want to dispute…but I am interested in peoples thoughts about, you know, what could really move the needle in math education and do it, the college level, the inservice level, administratively. You know, it seems at this point to teach math there is really not much (coughing) at the elementary level, you have the praxis, right, which is not exactly a high bar, same for writing. Only writing abilities is generally out there is for practical use, you don't have to be really accomplished to pass that things, but yea we are having those people teach, who sort of barely get over a little hump, our teachers in wiring and our teachers of math at the early grades, so anyway.

Could I ask you a question?

Sure.

You have been talking stressing obviously the elementary side of the picture. This is a big STEM show here and I am just wondering how you math on the STEM initiative. I mean of course you have to start at the beginning but STEM was focusing on elementary science and math, it would be a long time before we got to industrial likes and all the rest of it later, so what could we do without changing the whole system and changing registration requirements for teachers and all the rest of it, what would it be like…I don't teach elementary students, about 5th grade the teacher is going to have them in math class, the kids get too confident all the way along, just raring to go, _____ they are either not paying attention or whatever. That is a one-room school house basically. What would the STEM thought be about there. You know the potential STEM student is more distanced from science by the time he gets to high school. So how do you deal with it at the very small medium sized high school. How do you deal with this problem. What is STEM project going to say, keep your eyes out for our kids, make sure they do this and

this. The small Island community where I come from we have kids who are lobstermen, they don't _____ first day of examination, every school has its own graduation program, Maine doesn't have any uniform standards for graduation.

They have done time.

You know, (unable to understand) But some of you do teach elementary school and especially math. What is it liked when you are faced with _____ 10th grade, with kids who are raring to go and are high achievers and are paying attention and the kids who are distracted or doesn't want to be there. In the context of STEM, which is why we are here. I don't know the answer to that.

I don't know the answer but I did teach second, third, and fourth grade math for several years (laughing). And I think it really works well, we don't have to wait and identified, it is really the potential for all of them and that fluffy elementary school teacher taught. I think the problem is by the time they get to high school we stifled and killed any math and scientific thinking in the majority of the kids and the ones that are the bright ones are the ones that survive in spite of our educational process and I truly think that. I have walked down the hall in my school _____ modified open classes, (too low to understand) you know when you watch the first grade teacher on the date of the first grader said, oh we are switching from side to side and up and down and one of the kids said which never goes on top, and the teacher said oh, the big one always goes on top, and 22 kids have just flunked Algebra I. I mean we are setting them up, right? We put teachers in elementary school that are supposed to be all things to all people and the ones that have a fear of math or lack of understanding of math are passing that on in those very formative years. And I think really we need to start there with teachers who really know math and are passionate about math and understand science to make those connections work with foss kids with hands-on type of things and get kids excited and then you spend a lot of time training the parents. I spent a lot of time with the parents of my girls that were good at math and said they are about to get the toughest time ever and if you want them to keep being good at math, you're going to have to do black board stuff, you are going to have to keep it subversive, they are going to have all those external pressures and you know they would come back to me in seventh or eighth grade and say, oh it is not working, oh she hates math now. Okay does anyone do after school _____, it's tough.

For high schools in Maine, uh the concept (coughing) , you know working and _____ very big urban schools. The teacher is stuck, he or she has the classroom…I don't know what the STEM program would have to say to that except that it is a problem and we need very, very good math teachers at that stage.

I think there is…I am interested in some of these models which are…they are things with the computer is way better at doing that people are particularly with rote kinds of things, you know, you can learn your math facts probably better with a computer than you can do with a whole class group lesson, things like that and then you have this progression of skills in math areas that…the somehow blending of what is best taught with a computer

