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INTRODUCTION

On June 2-4, 2001, the U.S. Fire Administration (USFA) hosted the third annual Fire and Emergency Services Higher Education Conference (FESHE) on its campus in Emmitsburg, Maryland. In attendance were 91 representatives from colleges and universities that offer fire-related associate's and bachelor's degrees, and State and local fire service training agencies. Extensive group work by conference participants resulted in significant outcomes. The final results included the development of:

- Standard titles, descriptions, and outcomes for each of the six core associate-level courses in the "model" curriculum developed last year. It was recommended that all fire science associate's degree programs require these courses as the theoretical core foundation on which all other fire-related courses will be based. This will facilitate problem-free transfers to other schools and promote more efficient "crosswalks" for those who want to apply their academic coursework towards satisfaction of standards necessary to achieve firefighter certification.

- A sample model for fire-related management and technology baccalaureate degree programs which included outcomes, content, and articulation for these programs.

- A national model for fire and emergency service training and higher education which defines what kind of learning should occur at what levels of higher education (associate's, bachelor's, and master's) as firefighters progress through their career or volunteer service.

- Development of a list of fire service research needs and suggested topics for future projects or dissertations.

Other conference highlights:

- Keynote speech by Acting Administrator for the U.S. Fire Administration Ken Burris, who spoke about the new USFA, the status of FIRE Act grants review, and the role in risk reduction that fire departments must play in the future.

- Presentation by USFA Education Specialist Edward Kaplan about past FESHE conferences and the need for partnering academic fire programs with the USFA's Training Resources and Data Exchange (TRADE) network.

- Presentation of a USFA-supported doctoral dissertation called "A Study of Undergraduate Fire Service Degree Programs in the United States," one of the most comprehensive studies ever done on associate's- and bachelor's-level programs in areas ranging from types of degrees, courses, and accreditation to enrollment trends and student diversity. [http://www.dissertation.com/library/112130xa.htm](http://www.dissertation.com/library/112130xa.htm)

- Presentation by the chairman of the International Association of Fire Chiefs' (IAFC) Professional Development Committee, Chief James Broman (Lacy, Washington) about the importance of higher education to the fire service in the future.
• Forum discussion between the publishers of fire science textbooks and the FESHE conference attendees about how they can develop materials to support the model associates curriculum.

• Learning-Academic Materials and Programs (LAMP) Post, an exhibit hall format enabling the attendees to learn more about products, programs, and services available from the textbook publishers and USFA to the colleges and training organizations.

You can download all the slide presentations and documents at the USFA's higher education Webpage found at: [http://www.usfa.fema.gov/nfa/tr_high.htm](http://www.usfa.fema.gov/nfa/tr_high.htm).

This final report describes what occurred at the FESHE III Conference. Embedded in the narratives are the PowerPoint slides used in presentations. The slides are sequentially numbered in the report to accurately convey the presenters' points.
CONFERENCE AGENDA

Federal Emergency Management Agency
U.S. Fire Administration
Fire and Emergency Services Higher Education Conference
June 2-4, 2001

Saturday, June 2

Keynote Speaker:

Ken Burris, Chief Operating Officer, U.S. Fire Administration
"USFA Goals and Higher Education for the Fire and Emergency Services: Working for a Fire-Safe America"

USFA has undergone a major transformation in the last two years, both in the goals it set for the future and how it plans to achieve them. Academic fire programs will play a vital role in USFA's future because they provide the education and critical thinking skills necessary to affect the fire problem at the local level. Chief Burris' keynote speech will explain how colleges and universities can help work towards a fire-safe America.

Academic Fire Programs Survey Findings: An Update

Thomas Sturtevant, Texas A & M

This survey, a doctoral dissertation project, is the most comprehensive of its kind ever undertaken and had an extraordinarily high response rate. Dr. Sturtevant will present his findings in this update. USFA will assume responsibility for maintaining the database in the future and for making it available to the public.

Development of a Model Curriculum

- Associate's: Develop course outlines for six courses in "model" curriculum
- Bachelor's: Develop core competencies or curriculum for junior- and senior-level programs

A model curriculum comprising course titles and descriptions for associate fire science degree programs was developed last year. In this session, the attendees will break into groups and develop detailed learning objectives and outlines for each course. For the first time, attendees will also develop comparable recommendations for fire-related bachelor degree programs, having to decide whether to recommend core competencies or a set of prescribed courses similar to the associate model. For background on this issue, please view the FESHE 2000 videotape.
Sunday, June 3

Development of National Fire Service Training and Higher Education Model

The most significant outcome of the conference will be the development of a national model of recommended academic fire program requirements and the extent to which fire service training and certification should apply towards associate's and bachelor's degrees. For background on this issue, please view the FESHE 2000 videotape.

