An Interview with Ralph Tyler

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Jeri Ridings Nowakowski

This interview will be of interest to those entering the field of education as well as for those who have made their home within the field for some time now. In the interview, Ralph Tyler discusses work in education and educational evaluation that spans over a half a century. He describes issues that were important at the beginning of his career (those related to his work with the Bureau of Accomplishment Testing at The Ohio State under W. W. Charters, and issues emerging in the Eight Year Study), and issues he thinks are important to education and educational evaluation today.

I asked Dr. Tyler questions about his early career, middle career, and his present activities. He discussed the progress he felt was being made, the problems that still exist, and the resources he thinks are available to the field of education. Throughout, he captures a sense of the history and, perhaps even the inevitability of public education. He is essentially optimistic—he sees the gains in public education outweighing the problems, and the promises still attainable.

Whether the reader is an old or new friend of Ralph Tyler's, the conversation that follows will help you get to know this man a little better. As he discusses a lifetime of effort and multiple professional responsibilities, a sense of continuity and direction becomes apparent. Here is someone who deliberately chose public education some sixty years ago, and has spent, and continues to spend most days in pursuit of its improvement. He is not at all smug, but he seems sincerely to enjoy the idea that his work has made some important differences.

The interview[1] took place in November, 1981 when Dr. Tyler made a three-day trip to Western Michigan University at the request of Kappa Delta Pi, an honorary fraternity for students in education. Ralph spent three days in classrooms and auditoriums, and at luncheons and wine and cheese bashes. Throughout he was approachable—always giving the same attention and the same quality of response to whomever he was talking. And whenever anyone began taking Ralph Tyler or the topic at hand too seriously, you could begin to see his eyes

[1] The interview is edited from the script of a videotaped conversation between Dr. Tyler and Dr. Ridings of approximately an hour and a half's duration.

light up as he dropped a saucy joke or line on an otherwise unsuspecting fan. The interview, I think, gives you a feel for the combination of levity and seriousness that makes Ralph Tyler good company as well as an educational legend.

The Appendix contains Dr. Tyler's two-page vita. It gives the reader some idea of how Ralph Tyler frames his professional experiences. (It's one of the few educational documents that is overwhelming in its brevity.) A summary index is also included in the appendix. It outlines the major topics discussed during the interview and provides page numbers.

I am indebted to Dr. Tyler for his willingness to share his thoughts with me. I am, in turn, pleased to share this interview with other educators.

The Interview

RIDINGS: I'd like to begin with some questions about your history and your education. Were you born in Nebraska?

TYLER: No, I was born in Chicago while my father was in the theological seminary. And when I was two years old he graduated and we moved to Nebraska where I was raised.

RIDINGS: You attended Doane College in Nebraska.

TYLER: Yes, I received my bachelor's degree there in 1921 and went to Pierre, South Dakota, the capital of the state to teach science in the high school.

RIDINGS: Did you go from there to the University of Chicago?

TYLER: I first went to the University of Nebraska to get further training in science teaching, and they employed me as a supervisor of practice teachers in science. I was an instructor there for four years until 1926. Then I Went back to the University of Chicago and got a doctorate in Educational Psychology.

RIDINGS: You would have finished your doctorate then, when you were 25 years old. I heard you say the other day that dissertations shouldn't be a student's magnum opus; what was your dissertation study?

TYLER: I was studying educational psychology, but because of my background in mathematics (I had an undergraduate major in mathematics as well as in philosophy), I was employed on the Commonwealth Teacher Training Study as a research assistant, and the title of my dissertation was "Statistical Methods for Utilizing Personal Judgments to Evaluate Teacher Training Curricula." Sounds quite complicated but that was the time when Professor Charters was heading the Commonwealth Teacher Training Study; I had collected some two million cards from each cooperating teacher who wrote down on a card an activity that he was engaged in. We had two million cards. In those days there was no automatic sorting equipment or computers. Fly role was to classify those two million cards and finally to get statistical methods for identifying what were the important and crucial or what is often called the "critical incidents" for teachers. That was my dissertation. The classification reduced the two million cards into "The Thousand and One Activities of Teachers in America."

RIDINGS: How do we use that information today?

TYLER: Well, the Commonwealth Teacher Training Study is a report upon which competency based teacher education in those days was developed. You know about every 20 years or so the uneasy tension between theory and practice in professional education (whether it be doctors or teachers or others), alternates between emphasizing the activities within the profession, or emphasizing the theory that may help to guide the profession. This was one of those times when, as now, the emphasis was on finding the competencies of teachers and trying to focus on them.

RIDINGS: Did you move from the University of Chicago to Ohio State?

TYLER: No, my first position, after I got my degree, was at the University of North Carolina where I worked with teachers in the state on the development of more effective curricula. Because Rex Trabue, who had founded the North Carolina State Testing Program was on leave, I was also in charge of the testing program of North Carolina at that time. Then in 1929, Mr. Charters who had left Chicago and gone to The Ohio State University to head the Bureau of Educational Research asked me to join him there to head the Division of Accomplishment Testing, as it was called, in the Bureau of Educational Research.

RIDINGS: The group of young people who went with Charters to Ohio State turned out to be a pretty exciting group of people. What was it like working at the Bureau at that time?

TYLER: Charters was a very stimulating person to work with. Every other Monday evening beginning at 7:30 the heads of the different parts of the Bureau met at his home. I was in, as it was called, accomplishment testing; there was Edgar Dale in curriculum, W. H. Cowley in personnel, Earl Anderson in teacher education and Tom Holy in buildings and school surveys. We met, with each one of us previously submitting a written report on what we had accomplished during the two weeks, what we saw ahead, and what were the new problems, so that we had a chance continually to see ourselves at the cutting edge in developing new ideas and new research.

RIDINGS: You worked on something called "Service Studies" with professors across campus, didn't you?

TYLER: Yes, my role in the Bureau of Accomplishment Testing was to spend half time or more than that working with the colleges of The Ohio State University to try to increase student retention and improve the teaching. The legislature had become concerned because half of the students that were enrolling in the freshman year never came back for the sophomore year. The legislature appropriated funds to devote to improving teaching and learning in the university. Half my time was devoted to working with faculties there (actually more than half), and the other half of the time with schools in the state.

RIDINGS: What were some of the studies conducted with the schools in the state?