and what is best taught in groups. There…I think there is…I don't know enough to know what are the answers but I know enough that there has been considerable success. I just read an article of one of the KIPS schools at the elementary level actually in Los Angeles, and the KIP schools are _____ it is mostly the charter schools around that they have been very successful. They start off as middle schools and, you know, they have a long day, they go Saturday, have shorter summers, but they are very successful at turning kids around in their city or rural but minority kinds of communities. But anyway they did this elementary class or elementary school _____ which is a combination of individual, you know, like not long periods of computer but basically a combination of doing computer-based stuff and small group targeted kind of lessons and, they had you know, at the end of that year about 98% or above the national average which was absolutely not happen with that demographic, you know, before that. And this was in the early grades that they were starting, so I think there is going to be…I know computer instruction for a really long time and then for years it was like awful work books on the computer it wasn't really using the power of the computer to keep track of things, that is what the computer (coughing) but now I think that there are systems…I have talked at some length with Greg Palmer who is the Principal at Falmouth High and he was in Searsport before that and they built into their program at Searsport and I think Falmouth where they have some skill time which is…it is not just oh you're slow you need the skill time, everybody has that in their program and that allows people who are off the charts to progress, you know, off the charts and for those who are basically progressive and see if they can manage. And that is not all of their math curriculum, they got math courses as well but they do, do kind of that skill building stuff in an essentially computer-based model and I think that is really interesting because another part of the problem with math is that there aren't that many, you know, if you wanted to double the math teachers in the state, you couldn't, I mean there aren't people out there, you know, because there are a lot of reasons why that is but there are so few math majors.

Could I ask if people have something to contribute that I said my little piece.

We talked about instruction and the fact that there are varying degrees of quality among computerized math instruction. One of the things that can work is that computerized instruction is that kids can take ownership and responsibility for progress and I think that is kind of what you were describing whereby there are math classes and there is this math, I don't know whether it is an activity period or whatever, in Falmouth or Searsport but I have seen it. I work with MLTI and one of the things I have seen is a teacher use what we called share notebooks, on the lap tops in middle school have this and so the kids go back and they get their scores and they are actually able to identify their strengths and their challenges and set goals and there are some really good math programs out there that inter-activate that Shordore and National Library virtual manipulus. Basically they have put together this notebook of math stuff, math program that concentrate on their challenges and they log their time with them. They start to understand that a lot of these programs are set up that they persevere more with the programs than they would with paper and pencil. They keep doing it until they get it and so on. But it is different from doing it with paper and pencil because one of the things that can be put into these programs is the feedback and not having a teacher saying you are not getting it, but they

get some feedback and they might even get a hint of how to possibly progress. And so they actually spend more time on some of the more mundane drill and kill kinds of stuff this way, but…

Drill and try…

Right but they take a different attitude. Some of them will say I played games in math today, when really they were working their tail off to master some of these skills with fractions or whatever. I mean you are not going to get away from flash cards or multiplication tables or stuff like that. But that can make a big difference giving them the opportunity to take ownership of their own work and feeling responsible for their progress rather than just saying I am just going to check off some stuff on a multiple choice test. Which, I mean, where is the empathism at.

I _____ and I know to do about being a former kindergarten teacher, is how the day has to be structured because there were so many times when I did math with kids, doing measurement, doing patters or something, and the periods, you know you had 30 minutes to do you math and then you had to language arts or something. We would have spent the entire day doing measurement activities or…

One room school house…

You just would love to have them just do an all day math and teach them to love math and math things instead of having them getting in their minds that they have it for 30 minutes. I don't know how to change that because we have to do all the standard…

One of the, (unable to understand) getting all that stuff up there, you know, one of the on the, can' remember his first name…

Sol.

Sol, anyway he was talking about his nieces they sort of backed into doing this thing opposing and how they actually preferred him on tape to live, because when you are live you want to say, yea, yea, where if it is recorded you can go back _____ didn't understand it the first time through…it is an interesting fact there. I know when they have done research on remedial classes a the college level, the ones that are successful are the ones that are very individualized because if you got a bunch of kids who are one, didn't have the acu-placement test in the class, are they raising their hands. No way, right. These are the guys who are crouching down because they don't want to be called and yet those classes are taught by adjuncts who…are they using the latest techniques, not likely, you know. And that is…I heard but I haven't seen it in writing (coughing) remedial classes at community colleges, you know better the course that followed but those who basically _____ in that because it is like we are putting through this gate to community college which doesn't even work…and it is awful, I don't…

It is the people who don't followthrough, people that took Algebra I who didn't do very well in their freshman year. That was the major cause of failure and (coughing)…

In a separate test failure really in that is the predictor of whether they will ever get into STEM at all. The kid (coughing) confidence in _____ subject and they got that and now they can do chemistry and physics and their tool kits as well, and biology and earth science and all the rest of that is _____ and that is where you do your tool kits about life and leave biology and other things and I like it or not subject to _____ the sense of (coughing) problems studying biology, you know, you can't study biology _____ you need math, chemistry or physics. Those kids must be lost, the outcome of those kids they don't take chemistry, they don't take the options, they take the required courses in science, they don't go beyond that.

