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FUTURE EDUCATION METHODS (FEM)

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Panelists: WAYNE R. BERNEY
 M. DAVID R. BROWN
 WALTER N. MILLER
Recorder: WARREN R. LUCKNER

- o This session will present:
 - The results of the membership survey on FEM
 - Any Board of Governor or committee actions taken on FEM
- o This session will be open to discussion on the proposals in the FEM White Paper.

MR. GODFREY PERROTT: I'm the Flexible Education chairperson of the Education and Examination (E&E) Committee and I have been responsible for developing the FEM proposals.

When we designed the FEM White Paper, we enclosed a questionnaire, and we promised that if you returned the questionnaire we would report back the results. We received about 2,300 responses, and about half of them included written comments. Thank you for your input. This session is the formal report from the Board of Governors to the membership on what you said.

MR. M. DAVID R. BROWN: My part of the presentation is to give you a quick overview of the responses to the survey and to report on the action that was taken by the Board of Governors in connection with the proposals.

The responses were quite gratifying in their numbers. Eighteen percent of the members of the Society responded. The White Paper was also sent to students on the Society's mailing list, and seven percent of them sent back a reply.

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The respondents consisted of:

Students	19%
ASAs within the last 10 years	23
ASAs for more than 10 years	5
FSAs within the last 5 years	13
FSAs for more than 5 years	40
U.S.	85%
Canadian	14
Other	1
Insurance company employees	64%
Consultants	30
Education	2
Other	4

The figure slightly overrepresent long-term Fellows, underrepresent Canadians, and underrepresent consultants.

[A blank copy of the questionnaire that was included in the White Paper is included in the *Record* for reference. It follows this session.]

The response to the specific question concerning overall reaction was relatively favorable, with 66% being either very favorable or somewhat favorable and 34% being either very unfavorable or somewhat unfavorable.

There was a fair division of opinion as to whether the adoption of the FEM would meet the objectives that were presented in the White Paper. A small majority felt that the proposals would not meet the objective of enhancing the value of the FSA too well or at all. That gives you some indication of the ambivalence of the replies: 66% responded favorably to the package as a whole but expressed some reservations about whether the proposals would meet the objectives. However, 66% also felt that FEM would improve the future education of people entering the profession, and 56% of the respondents felt that FEM would do a better job in attracting and training actuaries of the future.

With regard to specific FEM proposals, there was a significant division of opinion on the proposal that credit be allowed for certain of the earlier Society examinations for people attaining a certain level of achievement in college. There was exactly a 50/50 split in opinion as to whether granting exam credits for college

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causes would meet the objectives, and only 41% thought that it would serve the objectives of better education.

There was a differentiated proposal for some of the later, but still early, exams, identified in the White Paper as Level 2 college credit. The indications were that the membership did not distinguish very much between those two rather different proposals -- for Level 1 and Level 2. Again, the reaction was close to 50/50 both on the question of meeting objectives and on the question of serving to achieve the better education.

We felt there was some confusion as to the nature of what was being proposed with respect to giving credit for the examinations or acknowledging the credentials of other organizations. This confusion showed in both the responses and the written comments. We were talking both about granting credit for the examinations of other actuarial organizations, which is something the Society has done for a long time with, for example, the British Institute and Scottish Faculty, and about granting credit for the credentials of other non-actuarial organizations. We were thinking of lawyers, accountants and perhaps chartered financial analysts. In any event, there was considerable division of opinion about that particular proposal as well.

There was considerably more support to grant credit to people who prepared research papers meeting specified conditions. Sixty-five percent felt that it would help to meet the objectives laid out in the White Paper and 78% felt it would be helpful from an educational point of view.

There was a proposal to supplement the examinations in certain subjects through the use of intensive seminars. Again, this received a favorable response: 73% thought it would be helpful from an educational point of view and 63% thought it would help meet the objectives of the White Paper.

The idea of a Fellowship Admission Course, which would come after the completion of all the examination requirements, was easily the most popular of all the proposals: 73% felt it would help to meet our objectives; 84% felt it would enhance the educational value of our program.

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The last few questions in the survey asked for reactions to the value of certain aspects of the proposals. Eighty-four percent of the respondents felt that research papers would be helpful in developing research skills. Eighty percent felt that intensive seminars would be helpful in learning practical actuarial techniques. Eighty-five percent felt that the case study approach (one of the techniques that would be used in the Fellowship Admission Course) would be helpful in the teaching of professional ethics. Eighty percent felt that some form of management simulation exercise in the Fellowship Admission Course would be a valuable method of integrating the various parts of the syllabus and knowledge gained in different courses.

The last section of the survey listed a number of the concerns which had surfaced within the E&E Committee, the Education Policy Committee, and the Board of Governors while the proposals were under discussion. We asked people to identify which of these concerns they felt most strongly about.