TYLER: Let me begin by describing the public mood at that time. The Great Depression began in the fall of '29, shortly after I arrived in Columbus. People began to worry about their material losses and blamed much of it on the banks, the government and the schools. A big conference was held in 1933 on "The

Crisis in Education: Will the Schools Survive?" The papers were reporting how bad the schools were. Since these accusations included no evidence of school decline, I wrote to the superintendents in Ohio asking them whether they had any of the tests and the papers left that were given 25 or more years before. I offered to get them reproduced if they would give the tests again to see whether the students are really better or worse than those 25 or more years earlier. We found a number of communities where old tests were available, and we gave them again. We found, as was discovered in Indiana a few years ago when they repeated the Stanford Achievement Tests after 25 or 30 years, that the students of today either did the same or better than those of the past. The public acceptance of the notion that in some way things are deteriorating seems to be due not to a presentation of facts but the feeling of people that things are bad because they are not as well off as they expected to be. They are not able to get a second car or to make other purchases that they had planned. So they blame their social institutions, such as the schools, and think they aren't doing their job for the kids are not as submissive as they used to be.

RIDINGS: That's basically an optimistic note, and you feel that's true in 1981 as well?

TYLER: Yes, I do. You've seen it around people saying it. When you look at the National Assessment, for example, you find that there are more children able to read in 1981 than there were ten years earlier. But the public doesn't pay as much attention to the National Assessment results as it does to the College Board report that the SAT scores were declining slightly, 30 points, which is only 2.4 points in raw score. The standard scores of the SAT are based on a scale in which the mean is 500 and the standard deviation is 100. And the standard deviation of the vocabulary test that fell so much was 8, and so 30 standard score units is 3/lOths of 8 or 2.4 points. This is the extent of the decline in ten years. Now that's not a serious decline, but it looks severe to those who don't know what the SAT standard score means. A more important College Board result was that the subject examination scores were going up. Nor was it generally brought to public attention that the SAT is taken by more and more students in the lower half of the class because they want to get Basic Education Opportunity Grants. And, so, in 1975 no publicity was given to the fact that many more young people from the lower half of the high school classes were taking the test than in 1965. Nothing was reported to the effect that we're testing a larger proportion of students who didn't do very well in high school. The public jumped to the conclusion that the youth of today are not doing as well as those in earlier years. The eagerness with which this conclusion was accepted, I think, is because many people are now not as well off as they hoped to be and they blame their disappointment on the failure of schools and other public institutions.

RIDINGS: You've brought up National Assessment, a project you began working on in the early sixties. Was the National Assessment Project your brainchild?

TYLER: Well, I was asked to design the plans and was chairman of the exploratory committee to develop an effective operation so that it could be taken over by the Education Commission of the States that now operate it.

RIDINGS: Has it turned out to be all that you'd hoped that it could be?

TYLER: Oh nothing is ever all that one hopes for. But certainly it has turned out to provide helpful data about the problems and progress of education in the United States.

RIDINGS: Do you think the change in funding base from a federal to a state nexus is going to have an impact on National Assessment? Will it make national data more important for us?

TYLER: I think it is very important before we spend much money on educational programs to have a picture of where we really are. This is particularly true now when pressure groups are trying hard to get funds for these purposes. So I think the National Assessment is always important—especially in difficult times when funds are rationed and should be focused where they are going to be most needed. However, the National Assessment is being supported by federal funds, and this year they were sharply cut. The Secretary of Education at the annual meeting of the Education Commission of the States in Boston this last August promised that he would do what he could to try to get some of that restored, it hasn't yet been restored. This raises the question of whether the National Assessment can be adequately continued, but I hope it will be.

RIDINGS: Let's move back to the end of your work in accomplishment testing at Ohio State. Was it then that you began to work on the Eight Year Study?

TYLER: I began my work on the Eight Year Study in 1934. I went to Ohio State in 1929 so it was five years later. Perhaps I should give you the background. When I came to Columbus I worked with faculty members in the university in departments that had a required course for students, e.g. botany, zoology, and agriculture. They were having large numbers of failures and they wanted help, and so it seemed important to find out how much students were learning. The instructors would usually say: "We'll give them a test." Then I would point out the problem: "What do you want tested? The typical so called achievement test is simply a test of what students remember about things that appear in their textbooks, and surely that isn't what you're after . . you are not just teaching them to memorize." This conclusion led us to talk about what the instructors' objectives were, that is, what they really hoped their students would be learning. And then they said that a test should provide evidence of whether students were learning those things or not. Because the term "test" usually was interpreted as a collection of memory items, I suggested the use of the term "evaluation" to refer to investigating what students were really learning. As we developed evaluation instruments with those departments and began to use them, we obtained information about what students were learning and were not learning; how permanent some learnings were; how quickly they forgot information; and how long they remembered basic principles. Things of that sort were part of our experimentation. Then we moved on into other subject areas, chemistry, accounting and business, history, and various other departments. This was going on during my first five years at Ohio State. Without going deeply into the background of the Eight Year Study, one could say that it was a project which developed from a

realization on the part of many secondary schools that the depression had brought into the schools many young people that did not plan to go to college; in fact, they didn't really want to go to high school, but they went because there was no place else to go. Youth unemployment was nearly 100 percent. By 1929 we had reached a point where about 25 percent of an age group went to high school. In my day it was only 10 percent of an age group, and suddenly as the depression went on, 50 percent of an age group were in high school. It doubled the enrollments. Many of these young people didn't find the curriculum for college entrance meaningful to them. And the other common program, the Smith Hughes Vocational Education Program, was highly selective. It enrolled persons who were definitely planning a particular occupation like garage mechanics, or homemaking, or agriculture.

High school principals realized that the schools should have a different program for these new students who were now in the high schools because they couldn't find work. But the course requirements of high schools then were pretty largely determined by, on the one hand, college entrance requirements and on the other hand, the requirements of State Education Departments. These determined what subjects were taught and, how many units were to be taken. Leaders among the principals brought attention to their problems, and the Progressive Education Association, which was interested in innovations, took the responsibility of getting together a conference of school and college people including the state departments to determine what could be done.

Out of that conference emerged the idea that a small number of schools (ultimately 30 schools and school systems), should be encouraged to develop programs that they would design to serve the high school students of that period. These 30 schools were to be given eight years in which to develop and try out new educational programs. During that time they would be freed from meeting ti specific requirements of the state and of college entrance subjects in order to provide freedom for experimentation.

But there was a stipulation in the arrangement agreed to by the colleges and the state department; namely that there would be an evaluation, and the evaluation was to include the following: One, there would be records available about the performance of students that would furnish information to help colleges make wise selections. Second, there would be an appraisal of what students were learning year after year in the high school so that the school would get continuing information as to whether they were learning something important. Third, there would be a follow up after graduation to see how well they did in college or in other post-high school arenas employment, marriage or whatever it might be. This was the threefold task of evaluation.