Monday, June 4

Fire Service Textbook Publishers: Model Curriculum Feedback and Discussion

Major publishers of fire science textbooks have been invited to formally "receive" the model curriculum recommendations from the conference attendees and make future publishing decisions based on them, where possible. The goal is to promote the private sector's development of a national core of fire science "content" provided in college textbooks based on these course outlines. For background on this issue, please view the FESHE 2000 videotape. This discussion will also enable the publishers and its academic customers to learn more about each other's needs and issues in textbook development and marketing.

Learning-Academic Materials & Programs (LAMP) Post

Those familiar with the National Fire Academy Training Resources and Data Exchange (TRADE) conferences know about the TRADE-ing Post. In an exhibit hall format, the ten TRADE regions, USFA offices and Federal agencies with fire-related activities showcase their courses and materials available for sharing and provide ideas applicable to the attendees' own programs. LAMP Post will be comparable, with booths from the new USFA teams, fire science textbook publishers, states with model training and higher education plans, national fire service organizations and others.

Emergency Management Institute (EMI) Higher Education "Mini-Conference" (Attendance Optional)

This afternoon meeting will be useful to those who have or are contemplating an emergency management degree or certificate program or just want to offer courses in the subject. Discussion will include information about the bachelor's-level curriculum available from EMI and how the different types of programs can be structured.

For more information, visit: http://www.fema.gov/emi/edu/
Learning-Academic Materials and Programs (LAMP) Post

Building B--Student Center
Edward Kaplan, Education Specialist, welcomed everyone to the U.S. Fire Administration's (USFA's) third annual Fire and Emergency Services Higher Education (FESHE) conference. There were approximately 100 people in attendance this year, versus 65 from last year. He stated that more State and local fire-service training representatives were attending this year.

Mr. Kaplan explained the mission and goals for the FESHE program:

---

**Fire and Emergency Services Higher Education Consortium (FESHEC) Mission**

Establish an organization of post-secondary institutions to promote higher education and to enhance the recognition of the fire and emergency services as a profession to reduce loss of life and property from fire and other hazards.

**FESHE Goals**

1. To establish a formal network for post-secondary institutions that offer degree programs in fire and life safety and emergency response.
2. To assist institutions in establishing relationships between degrees and professional certifications.
3. To provide national models for a collegiate curriculum leading to career tracks in fire protection, life safety and emergency services including associated allied professional fields.
4. To encourage the establishment of partnerships between individual educational institutions, and other local, state and federal fire- and emergency-related training agencies and organizations.
5. To promote quality assurance through mechanisms such as accreditation.
6. To further the concept of higher education and its positive effect in the overall mission of the fire protection, life safety and emergency services providers.
7. To promote the concept of integrated life-long education and training for fire protection, life safety and emergency services providers.
8. To collaborate with the National Fire Academy in meeting the goals stated in America Burning and other national initiatives that involve degree-granting institutions.
9. To enhance the professional qualifications and development of the faculties at the institutions offering courses related to these programs.
10. To encourage ongoing development of the quality, content and delivery of these programs.
11. To encourage the exploration of innovative program enhancements.
12. To explore and facilitate the integration of technology in all aspects of the educational programs.
13. To impact the mission of the participating educational institutions.
14. To promote inter-institutional recognition of courses.
Mr. Kaplan briefed the group on the three major outcomes from last year's conference. He explained that last year, the attendees improved collaboration between the academic fire programs and national and State fire service leaders, completed a national survey of Academic Fire Programs, and identified six core courses for the Fire Science Curriculum, which were

- Fire Prevention;
- Building Construction;
- Fire Protection Hydraulics;
- Introduction to Fire Protection Systems;
- Introduction to Fire Science; and
- Fire Behavior and Combustion.

Mr. Kaplan explained the missions and goals of this year's conference are to:

1. **Develop the outlines for the six core model curriculum courses developed last year.**

   Mr. Kaplan stated that these are recommendations for the "core" courses for any Fire Science Associate Degree Program. He asked this year's group to respect the work done last year. If there is a consensus that something needs to be opened then it will be opened, but at some point we have to "cut bait" and move forward. The group this year will be providing common course titles and content that will lead to a national core set of knowledge and competencies.

2. **Develop a national "Higher Education" Model.**

   This model will serve to explain how to move firefighting from an occupation to a profession.