Sixty percent were significantly or fairly concerned about the ineffectiveness of college credit as a screen. Fifty-eight percent expressed some degree of concern about giving credit for exams of other organizations. Fifty-six percent were concerned about the quality of the intensive seminars. More than half were concerned about possible inequitable treatment of candidates. Forty-nine percent were concerned about the complexity of the system, and 46% about the possible weakening of the value of the FSA designation.

The compilation of the survey results was completed by early summer, and the E&E Committee and Education Policy Committee had some time to reflect on the results. I would also remind you that this whole process has been going on within those committees for some three or four years, and a good many other proposals had already been considered before the White Paper was disseminated to the membership. In large part as a result of the responses to the survey, the final proposals presented to the Board were fairly significantly modified from the original White Paper proposals.

First, the Board reaffirmed that the first priority for the committees that are doing the work of the Society in the education and exam process should be to complete the implementation of the Flexible Education System (FES, the change in the exam structure from large, multi-subject examinations to examinations smaller

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in scope). That system is already in place for the Associateship exams and is being prepared for implementation for the Fellowship examinations in November 1988. There is a tremendous amount of work involved. Significant upgrading of the educational material, particularly in some of the specialty areas, is underway.

Next, the Board affirmed that the detailed implementation of any of the proposals is to be subject to final review and approval by the Education Policy Committee. Wayne Berney will have more to say about the implementation plans for the proposals that have been approved by the Board.

The specific proposals are:

1. To proceed with the Fellowship Admission Course. As indicated, that was by far the most popular of the proposals. This will be offered first in 1990. That is, candidates who have *not* completed their FSA with the examinations in November 1989 will also be required to complete the Fellowship Admission Course.
2. To establish a program to give credit for research papers as described in the White Paper. The White Paper contains a fair amount of detail about exactly how that's to be done. The Board approved that the program be in place as soon as possible. It was felt that it was not practical to think in terms of granting credit before November 1988, so that would be the earliest date of implementation for that proposal.
3. The Board directed the E&E Committee to identify the credit which should be granted for specific examinations of other actuarial organizations and also for the designations of non-actuarial organizations by July 1988. These concrete and specific recommendations will then be dealt with by the Education Policy Committee and the Board during 1988.
4. To proceed with the intensive seminar proposal in applied statistics and/or risk theory. This recommendation is essentially without change from the proposal described in the White Paper. Because it will also require some of our educational resources, the earliest possible date of implementation is mid-1989.

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5. To establish an experimental program for college credit limited to former Part 3 subjects. The experimental program is to start with the 1990-91 academic year. The Level 1 and Level 2 college credit proposals are to be reconsidered in light of experience with the intensive seminars and with the experimental college credit program. This reconsideration will take place, I would say, no sooner than five or six years from now.

The Board also approved the proposal that examinations in Courses 100 and 110, which are the earliest exams, should be offered up to four times per year if there is sufficient demand. Course 100 was offered in February for the first time, so we have now had a third administration. The objective is to make the exams available to college students at a time which better coincides with the school year.

MR. WALTER N. MILLER: I'm going to give you the background to the Board discussions from notes I took at the Board meeting. The Board of Governors very seldom takes summary action, and as a veteran of a few years of service on this and other boards, I can tell you that very few board members speak in summary fashion either. The Board discussion was long and drawn out; it was well over an hour after some considerable previous discussion of this subject at a number of prior Board meetings, plus all the corridor conversation, committee meetings and so on. I will just give you a summary.

The meeting began with Marta Holmberg, who is the Society's Education Executive, discussing the survey results that Dave Brown has just presented. Next Dave, who was the main discussion leader in his role as Vice President in charge of education matters, and the chairperson of the Education Policy Committee, talked a little about the background, the things that got us to consider and vote on FEM implementation. About four years ago some specific concerns with a common theme started to surface in the Planning Committee at about the same time. There was concern about the growing complexity of our E&E system. There was concern that we were putting too much emphasis on examination and not enough on education. There was concern that there seemed to be significant developments in educational technology, but not very much indication that the Society was taking advantage of them. There was concern as to whether we were making adequate use of the formidable educational institution in the colleges and universities in Canada and the United States. Out of these concerns was

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born the effort that gave rise first to the FES proposals and now to these FEM proposals.

Dave then presented the Board with the resolution on which it finally voted, moved the adoption of that resolution, and the discussion began. Dave started by discussing why any action was being proposed on Level 2 when it might be possible to read the membership survey as indicating a similar degree of concern for Level 2 and Level 1 developments. The Education Policy and E&E committees felt that the basis on which Level 2 is being proposed (as a limited experiment -- a pilot project) was something that can go forward for better or for worse, administered under very strict control by the Society because of the accreditation process. That can legitimately be viewed as something completely different from going forward with Level 1, which essentially, as discussed in the White Paper, would have been in a much less controlled or uncontrolled environment.

There was a question about the cost of this Level 2 experiment. One of the Board members commented that he'd been to a few actuarial club meetings and felt that the seminar program was biased towards those near major population centers; another Board member said that was possibly true, but that can also be said to be characteristic of other pieces of our educational system. A third party commented that for all these logistic questions, we shouldn't lose sight of the significant educational values of the seminars.