The first year of the Eight Year Study (1933-34) the directing committee expected to use the General Culture Test developed by the Cooperative Test Service for the Pennsylvania Study of School and College relations. But this was just a test of information students recalled about the things presented in widely used textbooks in the various so-called basic subjects. The schools rebelled; that wasn't what they were trying to teach, therefore it would not be a fair measure of their efforts. They threatened to drop out of the study. This produced a crisis in the summer of 1934 at the time of the annual meeting of the participants.

At this point, a member of the directing committee, Boyd Bode, a well-known philosopher of education who had his office across the hall from me in The Ohio State University said, "We've got a young man in evaluation at Ohio State who bases evaluation on what the schools are trying to do. He works closely with them and doesn't simply take a test off the shelf. Why don't you see if he will take responsibility for directing the evaluation?" I was reached by telephone at Chapel Hill where I was teaching in the summer at the University of North Carolina. I came up to the Princeton Inn where they were meeting. The interrogated me all morning and then I had lunch with them. They went into executive session in the afternoon while I twittled my thumbs and watched people playing golf outside the Inn. At 4:00 p.m. they came and said, "We would like to have you be the director of evaluation for this project." I agreed to do so after making arrangements with The Ohio State University to spend half time at the University, half time on the Eight Year Study.

RIDINGS: Would you say that Tylerian Evaluation, as we understand it, was born during the Eight Year Study?

TYLER: Well I don't know, it depends on what people want to call Tylerian Evaluation.

RIDINGS: That brings up an interesting point. Yesterday I heard you describe the evaluation process in the context of training evaluators, and it sounded a good deal richer than the six or seven steps often used to describe objectives-based evaluation.

TYLER: Oh surely you can't use just the objectives as the basis for comprehensive evaluation. But certainly it was very important for people starting a program to reach new students and find our whether they were accomplishing their purposes. But it is also important to find out many other things in order to understand what's going on in a program and to guide it. I think when people say "Tylerian" as a single process it's like saying Dewey only mentioned child interests; there is no way of summarizing very simply any human being's notions about something complex. But for convenience we are likely to give a procedure a name, rather than describing it more fully.

RIDINGS: As you worked with teachers to produce objectives that reflected their classroom goals, you must have realized that you had an impact on curriculum.

TYLER: I think so. Especially in the areas where there had not been much clarity in the curriculum descriptions and explanations. For example in the case of literature, the teachers of literature would usually repeat some trite phrase like "the students should learn to appreciate literature." I said, well, that sounds sensible. What do you mean by that? What have you observed that you are trying to help young people learn that you call "appreciation." Is it that they can tell you about who wrote a book? Is it that they can make critical judgments of a literary work in terms of some criteria, such as unity or illusion of reality, or what not. We discussed such things until we began to agree that ultimately with literature we were concerned with comprehension, interpretation and appreciation. They meant by appreciation that the reader responds emotionally to

some literary works and thus his life is richer by reason of these emotional reactions. Reading is not just a dull sensing of meaning. All that came out of discussions, and from continuous reminders, "Don't look at some taxonomy to define your objectives. A taxonomy is what someone else states as the meaning of educational objectives. You're a teacher working with students. What have you found students learning that you think is important? We formed a committee of teachers on appreciation of literature from the 30 schools and their discussions became a very rich way of trying to clarify what one could help students learn with literature. We were aided of course, too, during the Eight Year Study, by committees of people outside of the schools who had ideas. Louise Rosenblott wrote Literature as Exploration and that gave a new vision of what literature could be; or the book written by Alberty and Havinghurst, who was then teacher of Science at the University School in Ohio State, on Science in General Education gave new insights into that. So we were trying to help get a vision of what educational objectives could be. These discussions guided both the teaching and the evaluation.

RIDINGS: When we hear criticism of objectives-based evaluation, it's typically that the objectives are not evaluated. Yet in listening to you over the last two days, it's apparent that you have had a good deal of communication with teachers, and respect for their skills.

TYLER: They're the ones who have to do it. Nobody else can tell you what you're trying to do as well as you yourself. Especially, when you try to probe the unconscious intuition of thing; that teachers are doing that have been sensible, yet they haven't really worded them before.

RIDINGS: So, it's a matter of articulating some things that you think teachers do know how to do, have been doing, but probably need to refine. You approach educational problems with a great deal of common sense.

TYLER: The only problem with common sense is that it's so uncommon.

RIDINGS: One could say that while there might not have been a formal step for assessing the worthwhileness of objectives, that was in fact always going on in the "Tylerian" evaluation process.

TYLER: Yes, of course. The schools were helped not only by the evaluation staff but by a curriculum staff working under Professor A1berty. In 1938, the curriculum staff complained that the schools were saying they were getting more help for the evaluation staff than from the curriculum staff. Alberty explained this by saying: "Tyler has a rationale for evaluation and there isn't any rationale for curriculum. So when we were having lunch, I said to Hilda Taba, my right hand associate, "Why, that's silly, of course there's a rationale for curriculum." I sketched out on the napkin what is now often called "The Curriculum Rationale." It indicates that in deciding what the school should help students learn, one must look at the society in which they are going to use what they learn and find out the demands and opportunities of that society. To learn something that you can't use means that in the end it will be forgotten. One must also consider the learner—what he has already learned, what his needs are, and what his interests are, and build on them; one must also

consider the potential value to students of each subject. After lunch I said to the curriculum people, "Here's a rationale you might want to follow," and that kind of outline of a rationale began to be developed.

RIDINGS: Dr. Tyler, when I was reviewing for this interview, I looked back at your work, and I looked at Cronbach's piece in 1963 on course evaluation. It was apparent that you really couldn't talk about evaluation in the early days of educational evaluation without talking about curriculum; that they were in fact completely intertwined.

TYLER: Well, if you are talking about evaluation of education, of course.

RIDINGS: It seems, as educational evaluation has grown, in some ways we have seen the parting of education and educational evaluation; that is, educational evaluation has taken on a life of its own, is going in its own direction, and is really not attending to curriculum.

TYLER: That happens in all professional fields; medical research has often forgotten the patient, who has become clinical material, and forgotten the role of the physician as a health counselor. It was as if in some way, once the physician knew what was going on in the human body, automatically the patient would get well; but we know that only the patient can get himself well—just as only the child can learn. You can't learn for him. So there is all this evaluation business up here, without considering what it is the learner is doing. The same problem exists with social work; they sometimes think of clients as having no minds of their own. But, when for instance, people discover that money can be had in the aid to dependent children, some are tempted to say "That's the way to make my living. I'll just have more children and get more money." You've got to consider the social situation and what it means to the so-called clients. They're not inert objects out there to be worked on. You can do that if you're working on plants, but you can't do that with human beings.

RIDINGS: Ironically the federal dollars that moved evaluation forward brought us.

TYLER: Has it moved us forward?

RIDINGS: Well, it brought us large funded programs and with them program evaluation which has grown and become more methodologically diverse. I guess the question is whether program evaluation has co-opted curriculum evaluation in the public school system.

TYLER: Well, I think there will be much less money from the federal government for that kind of evaluation and that may help people to stop chasing dollars and try to consider what is really involved in effective evaluation, and who are the clients for evaluation. One of the problems is that they see the clients as being federal government, the Office of Education, NIE or the Congress, instead of the clients that you're going to improve—the teachers and the people who operate schools, and the parents and children. When you have those clients, you have to have different considerations.

RIDINGS: The evaluation components for many large-scale funded programs are still focused on outcome measures.

TYLER: And often inappropriate ones.

RIDINGS: They don't reflect the literature that we have available in evaluation. Who's in control of educational evaluation in our country? Why don't we see what professionals and academics are doing reflected in evaluation as it's legislated?

TYLER: You're not asking that an a question are you?

RIDINGS: You mean, it's so apparently government influence.

TYLER: Well, the evaluations that make any difference are those that reach the people that really care about education, the teachers, the parents, the children, and citizens who are concerned with the welfare of the country. Much program evaluation has been directed at Congress which, because it's controlled or greatly influenced by high pressure groups, doesn't really care as long as it has satisfied its pressure groups. And if it's an act of law, they will not change the law just because something is found not to work—not unless the pressure groups no longer press for it.

RIDINGS: An abstract of a recent dissertation study on the University of Chicago evaluation group proposed, after looking carefully at you and Bloom and the students that you had touched, that perhaps the most significant aspect of that group is the communication network that was set up and continues between you and your students.

TYLER: How do they determine what is the most significant, what's their criteria for significance?

RIDINGS: I didn't read the whole study. I would speculate that it might mean the characteristic that has been most instrumental in keeping evaluation alive and growing within that group and, perhaps influencing the general development of evaluation.

TYLER: Well, that's a theory of history, and there are other theories, such as the need for some things will cause the persons who produce it. The question, for example, of whether it was the automobile industry, as an industry, that made the great use of cars, or the discovery that cars were so helpful to people. It's hard to determine whether it's people with ideas that produce—rather than the need of a time; and, obviously it's some kind of interaction. You can have people pressing for some things and nobody feels the need for it, and it disappears in due time. In some way it's a combination, but it's too simple a theory to talk about. These "networks" haven't changed the world generally when they've been in existence, unless at that time there was a need for one.

RIDINGS: Do you keep in active communication with most of your students?

TYLER: I certainly see them quite often and I live not far from Lee Cronbach. My two right-hand research assistants getting their doctorates in Chicago, in those early days, were Ben Bloom and Lee Cronbach. And then there was Chester Harris, and, of course, Hilda Taba had already finished her doctorate, and I was able to help her stay in this country when she was about to be deported back to Estonia because she came on a student visa.

RIDINGS: In 1938 you made the move from Ohio State back to the University of Chicago where you became the chairman

of the Department and later Dean of the Division of Social Science.

TYLER: I came first to do two things. One was to take Mr. Judd's place, who was then retiring, and so to be Head of Education. And the other was to head the Board of Examinations responsible under the Chicago plan for determining the student's completion of his educational program. Under that plan, all the degrees are based on passing various comprehensive examinations. So that I was University Examiner half time and half of my salary was paid by the Examiner's Office, and half was paid by the school of education.

RIDINGS: Egon Cuba said to me that while people know you as a researcher, a theoretician and a statesman, you were also a wonderful administrator and a very good Dean. Did you enjoy administration?

TYLER: Yes, if you define administration as Lord Acton does, "the art of the possible." I like to help people find ways of using their talents most effectively and that's usually by giving them an opportunity for a time to do what they think is important. Then, from that experience, thus try to clarify what they really feel they can do best in that context. I think that Guba is especially influenced by his own major Professor Jacob Getze's; I found Jacob Getzels teaching social psychology in the Department of Human Relations at Harvard and brought him to Chicago. He said he was a social psychologist. He said, "What do you want me to do?" I said, "I want you not to teach anything until you feel you've got something to teach. I'd like to have you go around to schools, see what you see going on in education that could be understood by utilizing social psychology." Well he told me later that he didn't really believe me, so when the quarter started he said, "What am I to leach?" I said, "Whatever you feel is important to people in education." "Well, I don't know."—"Until you find that, just go on observing schools and talking to school staff." And so this went on until he felt he had something to teach teachers. And he also worked with people in administration on the theory of organization. I conceive a task of the administrator to find what appears to be a bright and able young man, then not to put him into a nitch, but to help him find himself and where he could use his talents and then support and encourage that.

RIDINGS: So you were the true facilitator?

TYLER: That's what an administrator should be, a person to help people accomplish; it is the art of the possible—helping make possible what others dream and hope they can do.

RISINGS: It's a nice definition.

TYLER: I might name a good many others I tried to help. For example, Herb Thelan—I found him teaching chemistry in the university high school in Oakland and again I had him, before he taught anything, observe what was going on in teaching. He became interested in the interaction of students and teachers. He said he wanted to work on that, so I set up a laboratory in which interactions in the classroom could be observed and recorded; a place in the laboratory school where he could study different groups of students. We didn't have video tape in those days but we had audio tape and we had ways of looking through one-way mirrors and so on. So he began to have a

chance to do what he had discovered to be interesting after looking at education for awhile and study what he wanted to learn about. Some of his students never went beyond that. Ned Flanders, for example, always wanted to have just interaction counting. But Herb, if you've seen his recent book just published, has gone a great distance in his understanding of the human influence involved in teaching.

RIDINGS: I'm moving you through your life way too rapidly. I was about to move you into 1953 when you became the Director of the Center for Advanced Studies.

TYLER: But you may want to understand that during the war I was also the Director of the Examinations Staff for the Armed Forces to develop educational testing. The GED Test was originally developed there, guided by Everett F. Lindquist of the University of Iowa.

RIDINGS: Didn't Dan (Stufflebeam) also work on the GED?

TYLER: After I left Chicago, the responsibility was contracted out to Ohio State when Guba was Director of the Bureau of Educational Research, and I believe Dan was working on the GED Tests then. We originally developed the examination so that young people who were returning from military service after the second world war would have a chance to demonstrate what they'd learned and get some credit for it. So we also developed a series of subject examinations and course examinations for that purpose. When the war was over I was asked to serve as Director of the Veterans' Testing Service for the American Council of Education to develop centers where veterans could take the tests, and demonstrate what they had learned in the armed services. Those were some administrative responsibilities to try to make possible something that seemed important.

RIDINGS: You were also instrumental, you and Frank Chase, in beginning Regional Labs in our country.

TYLER: Well, in 1964 Mr. Johnson set up a task force to see what needed to be done in education, if he were elected, as he was in 1964 to the presidency. The task force was headed by John Gardner and included a number of very able persons like Edwin Land, the inventor and head of Polaroid. He suggested the idea of Supplementary Education Centers in order for children to learn from museums, libraries and other educative agencies in the community. Unfortunately, this section of ESEA was construed by the educational bureaucracy as another task for the schools, and most projects supported under this title involved school activities, instead of sending kids out where they could learn from other experiences. I was responsible for writing the section on laboratories, the substance of which was included in the Elementary and Secondary Education Act of 1965. We viewed laboratories as the "middleman" between research and schools. We already had the R and D Centers in which educational research and development was supported. What we did need was a way by which the consumers, the schools, could identify problems they had and seek help from research of the past as well as the present. The laboratory was to be based with the consumer, but the laboratories that were actually funded were, with some exceptions, either R and D Centers or oriented toward the producers of research rather than the

consumers. The result is that we still lack the "middleman" in most regions.

RIDINGS: Like the National Assessment, it would seem that the regional labs could be jeopardized by lack of funding.

TYLER: Yes, but it is possible that this could be a constructive result. They might then seek to serve the consumer more fully and get support there. For example, the post office looks to Congress, it doesn't worry too much about its consumers; but if the Post office were responsible to their consumers then there could be more concern for good service. It is possible that if the federal government doesn't support the labs, they will seek support for their consumers. That may make the labs more responsive to the needs of schools rather than to becoming a sort of second level of R and D Centers.

RIDINGS: From 1953 to 1963 you were the Director for the Center for Advanced Studies. What do you think were the Center's major contributions during that decade before you began work on National Assessment?

TYLER: Providing an opportunity for very able behavioral scientists to spend time to think and to study when they were not responsible for teaching and other services based on their previous work. At the Center they could think about what they needed next and they could get ideas for future development.

The idea of the Center was suggested first by Haus Speier in a communication to the Ford Foundation. The Foundation in the autumn of 1951, appointed a committee to explore the idea. It consisted of ten leading behavioral scientists. I served as chairman of the committee. We met in New York for Saturday all day and Sunday until noon each weekend from January until June, 1952, working out possible ways to help able people to keep growing.

One of our members, Robert Merton, had been studying the careers of Nobel Prize winners and noted that they rarely produced anything new after they were awarded the Prize. We recognized a need for scholars and scientists to get new stimulation and new ideas in midcareer. To this end the Center was founded. Outstanding students of human behavior were invited to come there with no assignments other than their own restless energy. The Center administrations' responsibility is to help each scholar to do what he believes will give him new lines of work. That the Center has been a constructive influence is shown in the visible career lines of those scholars and scientists who have spent a year there. Each year the Center invites about forty people from the United States and ten from abroad to be in residence there.

RIDINGS: So once again you played the role of facilitator and nurtured people so they could do good things in education and research.

TYLER: Well, nurture is a term that depends on how suppliant you think they are. And, of course, don't forget the basic political principle that has guided many pressure groups in seeking government funds—when a sow is suckling a pig, the sow enjoys it as much as the pig.

RIDINGS: (Laughing) I like that one. Tell me, when you look back on a career that has already had so many pinnacles.

TYLER: I don't think there are pinnacles.

RIDINGS: Would you buy tiny hills?

TYLER: I don't think of them that way at all. I think about moving along doing the things that seem important.

RIDINGS: Just plodding through with Ralph Tyler. Is there something you feel a greater sense of personal accomplishment over?

TYLER: I never thought of it in those terms.

RIDINGS: If you don't think about accomplishments in a personal sense, what about as contributions to education?

TYLER: I thought they were useful; but I never tried to examine them.

RIDINGS: You don't rank order?

TYLER: No I certainly don't.

RIDINGS: Okay. I'm going to turn to some specific questions about the field of educational evaluation and start with what I think is the obvious one. You've often been referred to in the literature as the father.

TYLER: I invented the term "evaluation" when applied to educational procedures; so if naming the child, as the godfather names babies, makes you father, then I am. And when it began to be a cliche' and evaluation meant so many different things to different people, I invented the term "assessment," and that's what we used next.

RIDINGS: Well, that's what I wanted to ask—the amount of paternal responsibility you take for this offspring that is credited to you.

TYLER: You can't take responsibility for what other people do, so the only thing you can do when anything becomes a cliche' is to get a new word.

RIDINGS: And that's "assessment?"

TYLER: Right now it's assessment, but that will become a cliche' because many people quickly catch on to forms and to labels without understanding the substance of what something is. I was at a meeting yesterday in Chicago for the Board of the Institute of Philosophical Research, and one of the group had been making a study of the influence of the Committee of Ten's report on secondary education. That report was headed by Charles Elliot, the President of Harvard, and it was sponsored by the NEA. It outlined a program of education which in form set the structure of American education for 1893 until at least the Eight Year Study, or about 1933—at least 40 years. But what this researcher had discovered, Mrs. VanDoren, was that most of the things that were carried over were forms. The schools offered those subjects named in the committee report, but they did not usually believe in such courses, the aims and the content suggested by the committee. Many of the committee's suggestions are fresh ideas today. I was not surprised. Why was it that PSSC and the other science courses, supported in their preparation by many millions of federal dollars, never really reformed much of the curriculum? Because the people who quickly took it on, took on the form; they were taking PSSC and using the books not as aids to inquiry but as stuff for kids to remember. You may have seen the report of the use of these

materials prepared by the University of Illinois committee led by Robert Stake. The problem is that something is labeled, like the Tylerian rationale, and pretty soon it is the form that is in people's minds, not the substance. Forms, like cosmetics, are so much easier to adopt than changing your personality. And that kind of business makes it necessary periodically to change labels because the labels become cliches representing something like Dewey's "Do-I-have-to-do-what-I-want-to-do" sort of cliche'—which was not what Dewey said at all, but a way of quickly labeling it. And then it's lost.

RIDINGS: It's also much easier to dismiss an idea after you simplify that greatly.

TYLER: There was a woman, very set in her ways, who taught in the schools of Tulsa during the Eight Year Study. Every time we had a workshop, she'd say, "We've been doing that for 13 years in Tulsa." Of course she didn't understand what was being talked about except for the label she could quickly attach and, of course, then dismiss because "We've been doing it for 13 years in Tulsa."

RIDINGS: Speaking of labels, there are a growing number in evaluation. I think Michael Scriven said that, at one count, there were over 50 evaluation models; we have at least two bonified professional evaluation organizations, and probably more; we have a number of evaluation journals, and a number of sets of standards now. Do you think this is progress?

TYLER: Probably not. It depends on whether evaluation has become so popular that it's a fad and is likely to fade. However, there will be people who really are concerned with finding out what is going on in our educational program and want to understand it. These people will be seeking ways of evaluation. That's what science is about—trying to distinguish between the ideas you have about phenomena, and what's really going on.

RIDINGS: If you were to run a major project tomorrow, would you hire someone called an evaluator to work with you on the project?

TYLER: It depends on whether they could do what needed to be done.

RIDINGS: What kind of a job description would that be?

TYLER: Evaluation is a very broad term—what is it that needs to be done?

RIDINGS: Well, right now you're helping to educate evaluators, working on training programs for professional evaluators, is that right?

TYLER: Well what I do now, of course, since I have no permanent job, is what's expected of me growing out of my background and where I'm employed. For example, this semester at North Carolina State University I'm employed by the Division of Adult Continuing Education and Community College Education. Now, for example, the evaluation of general adult education requires the kind of person who understands what learning and teaching involves and can design a learning system and evaluate parts of the learning system that are working or not working. But they need to do this with a good deal of understanding of what that means in the context of the community college in North Carolina, or adult education that ranges from the basic

education of illiterate adults of whom there are a lot in North Carolina, to the adults who have graduated from college. They need to have gotten well along in a job and understand what life is really about, or, as Marvin Feldmen says "is there life after work?" Then there are the trainers, people in continuing education who I meet on Fridays from IBM and a good many other industries in that area involved in textiles, electronics, and printing. There the problem is identifying what is to be learned and how to evaluate it. Now there are some general people who can do that, but my own experience in evaluation is that except for the generalists like you and Dan, most of the people are going to be in a particular situation where their understanding of the particular situation is terribly important. Hence, I would choose someone very familiar with the context and teach them how to evaluate, or choose in excellent general evaluator and immerse them in the context Christine McGuire, one of my students at the University of Illinois Medical School, is a good illustration. She is a general evaluator but very familiar with teaching and learning in the various areas of medicine, pediatrics, psychiatry, and the like.

RIDINGS: You said yesterday that it was hard for you to believe that people involved in educational evaluation of schooling would have much insight or be very productive if they hadn't been in a public school classroom.

TYLER: Yes, if that's where they're evaluating—or medical schools if they are there, or training stations if they are there.

RIDINGS: That brought to mind, however, the many new people who are being graduated and have degrees in evaluation; some are a new breed of professional with technical skills and quantitative backgrounds but they are not necessarily educators.

TYLER: They're like the economists of today who can tell you what's wrong with the economy, but can't figure out what you're going to have to do about it.

RIDINGS: In other words, such evaluators are playing a role in finding problems, but not in solving them.

TYLER: Well, it depends on what the purpose is; there's a place for finding problems. There's a place for the diagnostician or the person who runs the blood tests in the clinic, but he is not the one who is going to tell you what to do with the information.

RIDINGS: Let me ask you about the Standards. As you know, the Project to Develop Standards for Educational Evaluation is housed here at Western Michigan at the Evaluation Center and has been chaired by Dan Stufflebeam. That group dedicated their Standards to you.

TYLER: That was nice of them.

RIDINGS: Certainly it was a sign of respect. What do you think about the quality of the Standards? Do they hit the mark now? Do we need them?

TYLER: I think it's very helpful for the kinds of program evaluation that have been done under federal support to have this set of standards. Standards for anything have to be in light of the context and where the problems lie. There are different problems if you're talking about the evaluation of medical school

curriculum in order to produce general practitioners, rather than people who are primarily research people in medicine.

RIDINGS: Do you think the Standards, or a profession searching for standards, will bring up some issues that will have to be resolved?

TYLER: Oh, I think that anything that causes you to look critically at what's going on will help you to identify places that have to be examined very carefully. Put another way, a professional occupation is one where there is continuous effort in the research of the profession to identify both the proper ends and the effective means of that profession. Research on the proper ends is concerned with the ethics of the profession relating the professional's work to the common good rather than the notion that what's good for General Motors is good for the country.

For example, there needs to be a continuing study of the nature of medical ethics as new ways are developed for keeping people alive a long time at a great cost. The ethical issue is: How much can society spend, if it has limited resources, on keeping some person of age 65 alive for ten years at a cost that would cover the health services to children for perhaps 20 or 30 times that many children? This is an ethical question not easily answered, and should be a matter of continuing study. Correspondingly, for the profession of evaluation, the questions of who are the clients and what proper service can be given clients are raised. Is it proper for some people to get information that might be wrongly used? These are kinds of questions in evaluation that are continually going to come up, and they change with time.

One role of the research profession, the important one, is the continuing study of ethics in the light of changing situations. The second is trying to understand the processes and trying to characterize them in ways that others can understand so they can do more than simply follow what the "master" does. They need to understand what goes on and be able to solve new problems as they arise. Evaluation needs to continually try to examine the appraisal process and to find principles rather than setting up models to be followed. If you look at science, it has not benefited by structural models alone except as an illustration of principles in which the models keep changing as new situations and applications of the principles require.

RIDINGS: Whether you look at medicine, or fields like accounting and auditing that deal with information, if those fields don't revisit their principles and the impact of those principles on their audiences, instead of a guiding set of principles they end up with a very restrictive set of expectations.

TYLER: And with limited time and resources, an important question for applied research in evaluation is to discover how far a further refinement of evaluation data is justified in terms of the cost, and how much difference it would make in the actions to be taken. A number of researchers seek more refinement but, because they think only of general group data, are happy to talk about a correlation say of .6. Many testers were jubilant when they found a correlation of .6 between the SAT and first-year grades. But they did not examine the question as to whether this correlation was a sign that college teachers should change their ways of teaching so that they could reach students

who had not learned to study before, or whether they select only students who have already learned to study. That's an ethical problem in connection with testing for admission. Testers did not consider another question: What does the admissions committee do about the SAT score when the correlation is only .6. How many individuals are misplaced, and does the college care about the misjudged individuals. If one only cares about the institution getting its share of good students, one can disregard the errors which individual students suffer. What is the ethical responsibility of testers? Don't they need to learn more about the person than is provided by an instrument giving a correlation of .6? This ethical question is the one on which the Communists and Fascists differ most from avowed democracies. Communists and Fascists say, we don't care as long as we get what we need to keep the state going. It's too bad that an individual suffers; but people serve the state. However, we believe in the individual; we believe in equality, and what right have we to say that we're satisfied to be guided by a .6 when we could go and try to learn more about the individual and get to a point where we could make fairer decisions. These are ethical questions that arise from a statistical method which applies only to groups. Don't we have a responsibility to learn more about the individuals within the group?

(Interruption for a photo session)

RIDINGS: During the photo session, we were talking about statesmen. I made the statement that you were, if not the premiere educational statesman, one of our most important educational statesmen.

TYLER: Well flattery doesn't get you everywhere. Let's go on with the questions.

RIDINGS: Let's talk about the necessity of statespersons and how to groom them in education.

TYLER: Well of course there are different history theories too. One is the necessity of statesmen, and the other is the English theory, during the time of the First World War, that you can muddle through without statesmen some way and the civilization survives. But, in any event, it's nice to have them. Whether they're necessary is another question.

RIDINGS: We mentioned a few, Frank Chase was one of the people we were talking about, and Horace Mann. You also included Hilda Taba. These are all people who are or have been national and sometimes international leaders in education. We were talking about the problems of why sometimes we seem to lack statespersons in education and suggesting that it might be, in fact, the educational process or training process. Could you talk a little bit about what makes a statesperson and what kind of activities they're involved in?

TYLER: You might want to talk first about why some situations produce more statesmen than others, and that, of course, has been a concern of religious writing for many, many years. Amos advanced a theory in his book of the Bible that in periods of affluence, (he described vividly how women flaunted their jewelry), people were no longer interested in God because they could satisfy their wants easily. The great ethical period for the Jews was in their Babylonian captivity. The general theory, which is

hard to refute because it seems to fit so many historic periods, is that the human being is both an animal that, like other animals, depends upon various physical things, food, for example, and is greatly attracted to material possessions but also is capable of immense efforts to attain goals that are non-material (concern for others, unselfishness, altruism, and so on). In times when it's easy to satisfy the material wants, people generally become greatly attached to material things so that in affluent times people spend more than they need, they're satisfied and get happy about all the things they can get, and they pay little attention to the nonmaterial because they spend little time in reflection when enjoying physical gratifications. In difficult times, when the physical gratifications are not easily obtained, more time is spent in thinking about seeking non-material goals.

John Dewey pointed out that man as a human being is essentially a problem solver. He's not a cow that chews its cud after a nice meal in the pasture and just enjoys that. Men and women are essentially made to deal with problems, and that's why civilization advances. People have been able to meet new environmental problems when other organisms have often perished because they couldn't adapt. Which suggests that the environment in which people can continue to develop is one where goals require effort and problems must be solved, and not one of relative ease. Now that's a theory of history that I think may be useful in this connection. Look back at the times that we've had people that we call statesmen. For example, in the case of Horace Mann, it was when there was a great expansion in the elementary school system of Massachusetts. They didn't have enough teachers, and he had to solve the problem of how to educate teachers. He invented the normal schools, and he did a number of other things. But during the periods before that, when there wasn't a great expansion and when there weren't problems in educating teachers, they didn't have any demands in that sense for persons to lead them in new ways.

RIDINGS: If times are getting bad, are we about to see the emergence of some new statesmen?

TYLER: If they're viewed as bad by those for whom the measure is money and physical satisfactions, then the times ahead are likely to be austere times. But that has nothing to do at all with the question of whether there will be good times for education or for people who care about others, who are concerned with some sense of satisfaction in serving others as well as being served, and those who care about a closely knit family. Those are things that can become better during periods of austerity.

RIDINGS: So the funding hiatus in education might in fact help us?

TYLER: It's probably going to produce better education. You might ask yourself if you got 25 percent more salary would you do a better job than you do now?

RIDINGS: No.

TYLER: So really money has nothing to do with how well you do, does it? Money helps because it provides for your physical satisfactions and it may be nice for you to have other clothes or other physical things. But if it causes you to be so interested in such things that it distracts you from thinking about your work, then it can be distracting. The point is, when is physical well-being such that you don't

worry about it. People who are starving certainly can't think about things because in some way they have to get food. So there's some line between which a situation is so devastating that people can't rise to it, or so satisfying that they don't worry about anything else. There is some line which promotes the problem solving characteristic that we should try to attain.

RIDINGS: You have seen a number of crises or what people characterized as crisis periods in public education. You've also seen enormous amounts of gain made in education, and probably experienced some disappointing losses.

TYLER: That's life.

RIDINGS: Something must have motivated you all those years to stay active in public education, to still look forward to another decade or more of active work in education. What keeps you going?

TYLER: Well I think like all people if you feel your experience and your training gives you a chance to make contributions to important things you want to be right in there fighting.

RIDINGS: And you're optimistic and believe in the public education system.

TYLER: There isn't any alternative. Public education didn't come first you know. When we first really had formal education it was supported by the family. You remember that in the English law from which our English ancestors came in the 1600's, the family was responsible. Every person had to be with a family; if someone had no relatives, he had to be attached to a family under law, or bound over, if he was a child, to somebody or to an orphanage. And the family was responsible for seeing that the person respected the law and obeyed it, for deciding which occupation to carry on to make his living, for his religious duties, and all those things that followed the requirements of the state for citizenship—that was all left to the family. People who came from upper classes were destined to be the rulers so they were sent to secondary schools in England, Eaton and Harrow, and so on, and then those of them who were going to be scholars and intellectuals were sent on to Oxford and Cambridge Universities.

But what happened with this group who first came to the New England Colonies? They were Congregationalists. They did not believe that a priest could lead them to salvation; they thought you had to read the Bible and understand what Christianity meant and make a voluntary decision to be Christian. Now that was a new conception; a view that a person had to make himself good meant they had to teach the children to read the Bible. It became a community responsibility because they were a religious community. So the first schools founded in New England were not just families tutoring children. The first schools were based on the need to have everybody learning to read.

Now we've got the same corresponding business. Less than five percent of the population can work at unskilled labor; that's the present proportion of the labor force that is unskilled. All the other jobs require some education. The people who don't have some education are typically on welfare and they can't get jobs. So that makes another requirement and reason for why public schools are important. The largest percentage of private schools we ever had in my time was just before the

depression hit—we had around 20 to 22 percent of our students in private schools. Now percent, about half that number. In those days, the parochial schools were the largest; nuns belonged to orders in which they had taken a vow of poverty and so it didn't take very much tuition to go to a parochial school. Now, of course, fewer young people are going into the orders so that most of the parochial schools have to pay higher salaries and they are more expensive for the family than the public schools. And, then, also the people who were moving up in social class felt their kids should have a better education than the public could provide so they had private schools for them.

When it came to secondary education, the last state to have public secondary schools adopted them in 1912, so public high schools were relatively rare. They started out as the Latin grammar school, so most learning was in Latin. Then when Benjamin Franklin recommended that the time for a person to be educated was while carrying on business activities of that sort, they established academies. Still they were usually private academies. And finally public schools be-tan to be adopted after the Civil War, and the first public high schools were around 1870.

This evolution is not likely to go backwards because the requirements of managing a system privately, making it capable of accomplishing or getting along is too great for people to handle. When I was Director of the laboratory schools at the University of Chicago and later when I was helping to put the Dalton School back on its feet, it was hard to find people who could manage it, get good teaching, satisfy parents, and be able to make it go with the money required. So that the notion that in some way private schools are going to take over all education seems very improbable. Private schools are going to be hanging in there, but they are not going to expand very much.

RIDINGS: I've got a few phrases, and I thought we would end with them.

TYLER: Cliches I hope?

RIDINGS: Yes, your favorite cliches; cliches that will make me vulnerable to all your one liners. I thought if you would give a couple of sentences, whatever comes to mind. First, the most promising development in educational evaluation.

TYLER: I always believe the most promising developments are people with vision and dedication to education who get some additional technical skills to handle it. Developments in human things are the persons the ideas are only guiding persons.

RIDINGS: Okay. How about the major problem in American education K-12?

TYLER: The most obvious one that we are still struggling with is reaching the proportion of the population that is now here. The civil rights movement has made us conscious of a lack of adequate service for the minority groups of various sorts, and that's still with us. And it is likely to be with us for some time because of the increased number of illegitimate children born to teenage mothers who won't be able to provide a background for their children unless their grandparents bring them up. We're going to have a lot of children coming in that do not have the background in the home that we've been accustomed to teaching, so that's certainly a problem that we must keep working on the so-called education of disadvantaged children.

The second problem that we've got to work on more effectively is the transition of youth into constructive adult life—which means being able to move easily from school to work, being able to accept and carry on effectively the responsibilities of citizenship, of adults in all aspects of life. We have continually tried to keep youth off the labor market and we've continually tried to lengthen their period of childhood without allowing them to gradually assume more responsibilities. Kids have to learn to take responsibility and take the consequences when they make a mistake; that's the way they learn. The transition to adult life is terrible now, and we've become so concerned with it that there have been four commissions publishing reports on the importance of that transition. I think we're going to work more on that.

And the third problem, greatly related to it, is the problem of rebuilding the total education environment for children. What's happened with the changes in the home; with mother's employment? What's happened with television taking the place of recreational things in which there's more constructive activity for the child? We've got to rebuild that environment because the demands of education are far greater than the school time of five or six hours a day for five days a week for perhaps nine or ten months a year. There is far too little to do and that's a big problem. Why don't we stop with those three. I could add some more if you wish, there's enough to keep us busy and happy for some time.

RIDINGS: You've put in more than your share of time on this, why don't we conclude now. Let me thank you, I've enjoyed it.

TYLER: Now, fine, can we make a date for a later time.

RIDINGS: Sure.

TYLER: And a different place.

Appendix

RALPH WINFRED TYLER

Director Emeritus

Center for Advanced Study in the Behavioral Sciences

Born, Chicago, April 22, 1902

Education	Doane College, A.B., 1921
	University of Nebraska, A.M., 1923
	University of Chicago, Ph.D., 1927
Occupational	High School Teacher, Pierre, S.D., 1921-22

Career University Faculty Member:

University of Nebraska, 1922-26
University of North Carolina, 1927-29
Ohio State University, 1929-38
University of Cllicago, 1938-53

Administrative Positions Chairman, Department of Education, University of Chicago, 1938-48

University Examiner, University of Chicago, 1938-53

Dean, Division of Social Sciences, University of Chicago, 1948-53

Director, Center for Advanced Study in the Behavioral Sciences, Stanford, California, 1953-67
Acting President, Social Science Research Council, 1971-72

Vice President, Center for the Study of Democratic Institutions, 1975-78

President, System Development Foundation, 1969-

Special Projects Director of Evaluation, Eight-Year Study, 1934-42

Director, Cooperative Study in General Education, 1939-45

Director, Examinations Staff, U.S. Armed Forces Institute, 1943-53

Chairman, Exploratory Committee on Assessing the Progress of Education, 1964-68

	Senior Consultant, Science Research Associates, Inc., 1967-
Associations and Affiliations	Member, U.S. National Advisory Mental Health Council, 1959-63
	Chairman, National Commission on Resources for Youth, 1964-79; Vice Chairman, 1979
	Chairman, National Commission for Cooperative Education, 1962-75; Honorary Life Chairman, 1975
	President, National Academy of Education, 1965-69; Secretary-Treasurer, 1969-71
	Chairman, Research Advisory Council of the U.S. Office of Education, 1967-70
	Member, National Science Board, 1962-68; Vice Chairman, 1966-68
	Member, National Advisory Council on the Education of Disadvantaged Children, 1965-72
Examples of Publications	Constructing Achievement Tests, 1934
	Appraising and Recording Student Progress, 1942 (with E. R. Smith)
	Basic Principles of Curriculum and Instruction, 1949
	Social Forces Influencing American Education, 1961

Educational Evaluation: New Roles, New Means, 1969

Crucial Issues in Testing, 1974 (with R. Wolf)

Perspectives on American Education, 1976