3. **Help USFA achieve its goals.**

   Mr. Kaplan said that the time has come to work toward the reduction of life and property loss; to support these efforts he offered three FESHE "pipelines" through which USFA can funnel its programs, products, and services to the academic fire programs:
FESHE Pipelines

Pipeline #1: Affect Learning in Academic Environments
1. Develop for fire-related academic courses suggested classroom projects or assignments related to USFA goals or products and make them available to the FESHE network.

A USFA video, research study or fire prevention product with a powerful, relevant message could be shown in class with a team-developed project or questions to prompt student discussion.

Pipeline #2: Involve the FESHE network in USFA campaigns.
1. Use academic fire program coordinators as points of contact for information distribution to students and campaign coordinators for local action.
   - Fire fighter safety campaign, including accidents to and from incidents, heart attacks, etc.
   - College dorm fire safety programs
   - Reaching Seniors

Pipeline #3: Involve FESHE network in support of fire research.
1. Use the FESHE network to integrate USFA/NIST research results into fire science programs, particularly the "model" curriculum courses.
2. Include FESHE network (particularly baccalaureate and graduate programs) in research projects.

2. Develop courses or convert selected resident courses for release to academic fire programs through the FESHE network.

Provide community risk reduction and public fire education courses to produce future graduates who become a new generation of prevention-oriented leaders.
Mr. Burris told the group that the biggest thing happening to the USFA this year was the Assistance To Firefighters Grant Program. He explained that on December 28th, 2000, a 100-million-dollar grant was passed with the expectation that everything (development of rules, notices, ratings, and awards) be completed by September 30th, 2001. This gave the USFA only months, with little management time and staff to do it with. The number one priority has been this program, moving classes and everything in order to accommodate the rating panels. Mr. Burris shared a PowerPoint presentation with the group and explained that he doesn't like to report too much on figures, as they change every day.

**ASSISTANCE TO FIREFIGHTERS GRANT PROGRAM**

- NUMBER OF APPLICATIONS PACKAGES RECEIVED: OVER 19,775
- APPLICATIONS/CATEGORIES ENTERED IN DATA-BASE: AS OF 5/31/01 30,583
- DOLLAR AMOUNT OF GRANT REQUEST RECEIVED: $3,156,198,390.85
- DOLLAR AMOUNT RECEIVED FOR EACH CATEGORY:
  - FIREFIGHTING VEHICLES: 
    - 134 M CAREER
    - 1,934 B VOL/COMB
    - 2.068 B TOTAL
  - PERSONAL PROTECTIVE EQUIPMENT: 
    - 38.1 M CAREER
    - 391.3 M VOL/COMB
    - 429.4 M TOTAL
The numbers that are shown on the handout are as of Thursday, May 31st, 2001. The total number of applications in the database is 30,583, with a total requested dollar amount of $3,156,198,390.85. The requests were broken down by categories: firefighting vehicles, personal protective equipment, firefighting equipment, health and wellness, fire prevention, and training. These were then separated by career and volunteer/combination departments. The number-one request from all departments was vehicles. Health and Wellness represented the least dollar amount requested by the volunteer/combination departments, with fire prevention the least requested by the career departments. There were a total of 167 disqualified applications; this total would have been thousands if it were not for the staff that went above and beyond to try and fix incorrect applications.

The second thing that USFA has been doing is trying to change its organization from what it was to something very different. This reorganization has changed the mind-set of the old organization. The largest cultural change has been going from an individual to a group effort. Mr. Burris stated that he feels the pyramid design gives a false sense of where a certain part of the organization falls. He used a rubber band ball as an example to show that every part of an organization is important. A team approach will be successful but also difficult at the same time. He spoke about an article in the September-October 1999 issue of Harvard Business Review called "Organigraphs: Drawing How Companies Really Work" by Henry Mintzberg and Ludo Van der Heyden.
Mr. Burris stated that the country has overanalyzed its fire problem. He said that he enjoys giving President Truman's 1947 speech verbatim because everyone can agree with it. Nixon reiterated Truman's words with *American Burning*, and Clinton again with *America at Risk*. Mr. Burris said that these reports use different technologies, but all share the same problem. He is hoping with plans, meetings, and strategies to reach the operational objectives of the next 5 years. The number-one objective is to reduce the loss of life from fire-related hazards by 15 percent. He stated that the need is to stay focused on simple but **BOLD** goals. He added that USFA can be successful only with the help of partnerships.
Mr. Burris heavily emphasized that the one single thing he would like to see in the future is multihazard risk reduction. The fire service is the first line of defense. It is the multihazard organization. Fire service needs to address earthquakes, floods, hurricanes, etc., as multihazard risks. He said that he knows evolution will not take place without bumps in the road. Fire protection and emergency management have many differences. We continue fire prevention and protection, but yet emergency management still is taught separately. Maybe not today, but in decades to come, the Risk Manager of a community will manage the community's entire risk. Fire Chiefs and Emergency Managers need to get along because everyone is suffering.