A Board member who is in academics supported the big difference between the proposed Level 1 and Level 2 approaches. He then made an interesting observation: at his educational institution he thought that the material in the old Parts 1 and 2 "was neither beneficial nor a hindrance" to his students. This was followed by an observation that it seems in Great Britain, nothing whatsoever has happened in the wake of their discontinuance of the general mathematics examination. Those two points led to a postscript which you will hear at the end.

A Board member who in previous discussions had been rather strongly in favor of putting the whole thing to a membership vote then said that he strongly supported the resolutions as proposed by Dave and that he no longer believes a membership vote is needed, because these resolutions call for action that is enough in accord with what seemed to be the feeling of the membership. At this

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point, there was some specific discussion of the membership vote question, and then a motion was unanimously passed that the Board was satisfied to go forward without putting the proposition to a membership vote.

There was some discussion of the possible cost of the Fellowship Admission Course. The discussion was interesting in that the Fellowship Admission Course seemed to be the most supported part of FEM, as shown by the membership survey and personal opinion and by Board sentiment. In current draft the course is projected to require 2 1/4 days, with a significant cost. Is that going to be a hardship?

This led to an amendment to the motion on the floor to make the Fellowship Admission Course optional initially so that people who might have trouble putting up either the time or the money don't need to take it. More discussion produced the conclusion that making the course optional would be tantamount to killing the effectiveness of the course in the context in which it was proposed. As one Board member said, how can you make ethics optional? The amendment was withdrawn. It was then observed that the resolution doesn't specify how the Fellowship Admission Course is to be funded. It was agreed that the possibility of some subsidy should be explored by the group that has the job of implementing that course.

A Board member who said he was still a bit worried offered an amendment to replace "implement this, implement that" with "consider doing this; consider doing that." That amendment failed to receive a second. At this point, it was felt that the discussion had adequately covered the ground, and the resolution as Dave read it to you was passed unanimously by the Board.

There followed an interesting postscript. A Board member moved to eliminate what used to be Part 1. That produced a spirited but relatively short discussion. It was decided that this is an idea whose time has come, but that the Board should not act without having been prepared to discuss the subject. There was also the question of relationships to other organizations who co-sponsor this exam. So the Education Policy Committee was asked to study this question and get back to the Board with a recommendation and a preliminary report in time for the Board's May 1988 meeting.

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MR. WAYNE R. BERNEY: As a General Officer of the E&E Committee, I will discuss implementation and communication of these plans. I will refer frequently to "we" in my presentation: that "we" is the E&E Committee, not the Board, the Education Policy Committee, or the Society staff.

The E&E Committee prepared tentative implementation plans for each of the FEM proposals in its Board recommendation. What I plan to present here are the implementation plans that apply to the specific action that the Board took on Saturday.

Before getting into the specific proposals I would like to reiterate the rationale behind the whole FEM concept. Our recommendation has a number of rationales, as described in the FEM White Paper; the most important rationale is enhancing the educational value of our educational process for future actuaries.

The most significant change from the FEM White Paper involves the issue of college credit. We proposed, and the Board approved, that a limited experiment in college credit following the so-called Level 2 concept rather than the Level 1 concept be attempted. Level 2 credit, as has been stated, involves giving credit for college courses in the old Part 3 topics, when it can be readily demonstrated that the university or college course is definitely superior to the self-study approach -- in other words, when the university or college course is an enhancement of the educational value. Because of the abandonment or postponement of Level 1, it has been proposed to offer Courses 100 and 110 up to four times a year, if demand exists.

Our implementation plan is to follow the FEM White Paper but with some exceptions. The E&E Committee will develop specific detailed plans which will be subject to final review and approval by the Education Policy Committee. On jointly sponsored exams, the joint sponsors will be involved in the discussion and the development of those plans. We will review the results of each FEM proposal at least every other year after implementation and report to the Education Policy Committee on what changes need to be made, including possible discontinuance.

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Implementation plans will be communicated by special mailings in conjunction with distribution of exam results, articles in *The Actuary*, or anything that will get the message out.

The Fellowship Admission Course is certainly the most popular of the various items. The Board has approved the concept and directed the E&E Committee to proceed with the course to be offered initially in 1990. Candidates who have not obtained their FSA with the November 1989 examinations will be required to complete the Fellowship Admission Course to obtain the FSA designation.

The course (as proposed) will be a 2 1/4 day course starting in the late afternoon on the first day and ending with a banquet and presentation of FSA certificates by the Society President on the third day. The content of the course is expected to be 50% ethics and 50% integration of material from the candidate's own specialty. Courses may be nation specific. Management simulation games or other suitable educational tools will be used only if they're worthwhile. We have insurance, pensions, and group benefits specialties. It is expected that spouses will be invited to the Fellowship Admission Course and will have their own separate program. They won't have to go through the ethics course or anything else. We might set up something like: How to live with an actuary.