I think it is sad that there are probably more kids out there that could do it.

Absolutely.

They could do that…

Or want to…

Yea, and they have just been overwhelmed or daunted by something _____ but I think there are more STEM kids out there.

Well you know I think no question factor is the girls interest, they certainly have the capacity, and they get turned off by it is not cool to do that, you know, in college the college population is 60% women and to me that is the low hanging fruit for having more majors in the…

Steve, I think it is obvious. You always hear the girls….I teach a grade at _____ Middle School. It is not cool to be smart. So now, none of the guys want to be…right now we are in March teaching 8th grade. I got 6 kids I think could be ready for high school, and they are all girls. The guys it is not cool to be smart. So every time I get _____ I mean throw it out the window, it is (all talking).

It is still skewed the way…

It is skewed that is it, even small art schools. My son goes to _____ in Pennsylvania and is…well he started up to this weekend with a major in physics and mathematics, he dropped physics because he said he can't handle both of them and most of those are all girls, I mean, that is where they are falling through…

By the way some statistics back that up. The girls, the amount of girls that are successful in STEM in college and boys…

I ..graduate 34 students this June and it is a very small school and it is getting smaller all the time.

But 80% of the top _____, they are all women.

I have gone up to _____ no question…University, Stanford Research Ph.D. in cell biology. In every case they have at least one parent who tells them, hey what did you do in school today, how is the math coming, how…and that is in two parents, both college graduates, with a science background, they are off, I mean they don't fall behind. These strange heterogenic populations. It is tough this is again the one room schoolhouse probably, with the backup from home.

One of the things I noticed as both a math teacher and working with a lot of younger grades that is when student works through traditional math K-5 and whatever it is we work it out, so you have the cumulative loss of knowledge over that course of time. Your traditional, you get 70 in pre-algebra that passes your Algebra I and then you got 70 in Algebra I and by the time you get to Algebra II, that is a large percentage of material they don't have mastery of that is expected and looking at those numbers that doesn't give that teacher any indication where there are the gaps for these students having these shortfalls. When you look at a program like the everyday math program which has experience and then has its short comings, one of the strongest pieces of it is the standard based track program. So students_____ you know exactly what that student has for knowledge. When you go from that into a traditional program which I think a lot of schools still have, it is difficult to maintain a learning style that everyday math has taught the students to learn that _____ through and also to transition them into…okay here is an Algebra I, I' not telling you what you don't' know but I am telling you here's a percentage of _____ maybe generalities here but in my class when I switched to a standards based, I did it just for my own will, getting the students to understand exactly what they needed to know and not letting them not learn that, it was a huge amount of success. So what we are looking for in the common core and that implementation that might be a place where we train our teachers (coughing) that, you know, makes students adhere to standards, make them (coughing) don't let them go if they don't and that might be one way we can fix some other problems.

I think the computer is going to help in that managing of people…

That will be huge just from a management in terms of tracking the standards, where they are and what they know now. You can look at it and go right up to the student and say these math skills and…

We have that. I teach at Gray and Gloucester and we have gone to a standard base and (coughing)….where we use all of our tracking. I agree that…outside of this a child goes from kindergarten up I don't think it is working well because it is hard to go to something standard based and say okay they mastered the standard this today but three months from now you ask them that same question and, what, what are you talking about. So it is really quite _____ in mathematics and I am one of the mathematics teachers you are

talking about. I have _____. I went to the business world for 13 years. I did some work in loan collections, I set up an accounts payable department and I did all the _____ stuff. So I went back to school to become a teacher. Well I have been teaching math and science and the only reason because I was the kid that always sat in the back of the class, read a book all day and got the highest grade because you showed me what to do and I could do it. I do that now and I kind of like…my daughter will come home with pre-calc stuff and I go okay, it is not like…it is just the way you have to teach it and what I am finding is everybody says computers are great and I think they are terrible. I find that because of computers they don't think anymore. You push a button, something comes up, they don't care if it is right or wrong. And with mathematics you really have to…I think you have to ask questions, you have to delve into it, until we get that part, you are not going to get the mathematics, I mean on a computer, I got all my kids, my seventh and eight grade kids believe that I don't own a cell phone, they get a smart phone and no this is that answer. And so I don't think computers are the thing you want to encompass learning. It is just another check but I think it is one of the major problems we have because they don't think anymore, they don't know how to question because all they do is push a button and things pop up. I think that is…you can teach anything and I think that is what we need to do is to teach them how to ask questions, how to feel like it is okay to them. I mean in my math class they will ask me questions I don't, yes you do, no I don't. Do everything you can do to figure out all the stuff we talked about, if it is right or wrong who cares. It has taken me six months just to get them willing to, okay, they still _____ the question and answer.