Mr. Burris concluded by stating that in the academic fire programs reside the ability to change our future. He stressed that everyone needs to thank his/her mentors before it is too late. He stated that everybody in the audience has the ability to use their skills and knowledge to better the Nation. They can have an impact. They have the programs and the minds to shake. They are building the foundations for our efforts. Our goal is to facilitate someone else's success.
ACADEMIC FIRE PROGRAMS SURVEY FINDINGS: AN UPDATE

Dr. Thomas Sturtevant, Texas A & M University Fire Service Extension

Thomas Sturtevant gave the group a handout of his presentation. This handout was a small overview of his complete survey, which was given to the group on a disk titled *A Study of Undergraduate Fire Service Degree Programs in the United States--Fall 2000*.

The following page shows the abstract that was taken directly from *A Study of Undergraduate Fire Service Degree Programs in the United States*. This abstract gives the main purpose, findings, and recommendations of this survey.

Mr. Sturtevant explained that he took the purpose and literature and then developed his research strategies. He used electronic methods to obtain some of his data from USFA, International Fire Service Accreditation Congress (IFSAC), Embark.com, and Collegeboard.com. He also hit Web email information and linked to educators.

Mr. Sturtevant went through the tables and figures from his handout and gave brief descriptions of each. He explained that Table 4-27 showed the top 10 identified planned changes to institutional degree programs. Also included in his handout were the results to the NFA survey question about the idea of a national model curriculum for a fire science or management associate's degree program and the same question for the baccalaureate degree program. This result showed that the associate's degree students and the bachelor's degree students were both in agreement to develop this model for associate's level, but the majority of the bachelor-level students didn't feel the need for it at the bachelor level.

Mr. Sturtevant explained that the survey used AS versus AA degrees because more and more schools have AA but they are not terminal. He told the group that this survey will help in benchmarking their programs versus national averages.

Mr. Sturtevant felt that the purpose of this was accomplished. They were able to come up with the top five challenges and top five changes. He stated that a lot of the same issues present in this survey were also in surveys back in the 1970's. He said that there is need for further study and he needs national collaboration to find ways to support ongoing research.
A Study of Undergraduate Fire Service Degree Programs in the United States

ABSTRACT

Recent national efforts to coordinate and promote higher education in the fire service led to this national survey of fire service degree programs. The main purpose of the study was to gather descriptive information concerning fire service degree programs offered at two-year and four-year accredited institutions. A second purpose of the study was to identify the perceptions fire service degree program coordinators/directors hold concerning current and future issues affecting their programs. The information collected as part of the study can be used in a variety of ways from benchmarking among fire service degree programs to assistance and support with policy formation at the local, state, and federal level.

Of the 248 institutions identified for this study, 222 (89.52 percent) were associate level programs and 26 (10.48 percent) were bachelor level programs. A survey instrument was developed, pilot tested by national experts, and then mailed to the coordinators/directors of fire service degree programs for each of the institutions. Respondents were provided the opportunity to return completed surveys in the traditional paper format or through an electronic version located on the Internet. A total of 210 institutions responded to the survey resulting in an 84.68 percent return rate. At the associate level, 184 (82.88 percent) of the 222 programs responded and 26 (100 percent) of the 26 bachelor level programs responded.

The purpose of the study was achieved as the data collected provides an in-depth snapshot of the current status of fire service degree programs in the United States. Data were collected in the following five areas: Degree Program Information, Student Information, Faculty Information, Distance Education Information, and Program Directors/Coordinators Perceptions.

Findings of the study included: 1) much is unknown about fire service degree programs during the 80s and 90s based on a void in research during this time period, 2) degree programs lack diversity in gender and race for coordinators/directors, faculty, and students, 3) the most important reported challenges facing degree programs included means and methods to increase enrollment, updating curriculum, finding quality instructors, lack of funding, and lack of incentives for earning an advanced degree, and 4) program changes coordinators/directors plan to make include updating and revising curriculum, working on distance education initiatives, and adding new courses, certifications, and programs.