In order to implement this course, a Board level steering committee will be established to set guidelines for the course. A number of subcommittees will be staffed and established to determine the specific content of the course. Emphasis will be on ensuring quality as opposed to filling in the 2 1/4 days. We hope to draw on all of the Society of Actuaries' resources, including staff members and, of course, anybody who wants to volunteer.

We expect that there will be three or four courses offered per year, with approximately 400 new fellows attending, in total. The first course will be offered following the May exams in 1990.

We will establish a program to give credit for research papers as described in the White Paper. The program is to be in place as soon as possible, but no credit will be granted prior to November 1988, which coincides with the

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implementation of FES for the Fellowship exams. We are establishing a committee chaired by a General Officer of the E&E Committee to develop a program to grant credit for research papers. This committee will include academic actuaries.

The Board has directed the E&E Committee to identify what credit will be granted for specific examinations of other actuarial organizations and designations of nonactuarial organizations by July 1988. Any proposal so developed must be approved by the Education Policy Committee and reported to the Board. The E&E Committee is comfortable with the consideration of examinations of other actuarial organizations, but we will proceed very carefully with respect to designations of nonactuarial organizations. We will be looking for quality, and we certainly welcome your input to assist us in this regard. Any of you who have first-hand knowledge of other designations such as the Chartered Financial Analyst, or the CPA, and who wish to comment on the applicability of granting credit for those designations, please do so by writing or calling Linden Cole at the Society office with your comments.

The fourth FEM proposal was on intensive seminars. We will proceed with intensive seminars in Applied Statistics and Risk Theory as described in the White Paper. Our objective is to develop a seminar which will apply the topics to everyday actuarial activity. The prerequisite to attending any such seminar will be successful completion of the examination on the topic of that seminar. The seminar will be one week long and include a detailed review of the mathematical background previously learned to pass the examination. It will then provide extensive applications from insurance company and pension situations using data from the real world. We hope to make extensive use of currently available software and provide background on the proper matching of software and technique to data characteristics. We expect that the faculty for the seminar will consist of one actuary and one expert in the particular field. For example, for Applied Statistics, one of the experts would certainly be a statistician, who may or may not also be an actuary; similarly for Risk Theory. The earliest possible implementation date to conduct any such seminars would be the middle of 1989.

Finally, the E&E Committee has been directed to establish an experimental program for college credit, limited to former Part 3 subjects, based on the Level 2 concept, starting with the 1990-91 academic year. This experiment will be of limited duration. Any university or college that participates in the program will

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be subject to strict accreditation of their course and will be required to demonstrate to the E&E Committee that their course will educate our students better than our self-study examination. The minimum grade required for a candidate seeking credit will be determined as part of the negotiations between the E&E Committee and the educational institution involved. Yearly monitoring of the grades granted by the institution to all students in the course, not just the ones who wish to receive this credit, will be required as protection against grade inflation. Following the limited experiment, the whole concept of college credit will be reviewed in light of the experience with intensive seminars and the college credit experiment.

We have attempted to give you our current thinking with respect to the implementation of the FEM proposals. The current thinking is certainly subject to change. We welcome your thoughts, suggestions, and, of course, your volunteered assistance in this implementation process.

MR. PERROTT: The rest of the program is your opportunity to ask questions of us. We represent the E&E Committee, the Education Policy Committee, and the Board, and we're ready to field any questions.

MR. ABRAHAM WEISHAUS: You talk about an experiment in terms of college credits. What are the criteria you are going to use to judge whether the experiment has been successful? It's clear to me, for example, that in those three or four years we're not going to develop better managers or worse managers, we're not going to see whether the FSA designation has been improved or has been degraded. How are you going to judge whether this experiment has succeeded or hasn't?

MR. PERROTT: The key reasoning behind the college credit proposal is that people will learn to use techniques such as Applied Statistics or Risk Theory better in a college environment with interaction with a professor than by self-study from a textbook, followed by an examination. The only objective measure that we can think of at the moment for the success of a program is not directly related to method of learning but to the candidate's performance on other exams. If the people who are taking advantage of the experimental college credit program appear to be performing well on other exams, we would be inclined to continue the experiment. If on the other hand we find that the college credit

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program does not correlate with success on other exams, we would probably conclude that it was a waste of time.

MR. PETER S. KREUTER: From the survey results, it seems as though a solid majority of the membership are willing to give all of the FEM proposals a fair try, except that they (and I number myself among them) have grave concerns about the college credit in lieu of examinations. Between the time I filled out the survey form and now, reports appeared in the newspapers and on the CBS program "60 Minutes." The report in the newspaper stated that 3,900 out of 8,000 high school students surveyed believed that Columbus discovered America some time after 1750. "60 Minutes" reported that college students were unfamiliar with recent history and current events that were prominent in the newspapers. Some thought that Albert Schweitzer was a Nazi general and some were unable to explain what a Contra is. Those types of surveys reinforce my feeling that our educational institutions are not making very good intellectual demands, and that a college course is unlikely to give anyone as good and as fair a knowledge of the material covered as the Society of Actuaries examination has done. One can only wonder whether the Board has given sufficient consideration to this possibility. Finally, if I may be permitted a frank comment, I think the Board is afraid that the membership would vote down the FEM proposal, at least with regard to alternative college credit, and is therefore trying to avoid a vote of the membership.

