

Advancing Curricula Development for Homeland Security Education through a Survey of DHS Personnel

CRISTINA D. RAMIREZ University of Arizona

GAIL A. RIOUX El Paso Community College

ABSTRACT

After the establishment of the Department of Homeland Security in 2003 and the creation and reorganization of agencies charged with “protecting the homeland,” employment opportunities related to homeland security increased. To meet the educational needs for future and current DHS employees, the number of homeland security education programs has increased dramatically. With the growth of these programs have come questions about where this field fits in academia and the types of degrees and curricula that should be provided. This assessment adds to the emerging scholarly discussion by surveying DHS employees as to what they believe are relevant subjects and courses in homeland security curricula. Through nationwide access to DHS employees at the Customs and Border Protection, Transportation Security Administration, Immigration and Customs Enforcement and Citizenship and Immigration Services the researchers collected over 5,000 surveys, which asked employees about what courses they feel should be included in HS undergraduate education programs. The findings provide valuable information for designers of curricula in this dynamic and growing field.

INTRODUCTION

The Congressional approval and development of the Department of Homeland Security (DHS) in 2003 resulted in the creation, coordination, and reorganization of federal agencies related to “protecting the homeland” (Borja, 2008, p. 5). With the creation of this new cabinet-level department, came not only newly created or expanded employment opportunities but the new employment field of homeland security (HS). In order to meet the demand and respond to these changes, academia has developed HS education programs, and these programs have proliferated with an estimated 300 certificates and degree programs (Ramsay, Cutrer, and Raffel, 2010). These programs can encompass such topics as safety and emergency management; issues of border security in terms of laws, technology and law enforcement; intelligence analysis; cybersecurity; terrorism; responses to natural and man-made disasters; and policies and strategies. According to Gordon and Bellavita (2006), there are “four dozen ways that colleges, universities, agencies and textbook publishers have conceptualized homeland security education” (p. 1).

The breadth and diversity of HS education programs is, however, not unexpected, and, may, in the long run, add to the strength and position of this field in academia. According to Pelfry and Pelfry (2009), because this is a nascent discipline, curriculum developers have the opportunity to design curricula that will be innovative, respond to the needs in the field of homeland security, and meet the requirements of new programs in accredited colleges and universities. Another reason to perceive the variety in HS programs as a positive development is that the employment opportunities in HS agencies are diverse, from law enforcement oriented positions to scientists in fields, such as agriculture, disease, and biological weapons. Even though the field of HS education is in its infancy, the number of programs is rapidly increasing. Therefore, the discussion whether HS “represents a discipline, field, or some other academic entity (i.e., a professional degree)” (p. 58) should continue but, more importantly, curricula and corresponding student learning outcomes that will be accepted by the U. S. Department of Education regional college and university accrediting agencies should be developed.

DEVELOPING CURRICULA

As universities and colleges have designed and implemented HS education programs, they have adopted various methods of assessing which courses and subjects should be included in the curricula. The National Research Council developed the Committee on Educational Paradigms for HS in 2004. The committee invited people from varied and distinguished backgrounds in academia, defense, security, and the military to participate in a workshop that focused on homeland security education. The workshop participants concluded there are four basic functions for higher education regarding HS. These provide: 1. “an educational path that would permit entry into a career supporting the goals of homeland security” (p. 5); 2. provide “relevant content knowledge, both specialized and generalized for those who need it;” 3. educate citizens informing them about threats and methods of dealing with the threats; and 4. provide “a forum for public debate” (p. 16). They recognized that “nearly all aspects of HS gravitate toward the issues of complex threats and how to manage them.” The committee noted a wide range of HS related career opportunities in agencies not directly under DHS, but viewed “as the primary customer” of these educational programs.

Since that workshop, there have been other efforts to address the issue of the content of HS education programs. The Naval Postgraduate School developed the first HS curriculum sponsored by DHS. Pelfrey and Pelfrey (2009) conducted an evaluation of this master’s degree curriculum using a retrospective pretest-posttest methodology. Students assessed their current knowledge base concerning the subject matter of the courses compared to their knowledge based prior to enrolling in the courses. Changes in student’s knowledge base reported gains in all six categories of “clusters of learning objectives” (p. 75). Another approach to curriculum development used by Ramsay, et al. (2010) organized a panel of

experts to develop consensus about “core academic areas that could be used to represent the breadth of the homeland security enterprise in an undergraduate curriculum” (p. 2). The eight panelists, with backgrounds as “homeland security professionals with extensive educational and professional credentials across a wide range of topic areas” (p. 7), came to consensus on three educational objectives, six general program learning outcomes, and eight core academic areas within HS. These findings highlight strengths and gaps in programs while noting the inherent challenges in combining rigorous academic coursework with experiential learning and understanding of real world responsibilities of HS professionals.

McCreight (2009) raised issue of providing students programs with relevant courses that prepare them for careers in HS yet fit into legitimate higher education degree programs. He also addressed several practical issues such as the use of online versus face-to-face subject delivery, how experiential learning fits in terms of requirements and credits, and problems finding faculty with the right balance of “practical and professional experience” (p. 4).

This article reports on a HS education needs assessment that proffers additional data for HS curriculum developers by querying those currently in these challenging positions to provide their perspectives on the value of specific courses and subject areas to include in an undergraduate HS education program. The participants in this needs assessment include over 5,000 DHS employees from four DHS agencies. These agencies also represent the “customers” who will employ, train, and work with the graduates of HS education programs.

METHODOLOGY

The HS Education Needs Assessment was designed to elicit information and opinions from DHS personnel. It was given to DHS personnel at four agencies—the Customs and Border Protection,¹ the Transportation Security Administration (TSA), the Citizenship and Immigration Services (CIS), and Immigration and Customs Enforcement (ICE). The goals and process of the assessment were unique in that the researchers were required to fulfill the explicit requirements of DHS, which included surveying groups of employees whose positions are related to law enforcement and security. Only through the support of DHS officials in Washington, D.C. were the researchers granted extensive access to this distinctive population.

Because this type of assessment had never been conducted, the researchers designed an original survey instrument, which met the needs and requirements of DHS and provided sufficient information to make relevant recommendations

¹ Customs and Border Protection includes the Border Patrol Agents and Customs and Border Protection Officers at points of entry. However, only Border Patrol Agents participated in the survey, and therefore, these respondents will be referred to as Border Patrol rather than CBP.

about HS education. As noted by Babbie, “Surveys are also excellent vehicles for measuring attitudes and orientations in a large population (p. 262).” This survey includes a large population and measures attitudes and orientations in terms of HS education. The instrument contains a list of fifty-two courses and subjects from five academic areas, which are general education, such as math and ethics; politics and the world; laws and law enforcement; public relations; and planning. The list was derived from HS curricula, journal articles and textbooks. The respondents were asked to rank the fifty-two courses and subject areas from 1 to 4 in terms of importance in a HS undergraduate education program, with 1 not important, 2 somewhat important, 3 important and 4 very important.

The respondents were asked to consider an appropriate undergraduate education background for future employees of the agency for which they work. If they did not think the subject applies to the agency, they were asked to check DK for don’t know. They were also given space to note any relevant courses or subjects not listed on the survey. The survey focuses on undergraduate education because the vast majority of new programs are at the associate or bachelor’s degree level.

In the next section of the survey, respondents’ opinions were solicited regarding the benefits of certificate, bachelor’s degree, and master’s degree programs in HS. For example, one question reads, “*Do you think a master’s degree in homeland security is valuable for future employees of DHS agencies?*” The choices are “*would benefit,*” “*would not benefit,*” “*should be mandatory for most jobs,*” or “*no opinion.*” They were also given space to expand on their answers by explaining what topics would be of value in a certificate program, and how a degree program in HS would benefit them. Next, they were asked to provide information about themselves, including level of education, gender, age, job title, and years of experience. They were also questioned as to whether they would have taken advantage of a HS degree program if it had been available when they were in college.

After the instrument was developed, two pre-tests were conducted with Border Patrol agents. As a result of the feedback provided by the agents, a few subjects were added to the list, and a few of the titles of the subjects were changed in order to clarify them. The final instrument contains fifty-two subjects and courses to be ranked and seven open-ended questions.

This assessment was conducted through travel over nine months to DHS offices throughout the country (Figure 1). The survey was given to the employees who were available and willing to take it. It was provided at their places of work, whether at Border Patrol musters, in conference rooms at CIS and ICE offices, and prior to or at the end of shifts in airports. The resultant group of DHS employee participants is a nonprobability, convenience sample. Although it was impossible to reach a representative sample, the researchers designed a travel schedule that included the northern and southern borders and all four corners of the country. As a result of this approach, over 5,000 surveys were completed.