Recommendations for further research included extending this study into a consistent collection process and expanding investigation into other related/advanced degree programs and into the fire service itself. Based on the findings and analysis of the study, the researcher suggested that fire service degree program coordinators/directors in cooperation with national fire service organizations such as the National Fire Academy, the International Association of Fire Chiefs, the International Association of Fire Fighters and other organizations work together toward: 1) supporting ongoing fire and emergency service higher education research, 2) developing nationally recognized traditional and distance education curriculum, 3) establishing meaningful incentives for obtaining advanced fire service degrees, 4) providing increased assistance to degree programs, and 5) increasing the diversity of students and faculty within fire service degree programs.

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DEVELOPMENT OF ASSOCIATE’S CORE CURRICULUM COURSE OUTLINES

The attendees broke into workgroups with each responsible for developing for each of the six aforementioned core courses, common

- descriptions for college catalogs; and
- learning objectives and outcomes.

These six courses represent the "model" curriculum, which serves as a theoretical foundation for all fire science programs at the associate's level, be they AA, AS, or AAS degrees. They are not meant to exclude other fire science courses required for graduation; rather, they are recommended "core" courses all students must complete as part of their degree requirements.

NOTE: The newly created National Fire Science Curriculum Committee further developed the model curriculum descriptions and learning objectives in November 2001. The updated curriculum outlines can be found in the Model Fire Science Curriculum report or by downloading it on the USFA web page at: http://www.usfa.fema.gov/nfa/he_fsc.htm

Model Curriculum

- A recommended set of courses which serve as core requirements for any fire science associate degree program
- Common course titles and content can lead to a national core set of knowledge and competencies provided by the fire science programs

Model Curriculum

- Moves fire service towards a national, unified system of training and education
- Minimizes duplication of effort
- Moves firefighting from an occupation to profession
DEVELOPMENT OF A SAMPLE BACHELOR'S DEGREE MODEL

A group representing bachelor's degree programs developed a sample model toward which upper-level fire-related degree programs may strive in the future.

**Purpose:**

To develop a sample Education Model, consisting of Outcomes, Content, and Articulation.

**Outcomes:**

1. To provide the student with education and career training, which will empower the student with the knowledge to succeed.

2. Multidisciplinary, areas to include Social Science, Natural Science, English, Critical Thinking, Communications, and Problem-Solving. In addition the student will be empowered with the skills needed to motivate, discipline, and provide guidance needed to succeed within the chosen career path.

3. The student shall demonstrate needed skills within the accounting field, to include efficient use of funds, budgeting, and problem-solving.

**Content:**

Two competency cores: one from fire science (including EFO courses); other from external departments on campus.

**Management Track:**

**Fire and Emergency Services Competency Core**

- Safety and Risk Reduction;
- Management of Large-Scale Emergencies;
- independent or applied research (capstone experience);
- Legal Aspects;
- Leadership;
- Community Mitigation (codes, fire prevention, public health issues);
- Strategic Planning/Public Policy; and
- areas of specialization (EMS, training, hazardous materials, fire prevention, etc).
Management/Public Administration Competency Core

- Human Resources Management;
- Budget and Finance;
- Organizational Management Theory;
- Research Methods/Statistical Analysis;
- Legal Aspects;
- Intergovernmental Relations; and
- Business/Technical Communications.

Technology Track:

Fire and Emergency Services Competency Core

- Safety and Risk Reduction;
- Management of Large-Scale Emergencies;
- Fire Dynamics;
- Active Fire Protection;
- Building and Fire Safety Codes;
- Industrial Hazard Control;
- Analytical Approach to Fire Protection;
- independent or applied research (capstone experience); and
- areas of specialization (EMS, training, hazardous materials, fire prevention, etc).

Management/Public Administration Competency Core

- Budget and Finance;
- Organizational Management Theory;
- Intergovernmental Relations;
- Business/Technical Communications; and
- Social Science (Political Science, Psychology).

General Ed Requirements:

All programs need horizontal and vertical integration for acceptance as prescribed by the Association of Specialized and Professional Accreditors. A 2-year associate's degree does not guarantee transferable equitable credit.
Credit:


Curriculum:

Core based on accepted standards
Legal
Labor
Finance
Personnel
Planning
Administration
Ethics
Leadership

Articulation Agreement: (Receiving Degree Work Credit)

Standards
(National/State)

Credit

Credit for Life Experience (Certification, +)
Accredited Course Work (ASPA, ACE, etc.)