MR. BROWN: The Level 1 college credit proposal was withdrawn in response to the discussion that we heard at the clubs during the time it was being debated and in response to the survey. The limited experiment with Level 2 is an attempt to see whether there is anything there that's worth pursuing. I think the feeling of the Board with regard to a membership vote on that particular proposal (probably the only one where most people might have thought there was a need for such a vote) was that the limitations that were being placed on the experiment were sufficient that the concerns expressed during the discussion and in the survey responses were being adequately addressed.

MR. KERRY A. KRANTZ: Before becoming an actuary I attempted to become a secondary school teacher; after seeing the behavior modification effects of mine on students, I decided to become an actuary. I had to take the courses that led to becoming a secondary teacher in California, including behavioral modification

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instruction. As a suggestion as to how we perhaps could measure performance of academic courses -- and this would relate as well to the correspondence courses offered by the Society -- we should have some behavioral modification objectives. Then you can measure whether the professor of a course had an objective which meets the Society's objectives. Did the professor have course work and examinations which measured whether the students met those objectives? If we can in fact provide to the educators what we consider behavioral objectives or performance objectives that the students should meet, and if the educators can in fact measure the performance of their students as to whether they meet those objectives, I would be willing to support such a program.

MR. PERROTT: That's an excellent suggestion, thank you.

MR. WOOD CARLTON SISARCICK: I spend about two thirds of my time at my company, but one third of my time I'm Professor of Mathematics at Marshall University. For about 22 years now I've taught the mathematics on the earlier exams. From that experience I do know not many things are certain in this business, but giving college credit in lieu of exams to me is going to weaken the requirements in this organization.

MR. PERROTT: Thank you.

MR. CECIL D. BYKERK: I wanted to comment on a previous questioner's comments regarding the educational value of an examination. What I heard this questioner say was that he believed that a Level 2 college course taken under the direction of the E&E Committee would not be as good an educational process as writing a single, comprehensive examination. I think what we're talking about here is process. I don't think that a comprehensive examination teaches anybody anything. As a former professor, I admit that you can use quizzes and examinations to help teach, but a single comprehensive examination doesn't teach anybody anything.

MR. CHARLES BARRY H. WATSON: I have been observing the process of developing the FEM proposals with great interest. It occurred to me that although certainly many of the things proposed are modifications on what has been done in the past in the Society of Actuaries E&E program, they could be better described as recent past educational methods rather than future educational

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methods. Most of the things we've heard are ideas that have been recommended in the past on a number of occasions, such as granting credit for college courses. This is a suggestion which seems to come up from time to time, particularly advocated by the academic members of the profession, and is regularly shot down. Many of the others are things that are being tried regularly in other areas, but I'm afraid that the Society has great difficulty in making radical modifications within its educational and even its examination system, and we do things, as Walt Miller said earlier, not in a summary fashion, but after great deliberation and pain and agony. I visualize that after this set of changes is adopted, people will sit around and say, "My, it's wonderful, we've now adapted to the end of the 20th century." All we've done is adapt to perhaps 1960! I hope there is some sort of mechanism established within the Society which would allow the E&E Committee (or the Education Policy Committee) to have the means of constantly looking at and testing different types of things. For example, I think that we make a mistake when we don't try to make much better use of video. It's a mistake that we don't offer the examinations, or at least the early ones, on a real time basis: you come in and you take the examination when you're ready. I'm not necessarily advocating any particular one of these ideas, but I think that we have to be alert and alive to the possibilities that do confront us, and I hope that this entire process is not sort of a tired spasm and we will not lapse back contented with what is going on.

MR. MILLER: Those words deserve careful attention, and you've added a valuable historical perspective in reminding us that many of these concepts have been under consideration one way or another for quite a while. I hope that will give some aid and comfort to those who are still uncomfortable with FEM. This is a bit more evidence that at least this is not a body of proposals that is suddenly being tossed up. It's anything but that. Your excellent reminder that we need to keep looking ahead is also a valuable reminder that these FEM proposals really are rooted in a good deal of Society history and analysis.