Figure 1

Sites Visited

Arizona

Tucson

Nogales

California

San Diego

Los Angeles

Florida

Miami

Maine

Calais

Houlton

Portland

Minnesota

Minneapolis

New Mexico

Deming

Las Cruces

Santa Teresa

Artesia (CBP Academy)

New York

Albany

Burke

Massena

New York

North Dakota

Grand Forks

Pembina

Texas

Alpine

Brackettville

Brownsville

Dallas

Del Rio

Eagle Pass

El Paso

Fabens

Harlingen

Houston

Texas con't

McAllen

Mesquite

Marfa

Presidio

Uvalde

Ysleta

Vermont

Burlington

Newport

St. Albans

Swanton

Washington

Bellingham

Blaine

Lynden

Seattle

Sumas

Washington D.C.

Because the researchers themselves provided the surveys to participants, they were available to answer questions, allay concerns and seek and receive verbal information. A major concern that the researchers addressed was the rumor that the results of the research would lead to changes in hiring policies, such as requiring a degree.

The purpose of conducting this survey was to gather as much information as possible from as many employees as possible about the preferred content of HS education. In an ideal sampling procedure, the researchers would receive a list of randomly chosen respondents. For this study, the researchers did not seek and were not provided with a list of employees. Such a list of DHS employees would not have been forthcoming if requested. In fact, the researchers were explicitly directed by DHS officials to state to all potential survey respondents that the survey was voluntary and anonymous, and that their names could in no way be connected to the results. Even with the restrictions imposed on the researchers by a nonprobability sample and often less than ideal surveying conditions, the researchers were impressed by the broad and open access to DHS employees, the enthusiasm of the vast majority of employees to be part of this assessment, and the resulting numbers of respondents.

Although the results of the survey cannot be termed as representative of all DHS employees, there are indications that this assessment has provided valuable information that should be considered as academics and DHS develop future

education programs. For example, there are commonalities among DHS employees, but there are also differences by agency. Because of the survey method, less than ideal as it was, and the cooperation from DHS personnel at the agency headquarters in Washington, D. C., supervisors in the field, and line personnel, there were very few refusals to fill out the survey and 5,122 were collected.

RESULTS

Tables 1 through 4 provide information on the total sample of DHS employees. These tables include demographic variables, education and employment information, and the overall subject and course rankings. The data collected on subjects and courses is then presented by DHS agency and similarities and differences among the results by agency are discussed. These organizations have common goals and responsibilities as a result of being part of DHS, but they also seek personnel with skills directly related to their agency goals and responsibilities. The results, therefore, provide information specific to their employees and also provide institutions of higher education the opportunity to respond to the needs of agencies that will be recruiting their students.

Table 1 provides demographic variables about the respondents. The majority of the respondents are male (73%). The respondents also tend to be young, with 62% under the age of forty. However, 17% are fifty or over.

Table 1

Demographic variables

<u>Gender</u>	<u>N</u>	<u>%</u>
Male	3569	73
Female	1292	27
Missing	261	
<u>Age</u>		
20 to 29	1456	30
30 to 39	1562	32
40 to 49	1021	21
50 and over	838	17
Missing	245	

In terms of education (Table 2), over half of the respondents have at least an associate degree; with 32% having a bachelor’s degree and 6% completing a graduate degree or law school. The most likely undergraduate majors are Criminal Justice (29%) and Business and Management (20%). The most common graduate program attended by the respondents is Business and Management (28%), and the next most popular is Criminal Justice (15%).

Table 2

Educational background

<u>Education</u>	<u>N</u>	<u>%</u>
High School Graduate	1803	37
Certificate	186	4
Associate Degree	1054	22
Bachelors Degree	1545	32
Graduate or Law School Degree	303	6
Missing	231	
 <u>Undergraduate Major</u>		
Criminal Justice	711	29
Business and Management	494	20
Humanities	275	11
Social Science	204	8
Math or Science	158	6
Computer Science	96	4
Engineering	89	4
Education	74	3
Psychology, Social Work, Counseling	69	3
Health Science	59	2
Fine Art	59	2
Two Year Professional (dental hygienist or administrative assistant, for example)	31	1
Homeland Security	6	Less than 1 %
Other	140	6
Missing	667	
 <u>Graduate Program</u>		
Business Administration	75	28
Criminal Justice	39	15
Social Science	36	14
Humanities	25	9
Education	17	6
Law School	15	5
Health Science	12	5
Psychology, Social Work or Counseling	10	4
Engineering	7	3
Math or Science	6	2
Computer Science	6	2
Homeland Security	2	1
Fine Art	1	Less than 1 %
Other	14	5
Missing	270	

The majority of the DHS respondents are employed by Customs and Border Protection (Border Patrol) and the Transportation Security Administration (Table 3). In terms of job positions, the vast majority of the respondents are line officers (73%), while 24% hold supervisory positions. Over half of the respondents have held their positions for five years or less, while only 14% have been with their respective DHS agencies more than ten years.

Table 3

Employment background

<u>DHS Agency</u>	<u>N</u>	<u>%</u>
CBP	2,010	39
CIS	315	6
ICE	263	5
TSA	2534	49
<u>Job Position</u>		
Line Officer	3419	73
Support Staff	142	3
First Line Supervisor	950	20
Middle Management	112	2
Upper Management	46	1
Missing	453	
<u>Years of Experience</u>		
2 years or less	1484	32
3 to 5 years	919	20
6 to 10 years	1586	34
11 to 15 years	345	7
16 and over	327	7
Missing	461	

Top Subjects and Courses by Mean Rankings

In the survey, respondents could rank the subjects and courses from 1 to 4 with 1 being “not important,” 2 “somewhat important,” 3 “important” and 4 “very important.” If they did not have an opinion about that particular subject, or if they felt it did not apply to the agency for which they work, they had the option of checking 5 for “don’t know.” Since the survey includes a Likert-type scale, Table 4 displays the twenty subjects and courses with the highest mean rankings.

Of the ten subjects with the highest mean rankings, the first two are directly related to HS, while the others focus on general education areas, such as writing, ethics and critical thinking. The tenth subject, Immigration Law, relates particularly to the DHS agencies that participated in the survey. The remaining subjects and courses are a broad representation of skills, abilities and knowledge

needed for employees in DHS agencies. They include general education courses, such as Spanish and Computer Technology; laws and law enforcement, such as Investigation Procedures and Constitutional Law; public relations, such as interviewing skills and conflict resolution; and threats to security, such as Chemical and Bioterrorism Disasters. These rankings indicate that HS education courses should include a wide range of topics from general education to more specialized technical subjects.

Table 4

Mean rankings of subjects and courses

<u>Subject</u>	<u>N</u>	<u>Missing</u>	<u>Mean</u>
Terrorism	4926	196	3.747
Fundamentals of HS	4935	187	3.620
Critical Thinking/Analytical Skills	4903	219	3.580
Ethics	4875	247	3.555
Technical Writing	4985	137	3.531
English Composition	4914	208	3.519
Disaster and Terrorism	4994	128	3.456
Informational and Descriptive Oral Communication	4970	152	3.460
Immigration Law	4941	181	3.456
Interviewing Skills	4362	760	3.415
Investigation Procedures	4384	738	3.410
Constitutional Law	4930	192	3.379
Leadership and Management	4990	132	3.367
Computer Technology	4934	188	3.330
Internship	4932	190	3.325
Conflict Resolution	5004	118	3.319
HS Relations with Law Enforcement and Private Security	4947	175	3.319
Scenario Based Learning	4978	144	3.304
Spanish	4867	255	3.290
Chemical and Bioterrorism Disasters	4994	128	3.290

Benefits of HS Certificate and Degree Programs

Survey respondents were asked to indicate whether they thought that degree programs in HS would benefit current or future DHS employees. For bachelor's degree programs in HS, 74% of the respondents believe this type of program would benefit future or current employees; 17% believe these programs would not benefit; and 8% believe these programs should be mandatory for most jobs in the agencies for which they work (Table 5). Sixty-one percent feel that a graduate degree would benefit future or current employees; 34% do not feel it would benefit employees; and 5% believe that it should be mandatory for most jobs in the agencies for which they work.

Respondents who have degrees were also asked if they would have majored in HS had it been available. Of those with a bachelor's degree, 42% said they would have majored in HS if it had been available and 49% of those with master's degrees or higher would have pursued a graduate degree in HS if it had been available (Table 5).

Table 5**Benefit of HS degree programs**

<u>Bachelors degree in HS</u>	<u>N</u>	<u>%</u>
Would benefit future or current employees	3108	74
Would not benefit future or current employees	732	17
Should be mandatory for most jobs	349	8
No opinion or missing	933	
<u>Graduate degree in HS</u>		
Would benefit future or current employees	2243	61
Would not benefit future or current employees	1258	34
Should be mandatory for promotion	189	5
No opinion or missing	1432	
<u>Would have majored in HS as an undergraduate if it had been available</u>		
Yes	695	42
No	961	58
Not applicable or missing	3466	
<u>Would have earned a graduate degree in HS if it had been available</u>		
Yes	132	49
No	140	51
Not applicable or missing	4850	

Responses of Border Patrol Personnel

Table 6 displays the top twenty subjects and courses according to Border Patrol respondents. The first two subjects, Spanish and Immigration Law, are directly related to the job of being a Border Patrol agent. The researchers were told by several respondents through informal interviews that even though these subjects are covered at the Academy, they would like to continue to take additional classes on these topics.

This list also indicates the importance of writing and communications skills, with courses such as Technical Writing in third place, English Composition in sixth place, and subjects related to communication skills, such as Interviewing Skills and Informational and Descriptive Oral Communication in fifth and twelfth places respectively. Other courses are related to HS and emergency management, such as Terrorism, Fundamentals of HS, Disaster and Terrorism, and Chemical and Bioterrorism Disasters. Some of the remaining subjects are related to law enforcement, such as Constitutional Law and Investigation Procedures. Also, the respondents include Scenario Based Learning and Internship as important components of undergraduate education in HS.

Table 6

Mean rankings of subjects and courses according to Border Patrol respondents

<u>Subject</u>	<u>N</u>	<u>Missing</u>	<u>Mean</u>
Spanish	1921	89	3.80
Immigration Law	1960	50	3.79
Technical Writing	1974	36	3.77
Terrorism	1976	34	3.76
Interviewing Skills	1356	654	3.70
English Composition	1942	68	3.70
Constitutional Law	1964	46	3.68
Ethics	1936	74	3.66
Critical Thinking / Analytical Skills	1947	63	3.61
Fundamentals of HS	1974	36	3.60
Investigation Procedures	1360	650	3.60
Informational and Descriptive Oral Communication	1974	36	3.51
Scenario Based Learning	1975	35	3.44
Disaster and Terrorism	1983	27	3.44
Computer Technology	1952	58	3.38
Internship	1965	45	3.38
Drugs and Society	1984	26	3.37
Leadership and Management	1982	28	3.35
Surveillance Technology and Detection	1979	31	3.31
Chemical and Bioterrorism Disasters	1984	26	3.29

Table 7 lists the subjects and courses with the highest mean rankings according to CIS personnel. The subjects with the highest means are English Composition and Immigration Law. Also among the top ten, CIS respondents ranked a second writing topic and other general education subjects such as Critical Thinking/Analytical Skills and Ethics. In addition, there are two courses related to communication in the top ten. The list then includes subjects directly related to HS, such as Fundamentals of HS and Terrorism. Subjects that would seem to be directly related to CIS responsibilities are Informational and Descriptive Oral Communication, Interviewing Skills, Investigation Procedures, and Cultural Sensitivity Training.

Table 7**Mean rankings of subjects and courses according to CIS respondents**

<u>Subject</u>	<u>N</u>	<u>Missing</u>	<u>Mean</u>
English Composition	306	9	3.78
Immigration Law	306	9	3.78
Critical Thinking / Analytical Skills	305	10	3.70
Fundamentals of Homeland Security	304	11	3.68
Technical Writing	312	3	3.66
Terrorism	306	9	3.66
Ethics	301	14	3.62
Informational and Descriptive Oral Communication	306	9	3.57
Interviewing Skills	307	8	3.55
Computer Technology	307	8	3.55
Computer Security	310	5	3.54
Investigation Procedures	310	5	3.46
Intelligence Analysis	308	7	3.34
Cybersecurity	310	5	3.32
HS Relations with Law Enforcement and Private Security Agencies	306	9	3.32
Constitutional Law	309	6	3.31
Internship	307	8	3.31
Cultural Sensitivity Training	311	4	3.28
Leadership and Management	309	6	3.28
Disaster and Terrorism	310	5	3.25

Responses of ICE Personnel

Table 8 shows the mean rankings of courses and subjects for ICE respondents. Four of the top five are related to law enforcement activities. These include Interviewing Skills, Constitutional Law, Investigation Procedures and Immigration Law. Technical Writing is ranked second, and English Composition is in sixth place, which again shows the importance of writing skills. The next two subjects are directly related to HS and are Terrorism and Fundamentals of HS. Other courses related to HS in this top twenty are Intelligence Analysis, Surveillance Technology and Detection, Computer Security, Disaster and Terrorism and Cybersecurity.

Table 8

Mean rankings of subjects and courses according to ICE respondents

<u>Subject</u>	<u>N</u>	<u>Missing</u>	<u>Mean</u>
Interviewing Skills	259	4	3.80
Technical Writing	261	2	3.78
Constitutional Law	257	6	3.75
Investigation Procedures	261	2	3.73
Immigration Law	259	4	3.72
English Composition	259	4	3.70
Terrorism	258	5	3.69
Fundamentals of HS	256	7	3.67
Ethics	259	4	3.63
Critical Thinking / Analytical Skills	258	5	3.59
Informational and Descriptive Oral Communication	259	4	3.53
Computer Technology	260	3	3.46
Spanish	259	4	3.42
Intelligence Analysis	260	3	3.39
Scenario Based Learning	260	3	3.38
Surveillance Technology and Detection	263	0	3.37
Computer Security	262	1	3.37
Disaster and Terrorism	261	2	3.36
Cybersecurity	259	4	3.33
Internship	260	3	3.33

Responses of TSA Personnel

In Table 9 are the mean rankings of subjects and courses by TSA personnel. The top two courses are directly related to HS and include Terrorism and Fundamentals of HS. Among this listing, other courses related to HS are Disaster and Terrorism, Hazardous Materials Control, Chemical and Bioterrorism Disasters, Disaster Communication and Computer Security. There are four subjects related to dealing with the public, which are Conflict Resolution, Informational and Descriptive Oral Communication, Public Relations and Cultural Sensitivity Training.

Courses related to writing skills appear a little lower in this listing than in those of the other agencies, but English Composition and Technical Writing are still among the top twenty. Illustrating the variety of skills of TSA personnel are the inclusion of two subjects related to law enforcement, which are HS Relations with Law Enforcement and Private Security Agencies and Investigation Procedures.

Table 9**Mean ranking of subjects and courses according to TSA respondents**

<u>Subject</u>	<u>N</u>	<u>Missing</u>	<u>Mean</u>
Terrorism	2386	148	3.75
Fundamentals of HS	2401	133	3.63
Critical Thinking / Analytical Skills	2393	141	3.54
Disaster and Terrorism	2440	94	3.51
Conflict Resolution	2445	89	3.46
Ethics	2379	155	3.45
Hazardous Materials Control	2406	128	3.40
Leadership and Management	2438	96	3.40
Informational and Descriptive Oral Communication	2431	103	3.40
HS Relations with Law Enforcement and Private Security Agencies	2410	124	3.36
Chemical and Bioterrorism Disasters	2440	94	3.34
English Composition	2407	127	3.32
Public Relations	2447	87	3.32
Technical Writing	2438	96	3.30
Internship	2400	134	3.28
Investigation Procedures	2453	81	3.26
Cultural Sensitivity Training	2439	95	3.26
Computer Technology	2415	119	3.24
Disaster Communications	2456	78	3.24
Computer Security	2445	89	3.23

Responses to Qualitative Questions

This survey instrument includes qualitative questions that asked the respondents to provide additional course suggestions and information about the benefits of higher education degrees for DHS employees. The first question asked respondents to add any courses or subject areas they feel are missing from the list provided. Two-hundred and twelve participants responded to this question. Their answers varied and often included topics they had already ranked. Of those who responded with a subject not previously covered, the most common response was physical fitness and conditioning (n = 14), and the next most common responses involve hands-on skills, such as survival training, first aid, and firearms training

(n=13). Another important subject that was noted is to understand the history and purpose of DHS (n=12).

The next question asked respondents to specify the certificate program topics that would benefit future or current DHS employees. Fifty of the 294 respondents who answered the question specified that certificate programs covering constitutional or immigration laws would be most beneficial. The next most common response includes the topics of writing and communication (n=49). The third most common response is terrorism (n=28) and then the topics of leadership and management and foreign language skills (n=25).

The respondents were also asked to indicate any educational courses or programs that would benefit them in terms of upward job mobility. Of the 149 respondents who answered the question, 40 feel that management and leadership courses would be most valuable. The next most common responses are computer skills (n=22) and writing and communication skills (n=17).

As this assessment focuses on educational needs of HS personnel, the respondents were asked to note the benefits of bachelor's and master's degrees. In terms of the benefits of undergraduate degrees, the most common response was that graduates would have a better understanding of DHS and how it fits in the federal system (40 of 188). For example, one respondent states, "People would have a better background and understanding of where this agency came from and would more fully understand its purpose." Another respondent noted, "It will give an employee an understanding of all the components of DHS and their relationship to each other." Other respondents noted that graduates would make a greater contribution to DHS and be more productive and successful on the job (n=31); and they would have better skills and job preparedness (n=27). A participant stated that graduates would "be better prepared to serve in HS positions [and] will shorten learning curves of HS employees." Another employee said, "By raising the educational level of your employees, you raise the level of professionalism and [by] doing so, create an opportunity to attract more well qualified applicants."

When respondents were asked about the benefits of master's degrees, the most common response is that graduates would be more skillful managers and leaders (n = 34). For example, one employee notes that a master's degree would "better prepare agents for the leadership aspects of the job once at higher levels of employment." Another states that this level of education benefits by "providing opportunities to excel in our field [and] become a subject matter expert." Respondents also feel that a master's degree would be valuable when seeking promotion (n=30), and that employees with master's degrees would bring additional knowledge to decision making and critical thinking (n=23). Regarding promotion, a typical response is "with a master's, they are more likely to promote." Related to the benefits of additional knowledge, one respondent wrote, "a person with a master's degree would be highly trained and educated to make the right decisions," and another said that a master's degree advances, "prepared,

focused individuals proven to possess the understanding of our business who will be up to date on HS to move forward and evolve.”

LIMITATIONS

For this assessment, the researchers were given broad access to DHS personnel, resulting in over five thousand completed surveys. However, the survey population cannot be designated as representative of the entire DHS workforce. The offices and stations that the researchers visited were selected based on their geographical location. As the researchers were housed at the University of Texas at El Paso, the number of DHS offices, particularly the Border Patrol, visited in Texas is disproportionate. Of the forty-seven sites visited, eighteen are in Texas. The other visits took the researchers to both borders and the four corners of the country. Although this sample is not representative, the researchers attempted to distribute the survey at diverse locations across the country.

Another limitation with this study is that the number of respondents for each agency is not related to the overall number of personnel. The sample consists of 2,010 Border Patrol personnel, and there are approximately 20,000 agents. There are approximately 48,000 TSA employees and 2,534 completed the survey. For CIS, 315 employees completed the survey, and there are approximately 18,000 employees. The fourth agency, ICE, has about 19,000 employees, and 263 completed the survey. Therefore, CIS and ICE are extremely under-represented among the respondents. However, because of the unique opportunity to conduct this survey at these agencies, the researchers are reporting all results.

A third limitation is the under-representation of middle and upper management personnel in the survey. At most of the sites, the researchers did not have contact with management except as a point of contact, and also the number of managers compared to line personnel is very small. The managers who were available completed the survey and encouraged line personnel to also complete it.

Finally, this assessment focuses on the preferred HS education background for line personnel as they begin or continue their careers with a DHS agency. The assessment does not address the education needs of many other types of DHS positions, such as scientists, engineers, and others that require advanced technological skills.

Even though there are these limitations, the receptivity of DHS personnel to the survey, the number of respondents, and the variety of locations reached combine to make the assessment findings valuable in terms of the goal of developing relevant undergraduate HS curricula.

ANALYSIS AND DISCUSSION

The Education Needs Assessment was conducted in an attempt to add to the growing scholarly discussion about the content of HS curricula. The strength of this assessment lies in the approach and the numbers and diversity of respondents. The survey was taken to DHS agencies across the country and, as a result, the response rate was very high, and the number of respondents exceeds 5,000. There is obviously a genuine interest in HS education as the most commonly asked questions after taking the survey were, “When is this program going to start?” and “Is it going to be online?”

Homeland security education programs are rapidly increasing in number. The content and foci of these programs vary, depending on the form and emphasis, from terrorism to intelligence analysis to emergency management. To develop curricula, institutions of higher education have formed in-house committees (Moore et al., 2010), consulted practitioners and experts (Ramsay et al., 2010), and asked students about the relevance of courses (Pelfry and Pelfry, 2009). As this is a new field, there are no set accreditation procedures, and therefore, no core curricula or student learning outcomes. As Ramsay et al. noted in their analysis of outcomes-based education related to HS, “Ultimately, for academic homeland security to mature, we would observe that there needs to be some mechanism that would identify and vet the outcomes and best practices needed by employers of homeland security graduates, and which should be taught in academic programs” (p. 14). The National Research Council observed that when programs “specifically claim that they will train students to become homeland security specialists” (p. 10), this denotes that DHS is the “primary customer.”

In this assessment, the “customers” have been asked to determine which subjects and courses are most needed in HS education programs. They have also been given the opportunity to “identify and vet the best practices needed by employers of homeland security graduates.” The results, therefore, should answer some of the concerns and questions of DHS, its sponsored organizations and agencies, and institutions of higher education about the content and relevance of HS curricula. Customers of HS education programs also include state and local governmental and private agencies. These are other groups with which institutions of higher education should collaborate when developing these programs.

The findings of this analysis include the responses from all DHS personnel who completed the survey, as well as findings from each agency. Overall, the respondents are mostly male and hold line positions. A little over half of the respondents have five years or less of experience and have at least an associate’s degree. According to the DHS respondents, Terrorism and Fundamentals of HS rank as the two most important courses for HS education curricula. After these two courses, which are directly related to HS, five of the next six courses are related to general education, including Critical Thinking/Analytical Skills, Ethics, Technical Writing, English Composition, and Informational and Oral Communication.

Other courses in the top twenty relate to law enforcement, such as Immigration Law, Investigation Procedures, and Constitutional Law.

By analyzing the data by agency, the findings point to some differences in the importance of subjects for an undergraduate education in HS, which can relate to the responsibilities of the agencies. For example, Border Patrol personnel indicate that Spanish is the most important subject, which does not even appear among the top twenty in the rankings of CIS and TSA. Border Patrol agents, particularly on the southern border, are often called upon to communicate in Spanish. Another difference is that Interviewing Skills is the top subject for ICE and is included in the top twenty for Border Patrol and CIS. Also, Immigration Law appears among the top five for Border Patrol, CIS and ICE. Neither of these subjects appears among the top twenty for TSA. Immigration Law and Interviewing Skills would be useful for personnel in the Border Patrol, CIS, and ICE because they deal with immigration issues and must interview those who cross the border and those who wish to become citizens. Because of the recent focus on airport security, TSA personnel may be more often faced with the threat of terrorism than those in the other agencies, and therefore, Terrorism and Fundamentals of HS are the top two courses for TSA. Also, Hazardous Materials Control and Disaster Communications are in the top twenty for TSA but not for the other agencies. The subject Cultural Sensitivity Training appears in the top twenty for CIS and TSA, but not for Border Patrol and ICE. This finding could relate to the duties of CIS and TSA employees, because they are required to deal daily with many people from diverse countries and cultures.

Two subjects that are consistently among the top twenty for these agencies are Technical Writing and English Composition. Also consistently listed is the subject Informational and Descriptive Oral Communication. The importance of these topics was reinforced through the informal interviews, roundtable discussions and focus groups. The researchers were told repeatedly about the importance of these skills. Two other subjects that appear among the top twenty for all four agencies and were also frequently mentioned in one-on-one conversations are Ethics and Critical Thinking/Analytical Skills. The results of this assessment indicate that HS curricula should include:

- General education and knowledge, such as writing, communication and ethics,
- Understanding of HS operations and procedures,
- Laws and law enforcement practices, and
- Responding to and mitigation of disasters.

The results of the Education Needs Assessment provide an overall perspective from DHS employees regarding what they believe are needed subjects and courses in HS curricula. In an emerging field, such as HS that is striving to be recognized as an academic field or discipline, programs should be developed through processes that will yield the most legitimate and relevant curricula. Also, to be recognized as a distinct field, HS programs should develop courses that are

unique and address the goals of HS agencies, whether in the public or private sphere.

The process of developing curricula at accredited colleges and universities can be long and involved. An initial proposal, including curriculum, student learning outcomes, and costs, will usually be submitted by a department with approval of the dean to a faculty curriculum committee. After passage by this committee, the proposal will be sent to the vice president for academic affairs for approval and then to the president. If it passes these hurdles, the proposal will then be presented to the institution's board of governors or directors. If this board believes the program will benefit students and the institution, the next step will usually be approval from the state commissioner or chancellor of education. Finally, the regional accrediting organization will be contacted to conduct an assessment of the new program to ascertain if it meets the standards for inclusion in an accredited college or university. This process, of course, will differ by state and institution, but is generally conducted over a number of months, and the goal is a new degree program that will be recognized as a legitimate part of an accredited institution of higher education. One of the main justifications for a new program is that it is needed and will, therefore, attract a significant number of students. The new degree programs in HS are attracting students and should provide students with the necessary skills and abilities to enter and be successful in this field. Through this assessment process, which provided access to over 5,000 DHS employees, "the customers" were able to contribute their opinions to academics and DHS administrators regarding the content of HS curricula. The HS programs developed and being developed will increase the educational levels of current DHS personnel and will also produce the next generation of HS personnel. Therefore, the content of these programs and future development of standards for HS degrees is extremely important.

This survey of DHS employees allowed participants a wide range of subjects and courses to rank and also asked them to indicate any that they would add to the list. The participants came from four DHS agencies that deal specifically with border issues, such as enforcement of immigration laws and the process of legally entering this country. Future research on HS education should consider the needs of other types of HS agencies at the federal, state and local levels. Researchers should also assess the results of how institutions of higher education can collaborate with DHS and other entities to develop relevant HS curricular. These collaborations should include establishment and analysis of student learning outcomes as they relate to skills and abilities required by HS agencies. As programs are developed and students graduate, their employment and progress in HS agencies should be followed, and they should be surveyed as to whether the education they received helped them achieve positions, maintain their jobs, and advance in their fields. The increase in HS education programs indicates the acceptance of this major in undergraduate education. However, as a new field, the continuing evaluation and reevaluation of curricula should continue so that it remains relevant, innovative, and valued by the "customers."

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