Summary:

With the completion of the above-listed objectives it is our intent to standardize an acceptable educational program for the fire service.
Mr. Kaplan gave a brief description of the USFA’s Training Resources and Data Exchange (TRADE) program. He stressed the need to get and develop training and higher education plans on regional as well as State and local levels. A partnership between TRADE and FESHE would promote collaboration among the respective organizations’ members at all three levels. He presented a model of how training and higher education partnerships can be applied in State and local jurisdictions:

**Partnerships in Training and Higher Education (Statewide)**

- Academic Program Coordination
- State Fire Service Training
- Fire Science Model Curriculum
- Academic Credits
- Certification Activity
- Local Fire Service Training
- Training & Certification Programs Coordination
- Fire Science Advisory Committees

**Performance Measurements**

- Number of states which adopt national T/HE model or develop their own
- Number of community colleges which adopt model curriculum
- Number of states in which collaboration between academic fire programs and state fire training occurs, e.g., meetings, jointly-sponsored activities
- Number of TRADE regions who include academic fire programs in their activities

**A National Training and Higher Education Partnership**

TRADE  FESHEC

**USFA Training and Higher Education Partnership Objectives**

- Develop a network of fire training agencies and academic degree programs
- Promote the sharing of resources, curricula and ideas for the mutual gain and benefit of participating network members
- Promote collaboration between members at regional, state and local levels

**What TRADE Can Do**

- Discuss ways to collaborate with the academic fire programs within your regional meetings today, including:
  - Participation in future meetings
  - Develop statewide training and higher education plans which factor in the fire science model curriculum and certification and training programs

**Anticipated Outcomes from Collaboration**

- Partnering of the TRADE and FESHE Consortium leading to the formation of a national training and higher education network
- Adoption of a model curriculum for fire and emergency services-related degree programs and the formation of a national body of knowledge and critical thinking skills
- Improvement of academic degree programs
Mr. Kaplan described a supplemental TRADE grant that provides money for the regions to collaborate with the academic fire programs. He strongly urged the group to contact their State Directors or Metro Training Officers and become familiar with them. He provided a list of the ten TRADE region co-chairs.

**TRADE Grants**

$150,000

Objective #1 (of 3): Dialogue with 2 and 4-yr. educational institutions
- Identify available college resources for training and education
- Identify regional training and education needs
- Identify current employment education standards: Entry Level; Fire Officer; Chief Officer; Fire Chief
- Review NFA Higher Education initiative
Chief Jim Broman, Chair, Professional Development Committee

Chief Jim Broman, Chair of the International Association of Fire Chiefs' (IAFC) Professional Development Committee, gave a presentation which describes his committee's position on the importance of higher education for the fire service and how, when taken with all the different elements, it fits into the whole professional development framework one goes through in his/her career.

His message to the group was that the expectations are degrees and certifications; these are forms of reference but not necessarily outcomes that are needed. The need is to understand the value and importance of education. He would rather have a student who has gone to many campuses versus the one who has attended only one. The students need the diverse experience. Training and certification makes you confident, and education makes you successful. Education brings together a group of people who can see clearly if a system is working.
**Professional Development**

- NOT...Training OR Education
- BUT...Training AND Education

**Comparisons**

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**Inclusion of Both Elements**

- Accept Areas of Overlap
- Do Not Universally Equate Them
- Do Not Lose Essential Values of Each Element

**Philosophy**

**It is education that makes training stick.**

  - Art Cooper, M.D.

**Philosophy**

**Education is learning what you did not know that you did not know.**

  - George Boas

**Philosophy**

**What sculpture is to a block of marble, education is to a human soul.**

  - Joseph Addison

**Philosophy**

**Education is not about learning facts.**

For that, you do not need college.

The value of education is in training the mind to think something that cannot be learned from textbooks.

  - Albert Einstein
Philosophy

Education is that which remains after one has forgotten everything that was learned in school.
- Albert Einstein

Our Need

- All the Diverse Elements
  - Technical Skills
    - Training
    - Certification
  - Managerial Skills
    - Analysis
    - Planning
    - Problem Solving
    - Communications (especially listening!)
  - Self-development
    - Ethics
    - Vision
    - Leadership
  - Experience
    - Roles
    - Cultures
    - Individuals
    - Groups

Our Message...

- Our Peers
  - Set Expectations
  - Training & Educational “Outcomes”
- Our Delivery System
  - Avoid Universalism
  - Protect Integrity of Process

Embrace the Diversity of Development!

Wild Card!

Moving to All Risk Management
RESEARCH ISSUES

A workgroup comprising of attendees with an interest in fostering research in fire-related areas met to identify issues, needs, and possible topics. The group reported out the following:

### Fire Service Research needs

1. Graduate Infrastructure at masters and doctorate levels
2. Require research at all levels in higher ed programs AA, AS, BS, MS, PhD
3. Need Research into Fire Issues
   - What, when, why, how do we do everything?

### Fire Service Research needs

1. Encourage Doctoral students to conduct research into fire service issues
2. Need a refereed journal for the fire service
3. Encourage and Support those programs and research efforts dealing with fire issues and policy

### RESEARCH TOPICS

1. Impact of Higher ed on the careers of FF (Where do they go?)
2. Correlation of response time and losses
   - Property
   - Life
   - Injury

### RESEARCH TOPICS

1. Changes in courage or risk taking related to education/training levels
2. Acceptance of Residential Sprinklers as a solution to the fire problem
3. Impact of performance based codes
4. Impact of diversity on the fire service
5. Impact of females on the fire service

### RESEARCH TOPICS

1. Seat belt use or lack of by the fire service
2. Staffing levels
3. Alternate education levels to achieve experience
   - Rotate to a major FD for an internship to gain command or live fire experience
   - Impact of "simulation only" based fire training on FF and Officer capability
RESEARCH TOPICS

- Feasibility of a Nat’l Response Team(s) for major incidents
- Radio Communication at Large Scale Incidents
- Longitudinal Study of the impact of fire safety education
- National Registry and/or Nat’l Standardized Exam

RESEARCH TOPICS

- Legal Issues in the Fire Service
- Medical and Physical Fitness in the Fire Service
NATIONAL MODEL FOR FIRE AND EMERGENCY SERVICES TRAINING AND HIGHER EDUCATION

Mr. Kaplan explained the need to have a unified system of training and higher education which defines how one's professional development in the fire and emergency services should evolve, from firefighter to fire chief. It should describe what kind of training and what type of degree one should acquire throughout his/her career.

The attendees reached consensus on the following model and recommend that States strive to align their existing training and education systems to the extent practical.
To provide a model for higher education that will:
- Enable individuals to plan for their higher education development;
- Enable higher education institutions to appropriately plan, deliver, and measure programs;
- Facilitate the ability of fire and emergency services to integrate expectations desired from higher education programs; and
(Slide 3 continued)
- Contribute to enhancing public safety and risk reduction within the community at large.

- The higher education model recognizes the reality that pursuit of post-secondary education is a component of both personal development and professional development.
- Higher education is a linear progression model.
- The characteristics of this model are:
  - There should be education progression between the Associate, Bachelor and Master's degree programs.

- This model provides a view of the relationship between the Training and Education components of the Fire Service and Emergency Services Professional Development. It provides that there is an intimate symbiotic relationship between training and education.
- Every firefighter must acquire basic skills.
- Access to Education is not limited by position.
- Training is the critical initial component of professional development; however, an individual should simultaneously prepare him/herself to succeed in higher education programs.
- Education is critical to both personal development and professional development.
- The model does not envision nor require that every firefighter progress through every level of training and education.

- There are three education tracks:
  1. Technical (This track currently often terminates at the Associates level but should be progressive to the 2 baccalaureate tracks)
  2. Liberal Arts and Science (AS/AA, BS, MS, PhD)
  3. Engineering (BS, MS, PhD)

- There is a desire that life experience and certification for training be accepted toward education credit, but a recognition that higher education will focus on additional academic broadening.

- Outcomes desired from this model include but are not limited to:
  - Develop critical thinking skills
  - Develop personal knowledge and understanding of diverse views
  - Assist in the development of the individual
  - Contribute to the body of knowledge of fire science and public safety
  - Improve personal communication and interpersonal skills
  - Improve Fire & Emerg. services provided to a community.

- Additional outcomes should be developed in future collaboration with representatives of the fire service, education and government leaders.
Monday, June 4, 2001

FIRE SERVICE TEXTBOOK PUBLISHERS: FEEDBACK AND DISCUSSION

Participants:

Margaret Shake  
Pennwell Corporation

Michael Weider  
Ifsta/Fire Protection Publications  
Oklahoma State University

Pamela Powell  
National Fire Protection Association

Katrin Beacom  
Brady Publishing

Mark Huth  
Delmar Publishers/Thomas Publishing

Mr. Kaplan asked the panel of publishers if, given the core curriculum with common outlines that many schools may begin offering over the next few years, it possible to begin writing textbooks that reflect them?

Publishers: The core curricula will include 228 institutions and there are maybe 90 represented here today, it would increase the comfort level if the 115 other institutions would sponsor this also. When do you want this done? It will take NFPA 1 to 1-1/2 years to get a book on the shelf. The group will need to identify the features you want (i.e., glossary, exercises, Student Manuals to existing guides help you out, etc.). FESHE members do not realize what progress they have made in the past 3 years. The publishers write to NFPA Standards. NFPA 1001 is what fire departments train their firefighters from. If the group is able to give us core courses with core content, it makes it easier. You (FESHE members) have taken huge strides in helping us. This is doable by all means. There is definitely a market that warrants the textbooks and competitive publishing. We now have a direction to go toward. By all means we will be publishing. Standpoint, the more direction you provide, the better job we can do. What instructor support material would help you teach a course successfully?

The group asked to have a test bank to work from. They want to see more diversification in the books. At times it may take four different books to complete one course. This has been a problem.

Publishers: We have attempted to combine courses into one book. Single topic books.
The group asked for Distance Learning availability of CD's, PowerPoint, and material that is easily put on Web. (Half the FESHE attendees responded that they put courses on the Web now.) They also asked for more slides and animated graphics in text (animated video and photographs or drawings). Another common thing is support material. They want to get instructor desk copies before class.

**Publishers:** As far as the animated graphics, motion requires expense. There will be a need to justify cost. Historically, we don't give instructors complimentary desk copies of textbooks. Many times students call up and say they are instructors in order to receive them. There are 240 programs in fire science. Small market, we are not for profit (IFSTA) but we are not charity. We need to be able to recoup cost in sales. Thomas Publishing will not bankroll this; you have to buy the books. Ms. Powell stated that NFPA has an 800 number, if the group is not happy with the publishers' response, call her and she will try to help out. She will try to untangle but added that NFPA has 10 to 15 percent of their products bringing 80 to 90 percent of their profits, and fire service material is not in that percentage.

Segmenting the materials is a good idea. The textbooks currently used have 1974, 1982, etc., publication dates. If a book is more than 5 years old, students laugh. A suggestion was made that the publishers take turns, and make it a cycle. The gap could be filled by NFA. All new updates should be coming out of NFA. Some of the instructors don't use textbooks, because of the cost; $70 for a textbook that is used only once. Suggestion was to put textbooks on Web and then use time-cost for using it? In doing that, the printing cost is gone.

**Publishers:** There are about 180 classes on Web; Brady is going with the trend of the future. There are tons of materials out there. E-books and audio or cassette books are definitely out there as the wave of the future. A lot of students are part-time and could use cassette tapes. This certainly creates another point. The point was made that the book version still outsells the CD version 40 to 1. The publishers didn't want to go with computer-based products, without the agreement to purchase books. They were agreeable to giving a choice of electronic versus print only if the students were compelled to purchase electronic and paper.

Instructors would like to see a sample text, on some of your lists for new materials. As far as the expensive textbooks maybe paperbacks would work better for the expense. There need to be Instructor Guides to go along with text. Could you split books? This makes it cost-effective.
Publishers: You could always check with individual publishers. Thomas does this and NFPA is looking into a chapter-by-chapter thing. Paperbound doesn't really "move the needle"; tables, diagrams, page numbers, etc., that is what makes the needle move.

Writing standards to crosswalk-universal knowledge that is out there. Is there a problem or conflict?

Publishers: Standards have to be there. NFPA Standards need to be there. Body of knowledge is for education. Publishers write to body of knowledge, and identify where that intersects with the standards. Standards are designed and meant to be academic limitations. Important standards are more accepted than the degrees. We have to meet the standards, and then reach the academic level.
FESHE Conference June 2-4, 2001

FESHE IV Agenda

Suggested Activities

2002 Agenda

Registration

Welcome

Orientation/Refresher (all participants)
(Bringing new attendees and guests up to speed)
(How we got where we are)

University panel discussion "How to be taken seriously on establishing and maintaining degree programs and merging professional/technical education and training with academia."
(Examples: University of Maryland, Oklahoma State, Louisiana State, and University of Minnesota)

Presentations on articulation, agreements, and memorandums of understanding. Case study on integrated education, training, and certification systems--from a group of people who work together.

Reports from publisher's textbook and support material development from 2001 recommendations.

Additional classes that might need consideration.

Two presentations of peers on their program, do they use the model curriculum, how is it working? Does or does not. (Something to learn and take home.)

Regional group meetings (programs that are similar) "Fitting the model to your program."

Survey:
Model curriculum--Are you using, do you teach the six core courses and in what aspect? Is it working/successful?
To be written and mailed to those on mailing list. Also made available to attendees that did not receive or complete. To be filled out prior to lunch and returned so results can be tabulated by end of conference.

The above suggestions are meant to limit the time devoted to work groups.