MR. BROWN: I also appreciated Barry's comments. He is one of my predecessors in this vice presidential office and he's very familiar with a lot of this process. My own view about the proposal, which I haven't expressed very often, is that I just hope we can gradually make it into the 20th century before it's over. A number of excellent ideas were put forward during the three or four year period while the proposals now acted upon were developing; many of

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those ideas are still in the hopper. For example, Barry mentioned the use of videos and computer assisted instruction and exams on demand -- the sort of technological things that we don't seem to be doing anything about. I don't think those advances were rejected on the grounds that they weren't valid. The economics of the situation are still not such as to permit a small organization like the Society to undertake them seriously. We all know the recent history of the economics of this kind of technology; and I am reasonably confident that those ideas will keep coming to the surface until we can do something with them.

MR. MARK M. HOPFINGER: The question that arises is, "Are we testing appropriately, and what are we testing?" Sometimes we're trying to test the ability of students to analyze, and it's a difficult item to test. What thought has been given to the possibility of oral testing where you have an interplay between the student and the examiner, similar to examinations for master's degrees? Is that going to be part of the Fellowship Admission Course?

MR. PERROTT: There was a proposal at one stage as part of the flexible system to introduce a comprehensive examination. I don't think it was expected to be oral. There are logistical problems with oral examinations. I think we recognize some of the deficiencies of written testing, but as far as I know there wasn't serious consideration given to oral examination.

MR. BROWN: I tend to agree with Mr. Hopfinger that an oral test can be a much more effective test of the ability to reason and analyze, but I would be very nervous trying to propose it to the membership, given the obvious concerns there are that we treat people equitably and fairly, because it would require an immense body of presumably volunteers conducting these oral exams and it would be extremely difficult to conduct them on a consistent basis. We work hard to grade essay exams on a consistent basis and I believe we succeed, but that's a much easier task than conducting consistent oral exams.

MR. FRANK A. HACKER: I am concerned about giving credit for college courses. It is quite possible to do very well in a very well conceived college course taught by competent faculty members and still not pass the Society of Actuaries exam. I think that we're confusing the educational experience with the accreditation process. If you do well on a college exam, that should not mean that you don't have to pass the Society of Actuaries exam.

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MR. PERROTT: The committee feels that there are sufficient accreditation tests; allowing alternatives for one very small part is not going to threaten the whole. You learn differently if you take a course to pass an exam than if you take a course to pass the course. The current system is not working in certain areas of application, particularly the application of techniques to the real world. Our hope is that in these narrow areas the experiment in college credit will be successful and will produce more actuaries capable of applying those type of techniques.

MR. JAMES B. GARDINER: When I was in college majoring in math we had a textbook by Hall and Knight, which some of you may remember. When I passed the course with 90 or 95, I thought this is duck soup, because the same textbook was on Part 1 of the Society exams. I took it and flunked miserably. That leads me to wonder how you can practically measure the adequacy of a college course to suit our requirements.

MR. PERROTT: I think the only measure is going to be whether it produces actuaries that are better able to use the technique. It will take time to discover that.

MS. ROBIN B. SIMON: I am seriously beginning to wonder, especially since I'm a new Fellow, if we're testing too hard -- if our standards are too high. Clearly there is more demand for our profession than there are people in our profession. It took me 12 years to get through those exams, and there isn't any reason for taking so long. I honestly question whether our standards are too high (because of the examination process), and I particularly question the Flexible Education System, which will tend to make the process even longer. In that regard though I do applaud the FEM as a way to shorten the process and perhaps get the process back to where it belongs -- education instead of examination.

MR. PERROTT: Certainly those who are involved are concerned about travel time. I don't know how one can ever decide whether the accreditation is too easy or too difficult. There will always be an ongoing debate, but I appreciate your comments.

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MR. BARRY JACOBSON: I think it was an excellent idea to offer Part I four times a year. Offering it in February enabled us to hire some college students we normally might not have hired because they wouldn't have had an exam until the May exam, with results not available until July. So we were able to give summer jobs to some students who normally wouldn't have had a summer job, and the same thing for full-time people. I think it's a great addition to the program.

MR. PERROTT: Thank you. That was the idea behind offering Part I more frequently.

MR. PAUL J. PATTERSON: I'd like to clarify one point on the intensive seminars. A comment was made that you needed to pass the exam before you went to the seminar. I'm not sure how the seminar then can be required for part of the educational system.

MR. PERROTT: The seminar would contribute as an elective. At the moment there are courses identified as electives on the Associateship syllabus. Basically, the seminar would be one way of satisfying 10 elective credits.

MR. JAMES C. BROOKS, JR.: An observation and a question. From one who has been working and managing an actuarial training program in a company environment for the last 15 years or so, these proposals certainly raise some interesting questions about the administration of a company-sponsored training program for actuarial students. I'm sure we will share some at the actuarial training programs workshop that's scheduled tomorrow. The question I have is to clear up a point about the Level 2 concept and experiment. Certainly there will be very strict criteria established for selecting the particular institutions that will be a part of the experiment, but will there also be similar criteria with respect to the individual professors who teach the courses? That may be of more importance than selecting the institution.

MR. PERROTT: We will be very careful both in accrediting professors and institutions. We will check very carefully when the teacher of a course changes after a course has been accredited to make sure that the standards are maintained.