My thought about the computers is that there are things _____ you took well because you just can't plug somebody into a computer and think that is…

I think, again from MLTI, laptop program I think that is really unfortunate that people do that plug in kind of stuff. There are things out there that are based like encoric base where your questions are very important to coming up with solutions and they use the skills in math to solve problems. A lot of them…heres the problem, give me the answer. That is what I think is very effective in computers. But in Algebra and things like that you are able to pose the questions and the students use sliders to see how the different functions change(coughing) that and that is a hard transition for a lot of math teachers into, because many cases now teachers wind up teaching the way they have been taught and that was 25 years ago but it is probably…pardon….

Professional development.

Yea, yea.

Get right back to training and how do we prepare to use the technology, (unable to understand) TV and everything else. If you don't know how to use it properly…

And we have some of the best people, Ping Buffington is absolutely wonderful in the way she uses algebra for math in trying to train teachers in how to use that and it is a different kind of format. Your right, the questioning is the crux on everything. Absolutely, how

do you define the problem and give them the problem and you have them define the problem. So your attitude is great for actually going into some of the problem solving stuff and _____ press the button and get the answer. Yea, that sucks. It really does and the kids know it sucks. They wind up after doing that too many times and it is not worth the effort. It is too bad, I mean, you lego set, what is going on with that. That is engineering. So yes I agree with you.

You know I use the lap top and we all love it but the other part is, from district I wish (coughing) I remember when the first lap top came out I just started teaching, I was trying to figure out, how come the kid is not just a glorified word processor, do things like that, there is no district and I know that LPI good things but then you have to get out of the classroom. I had trained to educate. I was out in the classroom, I trained parents in my district as well as all my teachers so the last thing I want to do is _____ for that part.

I am dying to come and to work with your group, dying to come in, _____ keeps looking at when can we schedule you in, it just doesn't work that way.

I mean we have teachers in science, you know, you come in and he discovered _____ so the lights are off in his room and the kids have their headphones on and are watching a _____ program and that is how he is teaching science and we are going how can that be.

We need to talk. (laughter)

I worked with a guy up in Orono. He taught physics, Bouchamp, I don't know if anybody knows who he is but he saw I was working for the lap top program and he basically grabbed me by the lapels and said if you can do anything, anything at all, we need to change the way math is being taught because I am teaching introductory physics and if kids understood linear functions then physics would be a breeze, absolute breeze but they come in and they can do linear functions but they don't understand them and so they go to the computer to find out the equation that will work instead of figuring out there are 300 equations but they are all based on linear function. So every time I see him he stops me and says, have you made a change yet, have you changed the way everybody is teaching.

Just like that?

Yea…

We are thinking about coming out in the fall with an edition which would be (coughing) that would be filled with how people use math in all sorts of situations and not again just the computer programs.

Well your statement was, what you were saying teaching math, contrast math. As a middle school teacher I think that is the hardest part. If you are teaching pre-algebra, _____ and the first question comes out is when do I use this for every day. And that would be…if I could have a program that would say this is when you would use this,

understand it helps you use thought processes and problem solving skills for something else and you do it, you know, you do algebra and you just don't solve a letter up there, that would be wonderful and that for me would be the biggest change in mathematics.

I think that is where there is a real opportunity. When we start connecting the systems, particularly when you look at your CTV programs and _____ with that. Particularly CTV and your…the person in the CT may not know the terminology for the person in the CT knows why you need to use it. So when you get these collaborative that happen and there are some happening around the state right now as you _____ I think that is when we are really going to see improvement on the crosswalks of what we need in those various things that they make it relevant, they are rigorous and the students are going to learn. It raises the interest and there is a lot to it and you see that is used in things rather than just as an abstraction. Mind building exercises, most of us aren't too tolerant of that.

More CTs are building core curriculum into their _____ oh, it is getting better and better all the time because what they learn in this class is immediately applied in the next class. So yea.

Where would we be without CTV.

I think most of the CTs, at least in the other _____ you are there half of the day in some kind of rotation system and other days you do your whole thing there and the alternate weeks or something like that. It seems like the system we have creates a lot of bus traffic…

(all talking) They are changing because of that. They are changing because of that and that is the reason…

…right now to change a number of common _____ of things and to make sure the people are going to be at your…at there to take a full program (coughing).

That is really I think is going to help the students.

Yup. I mean my son is a graduate in machining in CT but he was also a member of the Spanish Honor Society and so I mean, that was cool, that was really cool. Because he was a great college student but now he is a design engineer.

Now okay, I am supposed to be a time keep too. It is just about time. I am supposed to be dealing with questions, oh shucks. How does this conversation for understanding what it looks like when we do STEM teaching and learning well? Nice question, ha. Okay we didn't get the answer in the last group either. What do partnerships that support students look like and I think that is the root of this whole conference. This making partnerships. I am pretty active with two people that I am going to continue. I hope I get to hear from you folks later on. Given our different roles what specific steps can be take

that will support STEM. There is a biggie. What steps can we take that will support STEM. Okay, well that is good.

I think just from the partnerships _____ I sit in a number of different meetings around the state. I am _____ construction company who pays my wages for 95% of my work I sit in meetings. And if we can get all those entities in the same room at the same time we could move a lot of things because we are all saying the same thing, unfortunately and it is too bad…I think there are some great inroads that are happening, I think that part of it with respect to STEM education who are in the room with me is it comes down to two things. Until we have all the things you want and all these programs are going to run but unless you have a line with them, what needs to happen, level to level which is common core and teacher preparation and professional development then you just built your building on a muddy floor. Because those things are a key to making sure the people who are coming out understand what students need to learn and that they are capable of delivering how to impart that knowledge to them and get them to be greater thinkers…

…and communications…

And communication and collaboration and team work and if that will happen then we are going to continue doing all these things up here and in 10 years we will all be sitting in the summit. I won't be here mind you.

We don't have those partnerships, we don't have a leadership from the Maine department of Education, so for example, a 24-team with a shift builder from the Maine Lending Results to the common core state standards in mathematics. As it currently looks there is no plan or definitive professional development for any math project. The elementary or the secondary.

I just want to agree with you.

These partnerships there needs to be some kind of leadership whether it is from the Department of Education or them telling us at the county level here are some things (unable to understand) and not only that _____ funding. I mean the Le page administration…

I totally agree. You know, to me put all the things on a web site and say you have five things you can select, you may be a little bit better than you would be. I know a proponent to some degree of local control trying to develop a curriculum across the state is crazy. Testing everybody with the same test and some people have never even been given the material. I just can't believe we do that and then we criticize ourself because we don't make gaols and we don't have the foundation to do it.

But I agree with you.

You can't implement a curriculum because there is no funding for them to be able to…

And then you have a significant difference I think that _____ self…

All talking.

…where you got to know, we got a little bit of money if we work really hard and I have been in a district where you are ahead of the curve on the learning results when the learning results came in and the people said you already did that, now you have to change. And we were ahead of the curve in a _____ assessment. That went and we are really working hard with the common core and hammering the people, this is coming and this is going to stay, if that is true, and I agree with you, I think everybody in the state ought to be doing the same thing. If my district picks our standards and you guys pick your standard and somebody else picks their standards and…

I know one things, what we are doing right now is not working. We can use the excuse local control, we can say funding, we can say teaching to the task, we don't want high states exams, are all scapegoats of getting out of the fact that, you now what, we can change this…and I could change in my little district in Greenville and Union 60 just as well as they can change anywhere else, if we have the will to do it.

I have lived in Burton for 28 years and have traveled around Europe quite a lot and at the same time, if you told people in France and the north of France that the curriculum is exactly the same in the south of France, every state…

I don't think every state but every community has the…they just don't get it, we can have any kind of educational system…it doesn't make any difference who you talk to.

(unable to understand) it is a serious problem and it is as serous as American not gong to the metric system. (all laughing).

We are not going to change it before the election. If you want I can send you a link. (all talking)