FUTURE EDUCATION METHODS (FEM)

MR. RALPH E. EDWARDS: The college credit implementation may lead to members bragging that they came up by the more difficult route of passing the examination. I suggest this is a more serious concern than the concept that a senior actuary is one who can prove that the examinations were easier before and after he passed them. I remain unconvinced that the college course is as valuable as the alternative if the student is not capable of passing the examination. The proposed test bothers me by failing to show how the student would have scored in the examination.

MR. BERNEY: When you play golf and you get a par on a hole, it really doesn't matter whether you're on in regulation and took two putts or whether you chipped in from 100 yards, it's still the same at the end.

MR. DAVID M. ZOLT: The issue was raised, is the present accreditation too difficult? I'd like to suggest that perhaps it's both too difficult and too easy at the same time. Maybe our attention should be redirected to the content of the syllabus. We should be striving towards quality content. I haven't studied the new syllabus in detail, but historically the sheer volume of the material was such that at least 50% of it was virtually useless to the practicing actuary. Material should be either state of the art or it should be basic principle. The criterion that one might use to evaluate the current syllabus material might be, "If I flunk this exam, have I learned anything?"

MR. MILLER: There was a time, fortunately long ago, when there was a subject on the syllabus on Part 5 -- the sources and characteristics of the more important mortality tables. A very prominent actuary, one who was an E&E General Chairperson, said once, and his tongue was at most half in his cheek, that what we ought to do with sources and characteristics is make the student sign an affidavit that they studied the material.

MR. BERNEY: Just another comment with respect to that question. The whole concept of the Flexible Education System, or FES, has been work towards the goal of improving the educational quality of the syllabus material. As an example, on the Pension Track, approximately 70% of the material is being rewritten or replaced; similarly with the Group Track. And if you would like to volunteer to help our efforts, please get in touch with Warren because we need more volunteers to write study notes or to do anything.

OPEN FORUM

MR. KRANTZ: I want to point out a problem with the system. On the morning I took Part 5 (and I received a six on the exam), I had about 20 minutes before the exam began so I reviewed my cards on the 1959 ADB table. It just so happened that the question was, tell everything you know about the 1959 ADB table. I think I aced the question, and the reason I passed was that at the last minute I crammed for the exam. We don't want the marginal people to pass because they crammed for the exam. We want to measure education and not exam taking ability.

MR. ANTONIO PATRICK QUESADA: There are advantages and disadvantages under the whole classical examination process. There are also advantages and disadvantages under a college course type of a credit. I think we should make use of the advantages of both systems. As an example, for a specific course you could give 75% or some portion of credit for the exam under the old examination process and require a college-type course for the interactive features it would provide for the remainder of credit. This I think would eliminate some of the disadvantages under both systems.

MR. PERROTT: The academics would love you, but I think the problem of supply and demand referred to earlier would probably worsen.

FUTURE EDUCATION METHODS (FEM)

Survey of Your Opinions

March 1, 1987

The Board of Governors and the E&E Committee of the Society of Actuaries need your input and your comments on FEM. In addition to this White Paper, information about FEM can be obtained at the FEM Workshop during each Spring Meeting and at actuarial club presentations of FEM. Please return the completed survey as soon as possible, but no later than July 1. We have enclosed a return envelope for your convenience.

The results of the survey will be tabulated for the Board of Governors. All specific comments will be forwarded to the E&E Committee.

OPEN FORUM

For questions 1-14, please circle the number on the right of the page that best describes your views on the topic.

1. The FEM White Paper identifies a number of objectives on which its recommendations are based. How important do you feel those objectives are to the future success of the SOA?

	<u>Critical, will have negative impact if not realized</u>	<u>Important, but there are more urgent needs for the profession</u>	<u>Unimportant, not worth much effort or expense</u>	<u>Unnecessary, things are fine now</u>
(a) Enhance the value of the FSA designation.	1	2	3	4
(b) Provide better education consistent with the future needs of the profession.	1	2	3	4
(c) Create a system that will attract, select and train those people who can fill the role of the actuary in the future.	1	2	3	4

2. How well does FEM meet these objectives?

	<u>Completely</u>	<u>Fairly Well</u>	<u>Not Too Well</u>	<u>Not At All</u>
(a) Enhance the value of the FSA designation.	1	2	3	4
(b) Provide better education consistent with the future needs of the profession.	1	2	3	4
(c) Create a system that will attract, select and train those people who can fill the role of the actuary in the future.	1	2	3	4

FUTURE EDUCATION METHODS (FEM)

3. How well would each of the following specific suggestions help the SOA attain the objectives listed in question 1?

	<u>Completely</u>	<u>Fairly Well</u>	<u>Not Too Well</u>	<u>Not At All</u>
(a) Level 1 College Courses	1	2	3	4
(b) Level 2 College Courses	1	2	3	4
(c) Exams of Other Organizations	1	2	3	4
(d) Research Papers	1	2	3	4
(e) Intensive Seminars	1	2	3	4
(f) Fellowship Admission Course	1	2	3	4

4. What effect would each of the following specific suggestions have on the education of actuaries?

	<u>Significant Improvement</u>	<u>Some Improvement</u>	<u>Somewhat Negative</u>	<u>Detrimental</u>
(a) Level 1 College Courses	1	2	3	4
(b) Level 2 College Courses	1	2	3	4
(c) Exams of Other Organizations	1	2	3	4
(d) Research Papers	1	2	3	4
(e) Intensive Seminars	1	2	3	4
(f) Fellowship Admission Course	1	2	3	4

	<u>Very Favorable</u>	<u>Somewhat Favorable</u>	<u>Somewhat Unfavorable</u>	<u>Very Unfavorable</u>
5. Recognizing that you may not agree with each of the FEM proposals, what is your general reaction to the overall educational approach outlined in the FEM White Paper?	1	2	3	4

OPEN FORUM

	<u>Great Deal</u>	<u>Some</u>	<u>Not Much</u>	<u>None</u>
6. How much impact will revising the SOA's educational system have on improving the quality of actuaries we produce?	1	2	3	4
7. How much impact will revising the SOA's educational system have on enhancing the value of the FSA designation in the eyes of university students considering an actuarial career?	1	2	3	4
8. How much impact will revising the SOA's education system have on enhancing the value of the FSA designation in the eyes of employers?	1	2	3	4
	<u>Very Valuable</u>	<u>Somewhat Valuable</u>	<u>Not Very Valuable</u>	<u>Not Valuable At All</u>
9. How valuable is writing a research paper in terms of helping a candidate develop research skills?	1	2	3	4
10. How valuable are intensive seminars for learning practical actuarial techniques?	1	2	3	4
11. How valuable is the case study approach to teaching professional ethics?	1	2	3	4

FUTURE EDUCATION METHODS (FEM)

	<u>Very Valuable</u>	<u>Somewhat Valuable</u>	<u>Not Very Valuable</u>	<u>Not Valuable At All</u>	
12. How valuable are management simulation exercises in helping candidates integrate diverse knowledge acquired through Fellowship courses?	1	2	3	4	
13. The FEM White Paper identifies a number of potential concerns that might be raised regarding the FEM proposals. Which concerns do you share? In addition, please rank in order of priority any concerns for which you have circled "1" or "2".					
	<u>Significantly Concerned</u>	<u>Fairly Concerned</u>	<u>Not Too Concerned</u>	<u>Unconcerned</u>	<u>Rank</u>
(a) Weakening the value of the FSA designation	1	2	3	4	___
(b) Relying on external exams to maintain SOA standards	1	2	3	4	___
(c) Quality of intensive seminars	1	2	3	4	___
(d) Complexity of system	1	2	3	4	___
(e) Attracting qualified candidates	1	2	3	4	___
(f) Inequitable treatment of candidates	1	2	3	4	___
(g) Cost of attaining SOA membership	1	2	3	4	___
(h) New challenges for employers	1	2	3	4	___
(i) College credit ineffective as screening device	1	2	3	4	___

OPEN FORUM

	<u>Significantly Concerned</u>	<u>Fairly Concerned</u>	<u>Not Too Concerned</u>	<u>Unconcerned</u>	<u>Rank</u>
(j) College credit unnecessary	1	2	3	4	_____

(k) Other
(Please Explain)

14. A suggested alternative to the FEM proposal of allowing units of credit for Level 1 College Courses is to abolish the SOA Part 1 (Course 100) examination. Please give us your reaction to the following statement: If faced with a choice, I would rather see the Level 1 College Courses proposal implemented than see the Course 100 examination abolished.

<u>Strongly Agree</u>	<u>Mildly Agree</u>	<u>Mildly Disagree</u>	<u>Strongly Disagree</u>
1	2	3	4

For each of questions 15-17, please circle the letter of the item or items that indicate your present situation.

15. Geographical Location

- (a) Canada
- (b) U.S.A.
- (c) Other _____

16. Actuarial Experience

- (a) Student
- (b) Less than 5 years as ASA
- (c) 5-9 years as ASA
- (d) 10+ years as ASA
- (e) Less than 5 years as FSA
- (f) 5-9 years as FSA
- (g) 10+ years as FSA

17. Actuarial Employment

- (a) Insurance company
- (b) Consultant
- (c) Education
- (d) Other

FUTURE EDUCATION METHODS (FEM)

18. Other Actuarial Designations

- | | |
|----------|-----------------|
| (a) FCAS | (f) FCA |
| (b) ACAS | (g) ACA |
| (c) FCIA | (h) FIA |
| (d) MAAA | (i) FFA |
| (e) EA | (j) Other _____ |

19. Name and Company Affiliation (Optional) _____

If you identify yourself, the Society may contact you to respond to any comments you have made or to answer any questions you have raised.

20. Additional Comments:

