

6793250

ABSTRACT

AN ANALYSIS OF THE TEACHING OF CRIMINALISTICS IN THE JUNIOR AND COMMUNITY COLLEGES OF MICHIGAN

by

Robert Harold Palrud

The purpose of this study was the description of the status of education for police officers in basic criminalistics for criminal investigation purposes in the public two-year law enforcement or criminal justice programs of Michigan. The elements concentrated on in this description are the course contents dealing with basic criminalistics, the methods used to teach this material, and the professional qualifications of the faculty involved.

A survey of 19 public two-year institutions was performed, using a questionnaire dealing with the elements above. The course content was judged by the instructors opinion as to whether his course would enable his students to perform each of 25 learning objectives derived from objectives of the basic police training program used in Michigan's police academies.

Data was reported from the responses of 18 institutions whose law enforcement curriculum required the student to take

criminal in-
conclusions

(1) As a w
of field ex
experience
hours).

(2) Only a
as crime la

(3) Major
tent of the
gram and th
lice office

(4) Marked
courses off
on the basi

(5) The nu
the teacher

The fo
nalistics e

(1) Law en
criminal in
express the

(2) Specia
courses of
University,

Robert Harold Palrud

criminal investigation. Data analysis led to the following conclusions:

(1) As a whole, the faculty investigated have a high amount of field experience (averaging 15 years), and low educational experience (averaging a Bachelors degree plus 21 to 30 credit hours).

(2) Only a few (4 of 18) of the instructors have experience as crime laboratory analysts.

(3) Major differences exist between the criminalistics content of the required courses of the two-year education program and the mandatory training programs for Michigan's police officers.

(4) Marked differences exist among the criminal investigation courses offered by the two-year institutions, when evaluated on the basis of criminalistics content.

(5) The number of supplemental teaching methods utilized by the teachers of these courses varies widely.

The following recommendations were made to improve criminalistics education:

(1) Law enforcement program coordinators, when searching for criminal investigation or criminalistics instructors, should express their needs to the managers of crime laboratories.

(2) Specialized criminal investigation teaching methods courses of seminars should be provided through Michigan State University, other state universities, or through extension

courses.

(3) The

investiga

gation po

training s

year inst.

(4) Lack

the design

for crimin

(5) Mich

enforcement

establishm

tics curri

Robert Harold Palrud

courses.

(3) The Michigan Criminal Justice Educators Association should investigate the applicability of at least the criminal investigation portions of project CÖSTER, a competency-based police training system, to the law enforcement programs of the two-year institutions.

(4) Lacking such applicability, the MCJEA should undertake the design of a performance objective-based learning system for criminal investigation, for use in the two-year programs.

(5) Michigan's institutions of higher education with law enforcement or criminal justice programs should consider the establishment of courses and curricula in advanced criminalistics curricula.

AN ANA

IN THE

in

AN ANALYSIS OF THE TEACHING OF CRIMINALISTICS
IN THE JUNIOR AND COMMUNITY COLLEGES OF MICHIGAN

By

Robert Harold Palrud

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE

School of Criminal Justice

1975

LIST OF T

LIST OF F

LIST OF A

Chapter

1.

2.

3.

TABLE OF CONTENTS

	Page
LIST OF TABLES	iv
LIST OF FIGURES	v
LIST OF APPENDICES	vi
Chapter	
1. THE PROBLEM	1
Introduction	1
Statement of the Problem	4
Delimitations	5
Definition	6
2. IMPORTANCE OF THE PROBLEM	7
Criminalistics as a Police Function	7
The Nature of Criminalistics	10
Criminalistics and the Criminal Justice System	13
Summary	19
3. REVIEW OF THE LITERATURE	21
Criminalistics in the Curriculum	21
Criminalistics Course Content	26
Criminalistics Teaching Methods	29
Teachers of Criminalistics	33
Summary	35

4. 1

5.

6.

BIBLIOGR

APPENDIC

	Page
4. RESEARCH OF CRIMINALISTICS EDUCATION	37
Research Methods	37
Analysis of Results	39
Conclusions	50
Summary	54
5. RECOMMENDATIONS	55
The Improvement of Criminalistics Teaching Skills	55
The Improvement of Criminalistics Course Content	57
6. SUMMARY	60
BIBLIOGRAPHY	75
APPENDICES	79

Table

- 1. P
- 2. C
- 3. E

LIST OF TABLES

Table		Page
1.	Police and Teaching Experience and Education Ratings for Criminal Investigation Faculty	41
2.	Criminalistics Learning Objectives Taught by Criminal Investigation Faculty	45
3.	Educational Methods used by Criminal Investi- gation Faculty	48

Figure

1. T

2. F

3. D

4. D

5. D

LIST OF FIGURES

Figure		Page
1.	The Cop-Out Cops	15
2.	Frequency Distribution of Faculty Patrol Officer Experience	42
3.	Distribution of Total Police Experience . . .	42
4.	Distribution of Percentages of Learning Objec- tives Taught by each Instructor	47
5.	Frequency Distribution of Percentages of Instructors who Taught each Learning Objec- tive	47

Appendix

A.

B.

C.

D.

E.

LIST OF APPENDICES

Appendix	Page
A. Sample Training Council Instructor Guidelines	79
B. Training Guide Criminal Investigation Objectives	84
C. Criminal Investigation Course Guidelines . .	88
D. Principles of Learning and Motivation. . . .	93
E. Questionnaire	94

Introduction

One do
these days
crime. From
Upper Penin
75% for the
wide poll, c
munity prob

The in
for the con
ade there h
the family c
stitutions,
which contr
which foster
for the pre

¹ A tel
Michigan St
in Michigan
75% increas

² Michi
Michigan Pub

CHAPTER I

THE PROBLEM

Introduction

One does not have to look very far or listen very hard these days to discover one of the major concerns of the state: crime. From the center of Detroit to the backwoods of the Upper Peninsula, crime is ever with us and ever-growing, up 75% for the past five years in Michigan.¹ In a recent state-wide poll, crime was considered the worst of a list of community problems.²

The institution which Americans traditionally look to for the control of crime is the police. Within the past decade there have been identified many other social structures--the family environment (or lack of it), our educational institutions, our overcrowded cities, our beleaguered economy--which contribute in part to attitudes and personal situations which foster crime. But we still look primarily to the police for the prevention and solution of crime.

¹A telephone conversation with the Records Bureau of the Michigan State Police revealed that the number of Part I Crimes in Michigan rose from 266,973 in 1969 to 466,488 in 1974, a 75% increase.

²Michigan Office of Criminal Justice Planning, The Michigan Public Speaks Out on Crime, March, 1974.

During
strations,
became a ho
legislation
ment was th
1968, which
tion, the a
national e

As a
criminal j
proached a
with the a
approaches
data base
plication
problems.

Perha
zation of
the recent
tion of th
education
by a progr
the Law En
signed to
seek highe

During the 1960's and early 1970's, due to riots, demonstrations, and continually rising crime rates, crime control became a hot political topic and the target of much federal legislation and funding. The prime example of this development was the Omnibus Crime Control and Safe Streets Act of 1968, which created the Law Enforcement Assistance Administration, the agency responsible for coordinating and funding national efforts on crime control.³

As a result of this new interest and new funding, the criminal justice system (which was finally identified and approached as such) began to attain professional attributes, with the advent of scientific research into the problems and approaches of the various system components, concern with a data base for proper managerial decision making, and the application of new technology to both management and field problems.

Perhaps the most obvious development toward professionalization of personnel in the criminal justice system has been the recent accent upon their education, especially the education of the nation's police. All over the country, police education programs were given a tremendous shot in the arm by a program of the above-mentioned crime control act called the Law Enforcement Education Program (LEEP), which was designed to encourage present and potential police officers to seek higher education.

³ Omnibus Crime Control and Safe Streets Act of 1968, Public Law 90-351, June 19, 1968.

Wi
service
and enco
colleges
availab
liferat
which ha
period
to 34.⁴

Th
in crim
various
the end
sented
who wan
justice
offered

Th
the cou
and con
of the
analyse
content

With the resulting sudden supply of pre-service and in-service law enforcement personnel wishing to attain degrees, and encouraged to utilize LEEP tuition scholarships, Michigan's colleges and universities scrambled to attract this readily available source of students. The result was a sudden proliferation of law enforcement degree programs, a development which has sometimes been described as "hasty." During the period 1968 to 1974 the number of these programs rose from 15 to 34.⁴

There is a feeling on the part of many Michigan educators in criminal justice that the curricula and offerings of the various institutions should be standardized and defined, to the end that when a degree is granted or a transcript is presented for analysis, the prospective employer or anyone else who wants to evaluate the person's education in criminal justice will not have to consider the quality of education offered at the various institutions in his evaluation.

The criminal justice curriculum, that is, the body of the courses which a student is expected to take, has been and continues to be the focus for efforts at standardization of the law enforcement educational experience. However, these analyses of curricula have put very little accent upon course content and teaching methodology, with the result that a needed

⁴Data from editions 1 and 2 of Criminal Justice Education Programs in Michigan, School of Criminal Justice, Michigan State University, published in 1972 and 1974.

quest for

amounts

could o

name, th

evading

Th.

debilit

nalistic

patrol

many di

trainin

largely

institu

Stateme

In

these v

must fi

one par

of know

odology

in the

Wh

only on

and eff

should

approac

quest for uniformity in education can be sidestepped by what amounts to deceptive labeling practices: Various institutions could offer quite different material under the same course name, thus meeting the test of curriculum uniformity while evading the spirit of the test.

This lack of information concerning course content is debilitating when one attempts to analyze the status of criminalistics education in the state. Criminalistics for the patrol officer can be taught many different ways and include many different topics, with the result that the criminalistics training a patrolman receives at one institution could be largely or completely at variance with that offered by another institution.

Statement of the Problem

In order to end the possible inequities outlined above, these variances in course content and teaching methodology must first be identified and their prevalence measured. Thus, one part of the problem to be addressed in this paper is lack of knowledge about the specific subject materials and methodology used in the teaching of criminalistics to patrolmen in the junior and community colleges of Michigan.

While the background and experience of an educator is only one measure of his or her ability to instruct properly and effectively, it is an important measure, and one which should not be overlooked when evaluating an institution's approach to education. Until this study there has been no

known a
experie
he is e
problem
cations
nalisti
ment pr

Delimit

Th
tions w
enforce
tional
law enf

Th
stituti
justice
structo

Th
only as
It does
tial cr

Th
evidenc
perform
investi
detecti

known analysis of an instructor's background of professional experiences as related to the specific course material which he is expected to teach. Therefore, a second part of the problem is lack of knowledge about the professional qualifications of instructors who are called upon to teach criminalistics to patrolmen in Michigan's two-year law enforcement programs.

Delimitations

This study is concerned with public educational institutions within Michigan which offer an Associate Degree in law enforcement or criminal justice. It does not consider educational programs leading to bachelor's or higher degrees in law enforcement.

This study is limited by responses from the various institutions in that the data for the evaluation of criminal justice programs came solely from questionnaires sent to instructors at these institutions.

This study will deal with the teaching of criminalistics only as it pertains to police officers, pre-or in-service. It does not deal with the education of practicing or potential criminalists.

This study applies only to investigations and physical evidence with which policemen are expected to cope in the performance of their normal duties. It does not pertain to investigations or analyses which are normally processed by detectives or laboratory analysts (e. g. homicides, bank

robberies

Definitive

Cri

discover

protecti

physical

identifi

poses of

delimita

are per

officers

be made

robberies, arson, etc.).

Definition

Criminalistics, interpreted in a broad sense, is the discovery, recognition of value, recording, recovery, marking, protecting from contamination, packaging, and transporting of physical evidence, followed by examination, comparison, or identification, and interpretation of results.⁵ For the purposes of this study, the definition is narrowed, by the last delimitation above, to those portions of the science which are performed, or expected to be performed, by standard police officers. Whenever the complete science is meant, this will be made clear in the text.

⁵Edward Whittaker, "The Adversary System: Role of the Criminalist," Journal of Forensic Sciences, Vol. 18, No. 3 (July, 1973), p. 184.

In t
the opera
What have
different
or value
questions
ceive the
knowledge

Criminal

Crin
cipline o
cops? Au
the patro
ments of

1
t
:
t
a
a
l
1
v

CHAPTER II

IMPORTANCE OF THE PROBLEM

In this chapter, the relationship of criminalistics to the operation of the criminal justice system will be examined. What have the police to do with criminalistics; why is it any different from other police duties; and what is its purpose or value in the criminal justice system? The answers to such questions will show why it is important that our police receive the best possible education in criminalistic skills and knowledge.

Criminalistics as a Police Function

Criminalistics is often thought of as a scientific discipline or an esteemed profession; why are we trusting it to cops? Authorities on the police function seem to agree that the patrolman should be ready to perform at least the rudiments of criminalistics:

" . . . one of the basic functions of the uniformed officer, the one that he performs more than any other, has not changed. That function is preliminary investigation. It doesn't matter whether he gets a radio call, is called by a citizen, or makes an observation, he is nearly always the first officer at the scene of trouble. In the vast majority of these situations he is responsible for conducting the preliminary investigation. In fact, for certain investigations

wh
co

"T
m

t
p

t
I

f
w

a
h

Two

of the

reports

sponsib

Commiss

lished

and ot

United

identi

ards

Report
(Beve

Illin

which require no special expertise, he may conduct the entire investigation."⁶

"The duties of the patrolman are of the utmost importance to successful prosecutions. . . . It is he who through a proper and thorough understanding of evidence and its proper preservation, supplies the information necessary for successful prosecutions. It is he who must evaluate the evidence found at the scene of a crime to determine what action should be taken in making an arrest and in determining the type of crime that has been committed. He is a most important part in any criminal investigation and he must be able to evaluate and preserve any evidence which might serve to identify the person responsible for committing an offense, as well as to assure successful prosecutions."⁷

Two authoritative commissions have analyzed the function of the police within the criminal justice system and their reports identify criminal investigation as one primary responsibility of the patrol officer. The National Advisory Commission on Criminal Justice Goals and Standards was established in 1971 and given the task of providing police agencies and other elements of the criminal justice system of the United States with a sense of direction and unity, by the identification of goals to be attained and concomitant standards of action.

⁶John G. Nelson, Preliminary Investigation and Police Reporting: A Complete Guide to Police Written Communications (Beverly Hills, California: Glencoe Press, 1970), p. xv.

⁷Floyd N. Hefron, Evidence for the Patrolman (Springfield, Illinois: Charles C. Thomas, 1958), pp. v-vi.

One v
police, a
with the
agency sh
investiga
nary inve
important

C
a
n
c

Th
working
a repor
of Mich

8
ards an
Printin
9

One volume of the commission's report refers to the police, and standard 9.7 of that volume deals specifically with the criminal investigation function: "Every police agency should recognize that patrol officers are preliminary investigators and that they should conduct thorough preliminary investigations."⁸ In the commentary for this standard, important policies for its facilitation are given:

Chief executives of police agencies must guard against officers and investigators becoming mere report takers. Failure to insure that each crime receives the appropriate level of investigation permits some crime to go unchallenged, creates a negative attitude among the public, and severely reduces the motivation of police officers regarding many types of crimes. Police chief executives, pleading lack of time and manpower, sometimes permit officers to respond to reports of crime more than 24 hours later. The officer then too often only "takes a report." He may conduct little or no preliminary investigation. . . .

Every agency should insure that each patrol officer has adequate training as a criminal investigator. . . . The patrol officer should continue the initial investigation at the scene until the time he spends seems unlikely to produce additional benefits.⁹ [emphasis added]

The Michigan Advisory Commission on Criminal Justice, working from September, 1973 until September, 1974 produced a report, Criminal Justice Goals and Standards for the State of Michigan, which parallels the national project, with

⁸ National Advisory Commission on Criminal Justice Standards and Goals, Police (Washington, D. C.: U. S. Government Printing Office, 1973), p. 233.

⁹ Ibid., p. 234.

special a
practices
specializ
agency "e
efforts a
tary we r
is direct
critical
standard
tailed p
complica

The Natu

If

tasks sh
ly, say
hours in

Tru

wicked i
police-r
popular

10
Criminal
(Lansing

11
12

special attention paid to Michigan's particular needs and practices. The report treats criminal investigation as a specialized operation, and recommends as a subgoal that each agency "establish priorities to insure that its investigative efforts are efficient and goal-oriented."¹⁰ In the commentary we read: "the success of this [investigative] effort is directly related to what an officer accomplishes in the critical early stages of the investigation."¹¹ Finally, standard 37.1 says: "the patrol officer should conduct de-tailed preliminary investigations in all but very serious or complicated cases."¹² [emphasis added]

The Nature of Criminalistics

If we take for granted that some basic criminalistics tasks should be done by the patrolman, can't it be done quickly, say part of a criminal investigation course or a few hours in the police academy?

True, the basics of criminalistics training can be sandwiched into a criminal investigation course or covered in a police-run school. Indeed, it appears that this is a very popular method for preparing police officers for performance

¹⁰Michigan Advisory Commission on Criminal Justice, Criminal Justice Goals and Standards for the State of Michigan, (Lansing, 1975), p. 62.

¹¹Ibid.

¹²Ibid.

of their
coupled
of train
trainin
pect of
togethe
handlin
better
tective

Su

to the
crimina
police
ing for
the fie
much ab
tions w
react to
problems
of effec

13
Recognit
Vol. 14

14
Esther M
Universi
Kent Sta

of their criminalistics duties:" A few lectures, perhaps coupled with a simulated crime scene search, are the extent of training offered in the best police academies. In many training facilities even less attention is paid to this aspect of investigative procedure. This short exposure, . . . together with a more or less detailed set of directions for handling clue materials, constitute the present extent of the better efforts to educate the police recruit or neophyte detective."¹³

Such a treatment amounts to a perfunctory introduction to the skills, knowledge, and attitudes which a professional criminalist attains. This is to say that the exposure of the police to criminalistics need not be confined to menial training for the automatic completion of tasks. On the contrary, the field is ripe for education in criminalistics. There is much about the preliminary investigation and prosecution functions which require that the patrolman "effectively plan for, react to, or resolve a wide range of societal or technological problems on the basis of rational choice and an understanding of effects and alternatives."¹⁴

¹³James W. Osterburg, "Police Academies Can Teach the Recognition and Collection of Physical Evidence," Police, Vol. 14, No. 4 (March-April, 1970), p. 54.

¹⁴Quoted Material from a definition of "education" in: Esther M. Eastman, "Police Education in American Colleges and Universities: A Search for Excellence," (Ph.D. dissertation, Kent State University, 1972), p. 1.

The words of a recent authoritative text will help to illustrate the extent to which a successful investigation may depend upon personal attributes and skills which a typical "training" curriculum does not develop:

Physical clue material in and about the scene of a crime is highly fragile in the sense that the elements, time, inadvertent movement, improper packaging and handling and numerous other influences can reduce or destroy its evidentiary value. The legal and scientific standards concerning the collection and processing of physical evidence are rigid.¹⁵

Evidently, crime scene work is a complex task requiring non-trivial skills. More importantly, it also involves a degree of judgment:

A competent search of a crime scene demands specialized training, an understanding of basic procedures, an appreciation of the "why" of certain actions, and close attention to detail in carrying them out. . . . The success of any investigation is always a function of the intellect and experience of the officer. He must develop an hypothesis that will serve as the initial framework for the investigation. That hypothesis, based on the first survey of the scene, is simply a set of reasoned assumptions concerning how the crime was committed and the general sequence of acts that were involved. The hypothesis must be constantly reassessed in the light of each new fact or lead that is uncovered. . . . It is only through such a process of reassessment that the full value of the investigator's experience can be realized.¹⁶

So skills and judgment are important to a policeman's handling of a crime scene. To this list should be added

¹⁵Richard H. Fox and Carl L. Cunningham, Crime Scene Search and Physical Evidence Handbook (a prescriptive package prepared under Grant No. 71-DF-7618 of the Law Enforcement Assistance Administration, Washington, D. C.: U. S. Government Printing Office, 1973) p. 1.

¹⁶Ibid., p. 14.

another important requisite for quality work--a knowledge of applicable concepts:

Identity is always sought in criminal investigations. Was the revolver found on the suspect the one that fired the bullet found in the body of a murder victim? If so, was it the suspect who fired it? More often than not the answers to such questions must be sought from seemingly unrelated items of information and physical evidence. Therefore several important concepts bearing on the quality and usefulness of physical evidence in establishing identity should be considered. Basically, these concepts are: mathematical probability, class characteristics and similarity, comparisons, individuality, rarity, exchange, and the relationship of experience to the investigation.¹⁷

Criminalistics and the Criminal Justice System

Can we afford the amount of criminalistics training and education which the authorities seem to suggest is necessary for the proper preparation of a police officer for the tasks expected of him? Can we afford not to give them this amount?

This is a question which is properly answered only by a cost/benefit analysis far beyond the scope of this paper. However, some opinions will be given on the costs of criminalistics education in the chapter on recommendations, and let it be suggested here that they need not be overwhelming. The benefits to be reaped, while not quantitatively stated, can be inferred from various writings such as the following concerned with the interaction of police with people, prosecution, and courts.

¹⁷Ibid., p. 3.

The people are the "purchasers" of our criminal justice system. They stand to gain much from the current intense interest on the part of police theorists in defining the proper functions and operating priorities of the police. But how do they learn about police functions; how do they visualize "the man in blue?"

The mass media provide the most popular insights into police activities, and the pictures painted are not always rosey. The National Observer ran the picture on the following page as the cover for their issue of August 3, 1974. The accompanying article told the public that much police "work" amounts to being seen and acting sympathetic, while real police work goes untouched. The article refers to the findings of Bill Evans, a director of police research at Cresap, McCormack and Pageant, Inc., a management consulting company. He made comments about a county police system which allegedly apply to many departments:

Evans reports that the county's police officials emphasized public relations over crime-solving. Police officials wanted all calls handled swiftly so patrol cars could quickly "get back into service." Thus uniformed officers were "not expected or allowed to conduct investigations at crime scenes." And consequently, leads which might have helped detectives were lost, Evans asserts. But Fairfax's detectives weren't encouraged to make investigations either, Evans adds. They were to talk to all victims, "sympathize with them," and to indicate "police interest" in their cases. They were to make as many such "contacts" as possible. Thus they had little time left for detective work. Fairfax police performed

The Cop-Out Cops

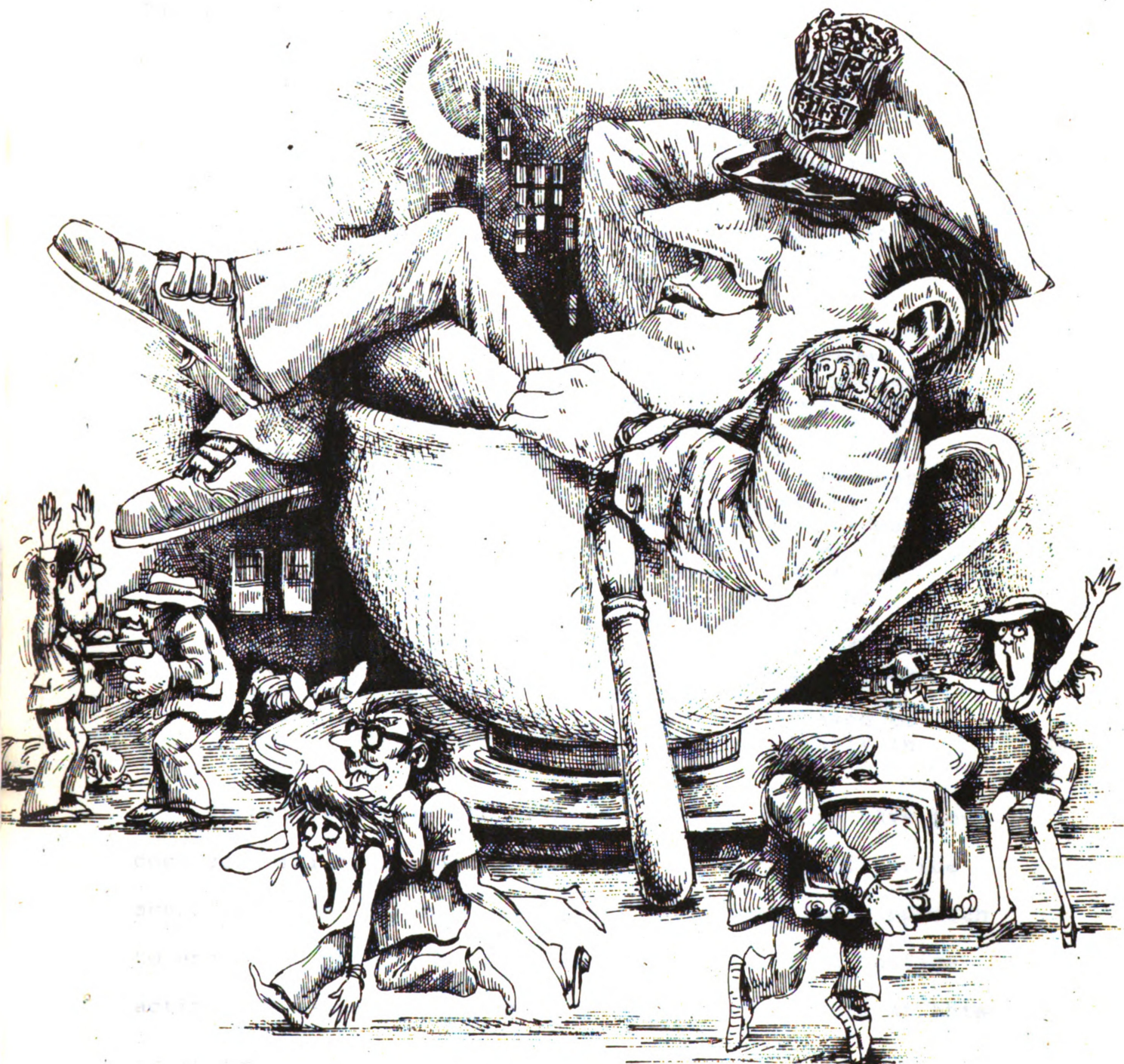


Figure 1. The Cop-Out Cops.

Ha
The art

cogni
agenc
to a
actio

serv

as "neighborhood guards and report-takers rather than as policemen" Evans reports.¹⁸

Have the police anything better to do with their time?

The article makes some suggestions:

. . . burglary is the most common "household and commercial crime." Yet criminologists acknowledge that burglary is the least-investigated, least-solved of major crimes. And in line with allegations that police departments have mainly responded to past criticism merely by improving their public relations, many of the crime victims stated that the police performed satisfactorily although the officers did little more than listen to their stories.

Jay Cameron Hall, a former policeman, crime lab specialist, and now a consultant to police, insists that properly trained police could do better. "Some states have high caliber, fairly well-trained officers," he says. "That's the exception. Few police have more than fragmented knowledge of scientific evidence-gathering, for example. So the gathering of physical evidence which could help identify burglars as well as other felons is almost nonexistent. My guess is that less than a tenth of one percent of crimes get more than a fingerprint check." Hall gives two main reasons for this. First, "Police don't know enough to realize what investigative possibilities exist." Second, "Police treat crime so lightly they feel they didn't need to bother with evidence collection, especially in burglaries."¹⁹

Theorists within the criminal justice system have recognized similar shortcomings in the activities of police agencies. The LEAA has adopted a "crime-specific" approach to analyzing objectives and successes of criminal justice action and research programs. Part of the strategy of this

¹⁸August Gribbon, "The Cop-Out Cops," The National Observer, August 3, 1974, p. 14.

¹⁹Ibid.

approach is to increase the risk associated with the commission of crimes by improving the detection, identification, and apprehension functions of police. The hypothesis is that increased arrest rates will serve both a short-term purpose in bringing suspects into the criminal justice system with the threat of punishment, and a long-term deterrence function. The crimes chosen for intense analysis under this crime-specific model are burglary and stranger-to-stranger assaults. These crimes have a high rate of incidence, a low rate of clearance by arrest, and a high cost to society.²⁰

If physical evidence collected and processed could be considered a benefit in a cost/benefit analysis of the investigative efforts of our police, the following suggests one reason for the poor success rate of our police in containing the crime of burglary:

Presently, the involvement of forensic science laboratories in the investigation of commercial and residential burglaries is minimal. A study conducted by Cornell Aeronautical Laboratories in 1968 found that evidence was collected and submitted to laboratories in a New York State tricounty area in only 1.6 percent of all burglaries reported to police. Data presented in the Stanford Research Institute Report "The Role of Criminalistics in the World of the Future" illustrated that less than one percent of burglary reports in Santa Clara County, California in 1970 resulted in an actual laboratory case report. Latent fingerprints are the only form of physical evidence which is regularly searched for at the scenes of burglaries.²¹

²⁰C. R. Kingston and J. L. Peterson, "Forensic Science and the Reduction of Crime," Journal of Forensic Science, Vol. 19, No. 3 (July, 1974), p. 419.

²¹Ibid., p. 420.

Is there evidence other than fingerprints which the police could use to solve burglaries and convict burglars? In other words, are the potential benefits substantial? Research says so: "A study by Parker and Peterson in 1970 found that 88 percent of the crime scene environments studied possessed physical evidence meriting laboratory examination, but only four of the more than 3300 Part I offenses committed during the study period resulted in an actual crime laboratory analysis (excluding latent fingerprints). These data indicate that significant quantities of potentially meaningful physical evidence go unrecognized, undeveloped, and uncollected."²²

This gap between the potential and the actual use of criminalistics is tragic not only for the police, who lose much information which would be valuable in generating and identifying suspects, but also to the courts, where the use of physical evidence could ease some problems which the adjudication process faces. Charles W. Tessmer, President of the National Association of Criminal Defense Lawyers, comments on the importance of criminalistics in the courtroom: "In my last seven trials the outcome has rested to a large degree upon my ability to cope with scientific evidence and the explanatory testimony of the expert witness. As most criminal trial lawyers are beginning to know, scientific

²²Ibid., p. 421.

evidence

the in

As

Justice

vs. Il

crimin

tory,

forcem

the lo

extrin

vestig

hinge

ratory

hairs

partme

search

Summa

polic

preli

which

Evide
ology

evidence and expert testimony are becoming indispensable in the investigation and trial of many criminal cases."²³

And no less an authority on the judicial process than Justice Arthur Goldberg, speaking for the majority in *Escobedo vs. Illinois*, called for increased use of and improvements in criminalistics skills: "We have learned the lesson of history, ancient and modern, that a system of criminal law enforcement which comes to depend on the 'confession' will, in the long run, be less reliable than a system that depends on extrinsic evidence independently secured through skillful investigation. More and more the solution of major crimes will hinge upon the discovery at crime scenes and subsequent laboratory analysis of latent fingerprints, weapons, footprints, hairs, fibers, blood, and similar traces. As a result, departments must train and devote greater numbers of men to searching crime scenes for physical evidence."²⁴

Summary

In this section we have found that authorities on the police function have agreed that the patrolman has a role as preliminary criminal investigator. Literature was examined which illustrated the complexity of the tasks involved in

²³Charles W. Tessmer, in a book review of *Scientific Evidence in Criminal Cases* in *Journal of Criminal Law, Criminology, and Police Science*, Vol. 65 No. 1 (March, 1974)

²⁴*Escobedo vs. State of Illinois*, 84 S. Ct. 1764.

prelimi

skills

this re

cord o

such as

ment o

revers

preliminary investigations, implying that the knowledge and skills necessary for the patrolman to function adequately in this role are considerable. Finally, the unimpressive record of the police in the investigation of frequent crimes such as burglary was reviewed, and the potential for improvement of the whole criminal justice system if this trend were reversed was touched upon.

on

fi

in

th

pr

fo

pr

Cr

cr

li

ti

th

pa

gr

of

ti

th

by

fi

CHAPTER III

REVIEW OF THE LITERATURE

Chapter III presents other writers' opinions and findings on several topics relevant to criminalistics education. The first of these topics is the place criminalistics should hold in the curricula of educational institutions of the nation and the state. Then literature related to the course content is presented, followed by a section on possible teaching methods for criminalistics material. Finally, a word is said about previous studies of Michigan's criminal justice faculty.

Criminalistics in the Curriculum

Perhaps before one attempts to analyze the efficiency of criminalistics education in Michigan, he should ask the preliminary question: does criminalistics have any part in education at all? Certainly one of the hottest controversies in the field of criminal justice education today, resulting in part from the rapid growth of law enforcement education programs, is the question of education, as opposed to training of the police.

Stated very simply, some criminal justice educators question the propriety of having "training"-type courses within the curriculum as opposed to "education" courses. In a study by Esther Eastman on police education, these terms were defined as follows: "Education: the process by which persons

are ma

plan f

techno

unders

proces

compe

expec

train

essen

This

lyze

beco

crim

forc

cred

in a

coun

of

gue

two

(Sp

are matured, trained, disciplined, and conditioned to effectively plan for, react to, or resolve a wide range of societal or technological problems on the basis of rational choice and an understanding of effects and alternatives." "Training: the process by which persons are brought to an adequate level of competence, skill and understanding to properly perform tasks expected or required of them."²⁵

After many studies and much discussion, the education vs. training problem has been very well defined, but it remains essentially unsolved, at least at the associate degree level. This fact is reflected in the several studies which have analyzed the associate degree law enforcement curriculum, and it becomes especially obvious when one analyzes the treatment of criminalistics which these authors propose.

In a 1963 study of 49 community colleges with law enforcement curricula, Gammage suggested the inclusion of three credits each of criminal evidence and criminal investigation in a standard curriculum.²⁶ While these are not criminalistics courses per se, topics of criminalistics are a standard part of these courses, and it is this writer's very subjective guess that this curriculum would be equivalent to at least two credits of criminalistics work.

²⁵Eastman, p. 1.

²⁶Allen Z. Gammage, Police Training in the United States
(Springfield, Ill. Charles C. Thomas, 1963) p. 178.

Ruthe

credi

a res

force

cludi

nal e

cover

study

the r

nal

cour

enfo

the

tior

tio

men

men

ges

—
Po
se

Po
Cr
Pr

Ec
O
F

In a 1964 thesis on police curricula in junior colleges, Rutherford proposed a standard curriculum including four credits each of criminal investigation and chemistry.²⁷ As a result of a more extensive survey of 164 two-year law enforcement programs in 1968, Vaupel suggested a curriculum including three credits each of criminal investigation and criminal evidence.²⁸ Again, these courses would be expected to cover many aspects of criminalistics. A 1969 LEAA-funded study of police education and training in Florida suggested the use of a core-course curriculum which includes both criminal investigation and an introduction to criminalistics course.²⁹

One of the more impressive studies of the two-year law enforcement curriculum was performed under the auspices of the American Association of Junior Colleges and the International Association of Chiefs of Police with the aid of a national law enforcement advisory council. The resulting document--the American Association of Junior Colleges Law Enforcement Program Guidelines (AACJLEPG), published in 1968--suggested a two-year curriculum which included these credits each

²⁷James W. Rutherford, "The Feasability of Instituting a Police Curriculum at the Junior College Level" (M. A. Dissertation, Michigan State University, 1964), p. 136.

²⁸Carl F. Vaupel, "A Survey and Analysis of Two-Year Police Science Curricula in the United States with Recommended Criteria" (M. A. Dissertation, University of South Dakota, 1968), pp. 137-138.

²⁹Warren E. Headlough, Development Police Training and Education in Florida (a report developed under Grant No. 350 of the Law Enforcement Assistance Administration) (Tallahassee, Fla.: Florida Police Standards Council, 1969), Appendix E.

of crim

cedures

best na

time, V

compar

curric

ductio

ricula

compl

AACJL

istic

tors

sider

educ

for

Coll

Coll

the

Comm

diss

gra

for

(un

of criminal investigation, logic, criminal evidence and procedures and Introduction to Criminalistics.³⁰ This being the best nationwide study of the two-year curriculum up to that time, Yankee, in 1970, used the AACJLEPG as a standard for comparison in his dissertation on the two-year law enforcement curricula in Michigan.³¹ His survey revealed that the Introduction to Criminalistics course was required in 6 of 22 curricula studied, or 28% compliance, while the average rate of compliance was 63%.³² Indeed, Yankee recommended that the AACJLEPG be revised to exclude the Introduction to Criminalistics course, on the basis that 65% of a panel of 35 educators used in a study of four-year curricula by Marsh³³ considered the course to be unimportant.³⁴

A lengthy study of the status of criminal justice higher education efforts in the nation was done by Esther Eastman in

³⁰Thomas S. Crockett and James D. Stinchcomb, Guidelines for Law Enforcement Education Programs in Community and Junior Colleges (Washington, D. C.: American Association of Junior Colleges, 1968), p. 18.

³¹William Joseph Yankee, "A Description and Evaluation of the Associate Degree Law Enforcement Curricula in the Public Community and Junior Colleges of Michigan" unpublished Ph.D. dissertation, Michigan State University, 1970).

³²Ibid., p. 110.

³³Richard F. Marsh, "A Core Program Proposal of Undergraduate Studies for the Professional Preparation of Law Enforcement Personnel in Four-Year Colleges and Universities" (unpublished Masters thesis, Florida State University, 1969).

³⁴Yankee, op. cit., p. 134.

1972, producing much quantified information.³⁵ Drawing upon philosophical arguments and impressive references on the need for law enforcement education "anchored in the liberal arts," Eastman recommended a two-year program with no requirements for criminalistics or criminal investigation courses. One presumes that any criminalistics education would have to come from four unspecified elective courses.³⁶

The Michigan Criminal Justice Educators Association (MCJEA), established in 1970, probably had the greatest effect of any group on curriculum choices of the two-year institutions in Michigan. Its initial goal was "to standardize curriculum and instructor standards within the various programs to facilitate credit transferability between two and four year programs."³⁷ In 1973 the MCJEA adopted its own core curriculum guidelines for associate degree programs, and Criminal Investigation is included as one of the 8 recommended courses.³⁸ No criminalistics or other courses are mentioned. Although there may have been considerable discussion within the association before adoption of the curricula, no supporting

³⁵ Eastman, op. cit.

³⁶ Ibid., pp. 207-208.

³⁷ Michigan Criminal Justice Educators Association, "Coordinating Criminal Justice Education in Michigan: The Michigan Criminal Justice Educators Association" (unpublished monograph [East Lansing, Michigan] 1974), p. 1.

³⁸ Michigan Criminal Justice Educators Association, "Michigan Criminal Justice Educators Association Recommended Associate Degree Core Curriculum in Law Enforcement" (unpublished monograph; [n. p.] 1973).

rationale is given in the document for the inclusion or exclusion of particular courses.

The foregoing illustrates the profound disagreement which exists on the part of academicians as to the role which criminalistics and criminal investigation should play in the two-year law enforcement curriculum. A far more complex problem is the choice of content for these courses--the next topic to be reviewed.

Criminalistics Course Content

In addition to the previously-mentioned MCJEA, the Michigan Law Enforcement Officers Training Council (MLEOTC) is another body which has considerable influence on the state's efforts in criminal justice higher education. The Council is a state agency which develops, certifies, and helps to administer the training programs which are mandatory for most of Michigan's police officers. This training usually occurs within the setting of a police academy, but portions of academic degree programs are, in certain cases, substituted for requirements of the training program.³⁹

Some of the content of the Council training program deals with criminalistics, and therefore is of interest to this study in light of the mutual dependency of education and training: each, when properly performed, contains elements of the other. There also exists the unexplored possibility that the

³⁹Conversations with Jerry Stemler and Wesley Hoes, M. L. E. O. T. C., on August 21, 1975 and September 5, 1975, respectively.

Council program has exerted considerable influence on the content of criminal justice educators' courses by virtue of its being the only standardized program in the state until 1973, and because of close ties between some police academies and two-year institutions.

Starting from a basic curriculum guide written in 1966, the year of its inception, the Council built a revised and enlarged curriculum for use in its police academies, and in 1972, published their Instructor Guidelines Basic Training Manual.⁴⁰ Garza and Pierce, in a 1973 study analyzing the objectives of this training package, described the development of the program as using a "subject-oriented" approach, depending heavily upon current knowledge and opinions for the decisions on content and study objectives. On this point they write: "The unit subjects and the lessons were based on existing training programs, the opinions of the instructors in the academies, the opinion of the senior administrators in the field, and the personal judgment of the person preparing the individual sections of the program." And they continue on the quality of the program: "The training program developed, which is presently in use, is one of the most complete factual, and professional training programs in existence today."⁴¹

⁴⁰Michigan Law Enforcement Officers Training Council, Instructor Guidelines Basic Training Manual (East Lansing, Michigan: MLEOTC, 1972).

⁴¹Manuel Garza and Kenneth Pierce, "A Comparative Study of the Project STAR Police Terminal Performance Objectives and the Michigan Law Enforcement Officers Training Council Basic Training Objectives (unpublished Masters Thesis, Michigan State University, East Lansing, Michigan, 1973).

The material of the Instructor Guidelines Basic Training Manual dealing with criminalistics is found in a unit entitled Criminal Investigation, composed of nine sections on particular topics such as vice investigation, collection and preservation of evidence, mock crime scene, fingerprint collection and analysis, etc. The bulk of the material consists of a suggested outline of main points. This is preceded in each section by a page containing a list of objectives for the section, and several suggested teaching activities. For an example of a section of the Criminal Investigation unit, see Appendix A.

The directions which accompany each section of the unit make it clear that the basic task of the teacher is to instruct so that the student is able to meet the stated objectives of that section. These objectives are of special importance for two reasons. First, they serve as "concise statements of the lesson content and provide an excellent overview of the Units of instruction."⁴² More importantly, they serve in this study as the major evaluative tool for analysis of the criminalistics content of the criminal investigation courses in the two-year law enforcement programs.

The objectives are operationally stated, that is, the student is supposed to "explain," "state," "cite," or "demonstrate" the knowledge or skill component of the objective.

⁴²Ibid., pp. 35-36.

However, they are not "state of the art" learning objectives in that they have no statement of conditions under which the objective is to be demonstrated, nor standards which describe the minimal level of performance indicating achievement of the objective.⁴³ The 53 student objectives for the Council's unit on criminal investigation are given in Appendix B.

To note one more literature source for criminalistics course content, the Michigan Criminal Justice Educators Association has developed a "course guideline" for each of the eight courses in their recommended Associate Degree Core Curriculum.⁴⁴ Each guideline is simply an outline of appropriate material for the course, unaccompanied by explanatory or guidance materials. The complete guideline is shown in Appendix C. Aside from the section "obtaining information," most of the material is directly related to criminalistics.

Criminalistics Teaching Methods

One of the major concerns of this paper is with the methods used by the faculty of Michigan's two-year institutions in teaching criminalistics to patrolmen, regardless of the title under which it is taught. This writer attempted to show in

⁴³These are common attributes of modern instructional objectives as defined by authorities such as Robert F. Mager, in Preparing Instructional Objectives (Belmont, California: Fearon/Lear Siegler, 1962).

⁴⁴Michigan Criminal Justice Educators Association, "Michigan Criminal Justice Educators Association Recommended Associate Degree Core Curriculum in Law Enforcement" (unpublished monograph; [n.p.] 1973).

earlier portions that the skills, knowledge, and grasp of concepts of criminalistics which are required of a patrolman if he is expected to perform adequately are non-trivial, indeed, they are demanding and complex.⁴⁵ Given these expectations of the student, one would hope to find a matching degree of development in the teaching methods used to transmit these skills, attitudes, and concepts. It appears that the opposite is true.

To the writer's knowledge, the closest thing to a treatise on the teaching of criminalistics is an article by James Osterburg dealing only with the methods of teaching skills in evidence recognition and preservation, and this within the context of a police academy. Osterburg's approach revolves around his text The Crime Laboratory: A Case Study Method of Scientific Criminal Investigation.⁴⁶ The book utilizes the case study method: "Using actual police cases, the author selected a wide variety of clue materials so that the reader is reasonably exposed to the usual as well as some unusual clues that were found in real life criminal investigations. The innovative aspect that raises police education to a new high is the method chosen to present the concepts involved

⁴⁵See esp. "The Nature of Criminalistics" pp. 10-13.

⁴⁶James W. Osterburg, The Crime Laboratory (Bloomington: Indiana University Press, 1968).

in the recognition, collection, and preservation of evidence."⁴⁷

Osterburg would overcome the lack of laboratory equipment in the schools by photographic presentation of the evidence:

"A typical case exercise then consists of two photographs: one of the crime scene evidence; the other of apparently similar evidence obtained from a suspect in the case. The aim is to determine if the crime scene evidence and that obtained from the suspect had the same origin."⁴⁸

Lacking a literature dealing specifically with the teaching of criminalistics or criminal investigation, we can turn to general education theory, some of which is applicable to the particular problem of identifying good methods for teaching criminalistics.

Obviously, if one seeks to analyze the teaching methods utilized by learning systems as potentially varied as those under consideration, the task could be simplified and facilitated by the use of an organized body of theory describing such systems. A text and indeed a whole body of theory devoted to the systematic solution of teaching problems has been developed under the title of Learning System Design,⁴⁹ by Davis, Alexander, and Yelon at Michigan State University.

⁴⁷James W. Osterburg, "Police Academies Can Teach the Recognition and Preservation of Physical Evidence," Police, Volume 14, No. 4 (March-April, 1970), p. 54.

⁴⁸Ibid., pp. 54-55.

⁴⁹Robert H. Davis, Lawrence T. Alexander, and Stephen L. Yelon, Learning System Design (New York: McGraw-Hill, 1974).

Learning system design is based on the principle that learning systems have interacting components, and that both the components and the interaction should be understood before one attempts to improve the system. The theory provides five basic designing techniques; (1) describing the current status of the learning system, (2) deriving and writing learning and objectives, (3) planning and implementing evaluation, (4) performing a task description and task analysis, and (5) applying principles of human learning.⁵⁰

These techniques are tools which can be applied to the basic strategy of learning system design, which has three phases: "(1) analyzing system requirements in terms of system goals and the current state of the system; (2) designing the system by selecting from available alternative procedures, equipment, and materials; and (3) evaluating system effectiveness by comparing planned performance with actual performance."⁵¹

That portion of learning system design theory which is most applicable to the analysis of teaching methods for criminalistics is the technique for applying the principles of human learning. "Principles of human learning provide a set of criteria for selecting effective instructional procedures, and, in effect, help in the solution of methods problems."⁵² Learning System Design gives a number of general principles of student learning and motivation which can be

⁵⁰Ibid., pp. 9-17.

⁵¹Ibid., p. 316.

⁵²Ibid., p. 17.

applic

Appen

teach

solvi

menti

must

crimi

tem d

to ma

ing r

know

cipl

tems

teac

envi

exam

tem

crim

Teac

par

Thi

ter

applied in any learning situation. These are reproduced in Appendix D. Further, the book has sections dealing with the teaching and learning of concepts and principles, problem-solving, and psycho-motor skills,⁵³ all of which have been mentioned or inferred as classes of knowledge which a student must master if he is to become adequately educated in basic criminalistics.

It soon becomes obvious to the student of learning system design that this is a rich resource for teachers who wish to maximize the effectiveness and efficiency of their teaching methods. While it does not address itself to one area of knowledge, it is stronger for its generality in that the principles and methods given are applicable to all learning systems, and take into account the local constraints put upon teachers by their students, managers, resources, and system environments. In the chapter on recommendations there is an example of the application of the principles of learning system design to some typical problems faced by instructors of criminal investigation and criminalistics.

Teachers of Criminalistics

An analysis of teaching methods takes into account only part of the picture which makes up an educational experience. This methodology must be applied by teachers; their characteristics and attributes are the subject of this section.

⁵³Ibid., pp. 219-300.

It is unfortunate that many of the qualities which make "a good teacher" are undefined or at least so subjective as to make a quantitative measurement unlikely. Thus, descriptions of law enforcement faculty in Michigan have been limited to objective data which may or may not directly influence their effectiveness in the classroom.

This is the case with two studies, reported in 1970 and 1971, which have described the background of faculty teaching in Michigan's two-year institutions.^{54, 55} The findings of the later study, which differ only slightly from those of the earlier, are summarized as follows: "It has been found that typically a faculty member of the law enforcement programs in the community colleges in Michigan is not academically qualified (40% are below a Masters level), experientially low in teaching (averaging three years), [and] high in related field experience (averaging 11.5 years). . . ."⁵⁶

Horn also reports that the respondents to his survey felt the academic preparation most desirable for a law enforcement faculty member is a Masters degree, and that the "desirable related field experience" for these faculty would be five years of general law enforcement.⁵⁷

⁵⁴Yankee, op. cit. (1970).

⁵⁵William G. Horn, "A Profile of the Law Enforcement Faculty in the Community Colleges of Michigan with Recommendations" (unpublished Masters thesis, Michigan State University, 1971).

⁵⁶Ibid., p. 37.

⁵⁷Ibid., pp. 36-37.

However, the legitimacy of applying standards such as these to the particular set of faculty examined in this study might be questioned. On the one hand, given that criminalistics is a physical science dependent upon logic and philosophical concepts, one might expect that faculty who deal with it would possess both field experience as a criminalist, or at least a criminal investigator, and an advanced degree in criminalistics or some related physical science. On the other hand, given the dearth of trained criminalists and the practical absence of institutions offering advanced degrees in the science, one might be surprised to find any faculty at all with this background.

Summary

In this chapter the literature concerned with the place of criminalistics in the two-year law enforcement curricula was reviewed. The findings show that most authorities would require at least a course in criminal investigation, with most suggesting one or more criminalistics-related offerings such as criminal evidence, chemistry, or logic. Two notable exceptions to this pattern are the AACJLEPG, which suggests a pure criminalistics course in addition to criminal investigation, and the liberal arts curriculum offered by Eastman, which has no provisions for even the criminal investigation course.

Turning to course content, the guidelines of the Michigan Law Enforcement Officers Training Council and the Michigan

Criminal Justice Educators Association were presented and their criminalistics content noted. A literature on teaching methods for criminalistics was found to be practically nonexistent, but a systematic approach to the improvement of instruction called learning system design was outlined, and its use as a resource was suggested.

Finally, studies which dealt with criminal justice faculty in the two-year institutions were reviewed, and standards for "acceptable" experience were noted, but the applicability of these standards to the set of faculty in this study was questioned.

CHAPTER IV

RESEARCH OF CRIMINALISTICS EDUCATION

In this chapter the questionnaire which was the basic research method used to gather information on the teaching of criminalistics to Michigan police is described. The results of the questionnaire are analyzed, and conclusions drawn from the results are given.

Research Methods

To determine what criminalistics knowledge and skills are being taught to our police, the methods employed in the learning systems, and the academic preparation and field experience of the instructors, a questionnaire was sent to the law enforcement program coordinators of the 19 public two-year institutions in Michigan which offer a program in criminal justice or law enforcement.⁵⁸ The questionnaire was to be executed by the teachers of courses in criminal investigation or criminalistics. The questionnaire is reproduced in Appendix E.

⁵⁸These institutions were identified from data in: Michigan Criminal Justice Educators Association and Michigan Office of Criminal Justice Programs, "Criminal Justice Education Programs in Michigan," ([second edition]; East Lansing, Michigan State University, [1975]).

TH
structo
tective
an educ

TH
of cou
"learn
knowle
would
form t
jectiv
studen
Traini
They w
when r
the st
pendix

T
cific
audio-
crime
tion k
teach

5
course
litera

The first portion of the instrument deals with the instructor's background: his police experience (patrol, detective, command, and special positions), and experience as an educator.

The bulk of the questionnaire is devoted to an evaluation of course content. The instructor was given a list of 25 "learning objectives" dealing with criminalistics skills and knowledge. If he felt the methods and content of his course would educate his students to the extent that they could perform the objective, he was directed to check off that objective. These "learning objectives" were drawn from the student objectives of the Michigan Law Enforcement Officers Training Council Instructor Guidelines Basic Training Manual.⁵⁹ They were reworded slightly to make them grammatically correct when read with a general introductory phrase. For a list of the student objectives in their original form, refer to Appendix B.

The last portion of the questionnaire deals with specific teaching methods used by the instructor: text(s), audio-visual methods, guest lecturers, lecture/laboratory hours crime scene search practice, instruction in evidence collection kits, and miscellaneous methods or equipment used to teach evidence recognition, collection, and analysis.

⁵⁹The relevance of these student objectives to the course content of educational programs is discussed in the literature review; see pp. 28-29.

Followup letters, telephone calls, and personal contacts were used to obtain as large a sample as possible. In addition, instructors were contacted by telephone for information on their academic degrees, and for clarification of responses on the completed questionnaires. In several cases where the institution's curriculum, methods, or course content indicated an instructional approach above average in quality, a visit to the institution was made.

Analysis of Results

Thirty completed questionnaires were returned by 19 institutions. At this point a further delineation of the scope of the paper was considered, with the result that only the data describing those courses which are required for the associate degree in law enforcement will be reported. It was felt that this limitation would add to the coherency and ease of interpretation of the data without subtracting from its effectiveness in meeting the objective of describing the typical education in criminalistics for the Michigan police officer. Since none of the ten reported criminalistics courses were required for the law enforcement degree, and one of the criminal investigation courses was not required,⁶⁰ it was determined that eighteen questionnaires describing criminal investigation courses would provide the data for

⁶⁰Michigan Criminal Justice Educators Association and Michigan Office of Criminal Justice Programs, Op. Cit.

this study.

The data is reported anonymously, as was promised the program coordinators of the institutions. Each respondent faculty was assigned a "faculty number" which is used uniformly throughout this paper to label the data he provided.

The instructors' experience profile will be reported first, then the data on criminal investigation course contents, then the methods used by the instructors to teach these courses.

The raw data describing the faculty experience with police agencies and as educators is given in Table 1. Fifteen faculty reported experience as patrolmen; the average amount of experience was 6.9 years. It should be noted that the three faculty who had no patrol experience each reported experience in a police-related field, although the equivalency of these experiences would be difficult to determine. A frequency distribution of the faculty patrol experience is given in Figure 2.

Eleven of the eighteen instructors reported an average of 3.9 years of experience in detective positions; the individual experiences are quite evenly distributed over a range of one-half to ten years. Eight respondents reported command experience averaging 6.2 years, and the distribution is smooth across a range of two to eight years, with the exception of one experience of 17 years.

Table 1
Police and Teaching Experience and Education Ratings
for Criminal Investigation Faculty

Faculty Number	Patrol Experience	Detective Experience	Command Experience	Police-related Experience	Total Police Experience	Laboratory Analyst Experience	Full-time Teaching Experience	Part-time Teaching Experience	Education Rating
1	3	0	0	4	7	0	5	0	4
2	23	10	5	0	38	1	0	3	1
3	9.5	1.5	0	.5	11.5	0	0	3.5	0
4	7	3	8	0	18	0	1	10	4
5	5.5	0	0	0	5.5	0	2	0	3
6	5	0	0	.5	5.5	7	0	.5	0
7	4	1	0	0	5	0	3	0	4
8	6	.5	17	2	25.5	0	8	0	4
9	0	0	0	22	22	0	0	3.3	2
10	6	2	3	1.5	12.5	4	6	1.3	3
11	4	3	0	0	7	0	4	1	2
12	0	0	0	.5	.5	0	0	5	1
13	8	8	5	4	25	0	4	2	1
14	2	0	0	11	13	0	6	1.3	3
15	3	5	4	0	12	0	0	1.8	9
16	11	2	6	0	19	0	0	0	0
17	7	7	2	0	16	0	3	1.3	10
18	0	0	0	27	27	1	.5	1.3	4

Number of
Faculty

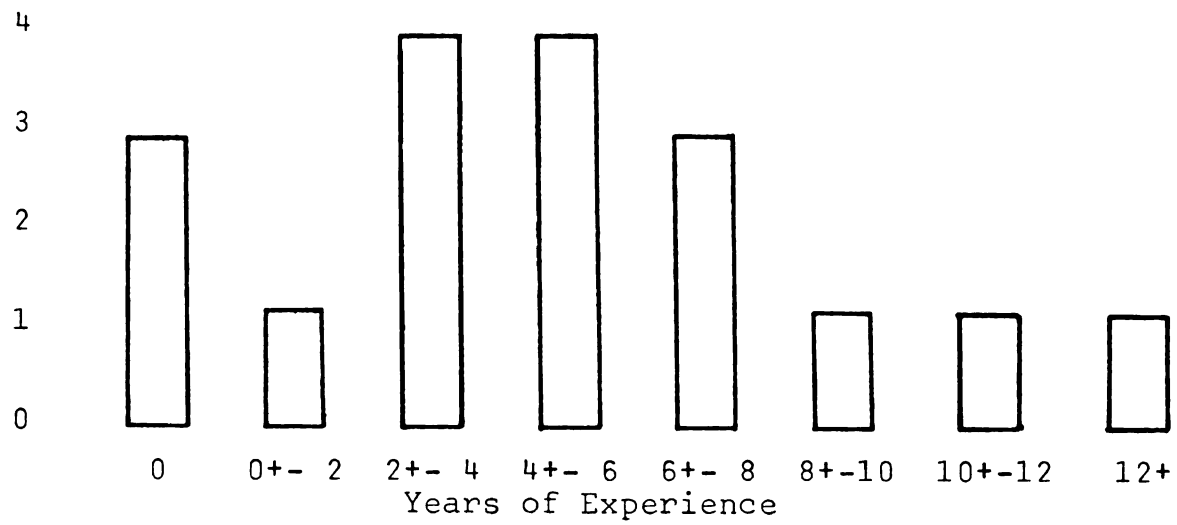


Figure 2

Frequency Distribution of Faculty
Patrol Officer Experience

Number of
Faculty

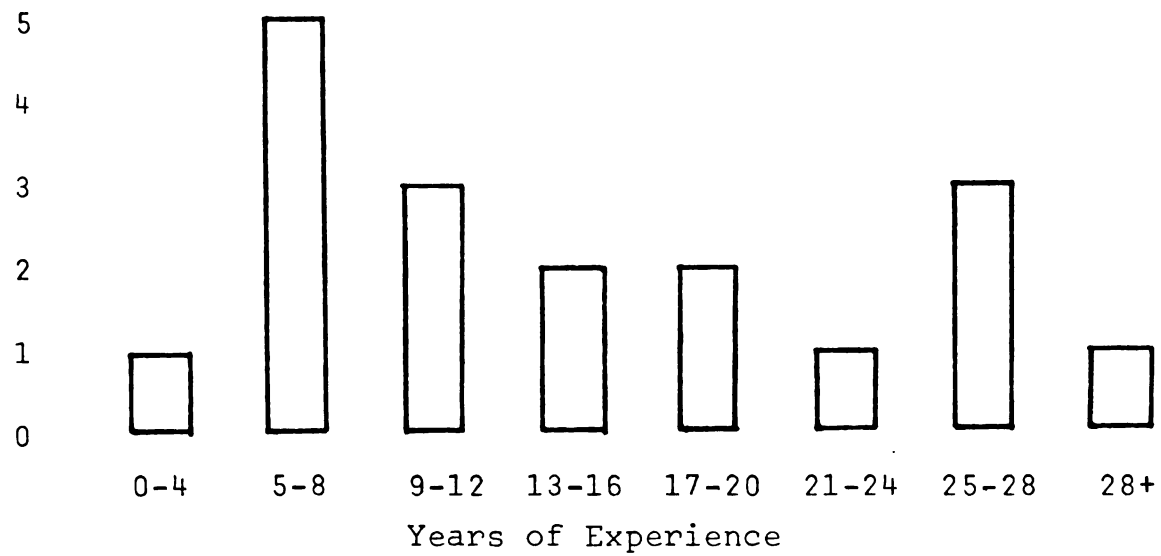


Figure 3

Frequency Distribution of Total
Police Experience

Police-related experience was reported in areas such as state investigator, research and planning, traffic division, communications, industrial security, training, juvenile work, military police, and Federal Bureau of Investigation. Ten respondents indicated experience in these areas, with seven having four years or less, while three had extensive experience of 11, 22, and 27 years. The total years of police and police-related experience were calculated and included in Table 1, and a frequency distribution of this data is provided in Figure 3.

Four faculty reported experience as crime laboratory analysts ranging from one to seven years and averaging 3.3 years. Their areas of specialization were fingerprints, analytical chemistry, photography, drug analysis, and instructing. One instructor reported extensive experience as a firearms expert, although this was not within a laboratory setting.

Eleven respondents had experience as full-time faculty; the average amount was 3.9 years. This full-time experience was evenly distributed in a range of one-half to eight years. Part-time teaching experience is reported on an improvised scale: two courses per term and three terms per year, or six courses, was used as a standard for one year's part-time experience. For example, an instructor reporting having taught four courses would be credited with two-thirds or .7 year's experience. On this scale, 12 faculty had part-time experience of .5 to 5 years, and one faculty had 10 years of

experience.

The academic experience of the surveyed faculty is included in Table 1. This experience is reported on a scale developed by Yankee⁶¹ as follows:

Less than a Bachelors Degree	0
Bachelors to +10 credit hours	1
Bachelors +11 to 20	2
Bachelors +21 to 30	3
Masters Degree	4
Masters to +10	5
Masters +11 to 20	6
Masters +21 to 30	7
Masters +31 to 40	8
Masters +41 to 60	9
Doctorate	10

Three of the faculty had ratings of zero; thirteen had ratings from one to four; one faculty rated at nine, and one at ten. The average rating was 3.2.

Raw data from the central portion of the questionnaire dealing with the teaching of the 25 "learning objectives" is given in Table 2. Also included in the table are the percentages of the 25 objectives which each instructor taught, and the percentages of the instructors who taught each objective. It should be noted that three instructors gave ambiguous responses to some objectives. These responses are not

⁶¹Yankee, Op. Cit., p. 71.

Table 2
Criminalistics Learning Objectives Taught
by Criminal Investigation
Faculty

Faculty Number	Learning Objective Number																									Percentage
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
1	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	96%
2	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	76%
3	O	O	O	O	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	80%
4	X	O	O	X	X	X	X	X	X	X	X	X	X	X	X	O	X	O	X	O	X	O	X	X	X	72%
5	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	40%
6	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	56%
7	X	X	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	68%
8	O	O	O	O	O	O	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	X	X	68%
9	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%*
10	X	X	X	X	X	X	X	X	O	X	X	O	X	X	X	X	X	X	O	O	O	O	O	O	X	68%
11	-	-	-	-	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%*
12	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	96%
13	O	O	O	O	O	O	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	72%
14	O	O	O	O	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	76%
15	X	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	72%
16	-	-	-	-	-	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%*
17	X	X	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	92%
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	100%
Percentage	53*	47*	13*	40*	73*	53*	100	100	95	83	100	95	100	100	100	95	100	83	95	72	67	61	78	72		

- Denotes a questionable response

* Questionable responses are not included in the calculation of percentages.

included in either set of percentages; e. g., if six ambiguous responses were given, the percentage of objectives taught was calculated on the basis of the other 19 objectives.

The percentage of learning objectives taught by each instructor varied from 40% to 100%. The frequency distribution of these percentages was skewed toward the high end, as shown in Figure 4. In other words, most of the instructors taught over half of the objectives. The percentage of instructors who taught each objective varies from 6% to 100%, with seven objectives being taught by all the instructors. A frequency distribution of these percentages is given in Figure 5.

The percentages of faculty teaching each objective are easily classified into groups of low, medium, and high percentages. With one exception (number 5), the objectives which called for the student to explain the analysis of physical evidence were in the low class, being taught by an average of 44% of the instructors. The six objectives which called for the student to physically demonstrate a skill were in the medium class, with an average of 70% of the faculty teaching them. The remaining 13 objectives were all in the high class, with a range of 83% to 100% (average: 96%) of the instructors teaching them. The overall average for the use of the 25 objectives was 78%.

The data from the portion of the questionnaire dealing with the methods used to teach basic criminalistics is given in Table 3. Included is information on the texts used, the use of educational materials (slides, films, video tapes,

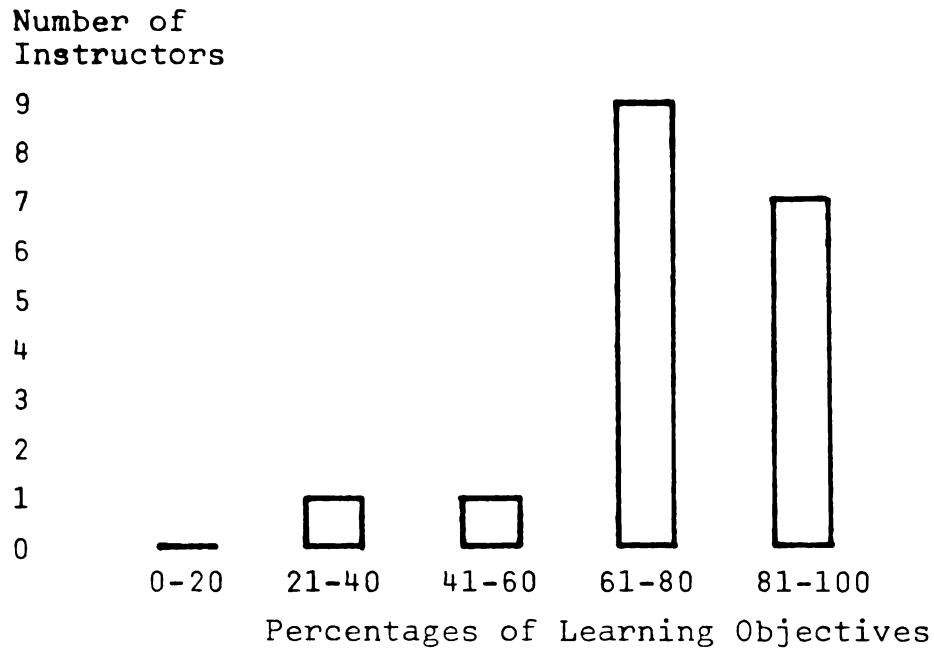


Figure 4

Frequency Distribution of Percentages
of Learning Objectives Taught
by Each Instructor

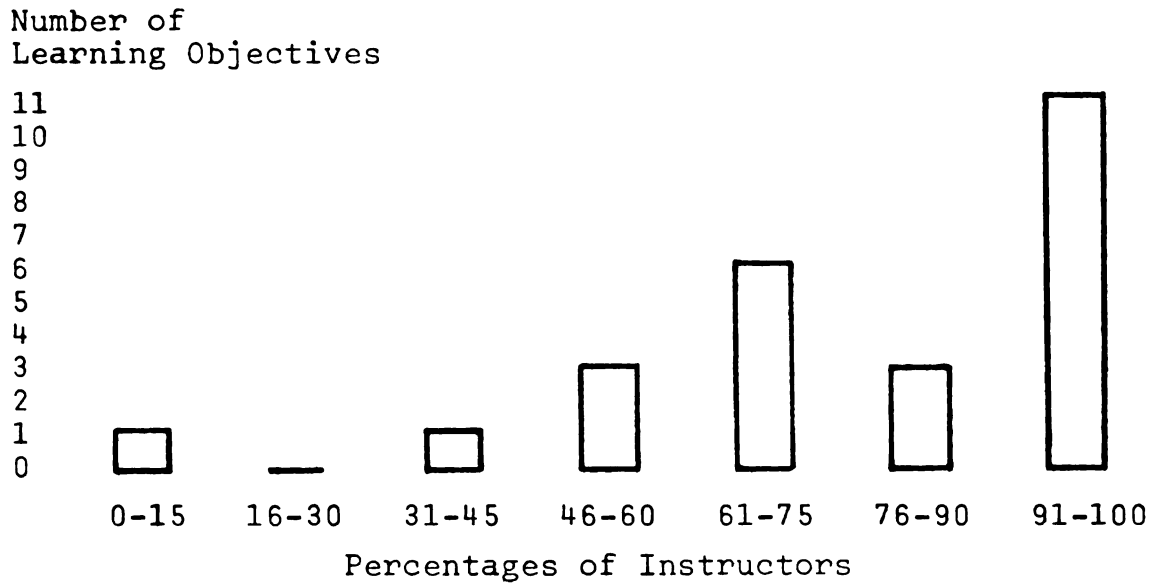


Figure 5

Frequency Distribution of Percentages
of Instructors Who Taught
Each Learning Objective

Table 3

Educational Methods Used by Criminal
Investigation Faculty

Faculty Number	Text Used	Educational Materials (S, F, VT LR OHP)*			Guest Lecturers Used?	Are Lecturers Lab Analysts?	Lecture Hours/ Lab Hours/ Weeks Per Term	Mock Crime Scenes Used?	Evidence Collection Kit Used?
1	Horgan	S	F	VT	LR	Yes	3 /1 /16	Yes	No
2	O'Hara		F		LR	Yes	3 / /15	Yes	Yes
3	O'Hara	S	F		LR	Yes	3 / /16	Yes	Yes
4	O'Hara		F		LR	Yes	3 / /16	Yes	No
5	Horgan	S	F			Yes	3 / /15	No	Yes
6	O'Hara	S			OHP	No	3 / /16	No	No
7	O'Hara	S			OHP	Yes	1 /2 /16	Yes	Yes
8	O'Hara	S				No	4 /1 /10	Yes	Yes
9	O'Hara					No	3 / /17	Yes	Yes
10	O'Hara	S		VT		Yes	3 /1.5/16	Yes	Yes
11	O'Hara	S	F	VT	LR	Yes	3 / /15	Yes	-
12	O'Hara	S	F			Yes	3 / /14.5	No	No
13	O'Hara	S				Yes	5 / /10	No	No
14	O'Hara	S	F			-	3 / /16	Yes	Yes
15	O'Hara	S				No	3 / /16	No	No
16	O'Hara	S			OHP	Yes	2 /1 /15	No	Yes
17	Horgan	S			LR	Yes	2.5/ .5/16	Yes	No
18	O'Hara		F		LR	No	3 / /16	No	Yes

* S: Slides; F: Films; VT: Video Tapes; LR: Literature Reprints; OHP: Overhead Projector

- Denotes unavailable information

literature reprints, and overhead projector), guest lecturers, a breakdown on lecture and laboratory hours and weeks per term, and the use of mock crime scenes and evidence collection kits.

Fifteen instructors reported using O'Hara's Fundamentals of Criminal Investigation⁶² as their major text, although at least one instructor was still using the second edition. Three instructors used Horgan's Criminal Investigation⁶³ as a text. Other reference books were used in conjunction with the O'Hara text; two instructors used Scientific Evidence in Criminal Cases by Moenssens. The other major educational materials used and the percentages of the faculty which used them are: slides (72%), films (50%), literature reprints (39%), video tapes (17%), and overhead projectors (28%).

Guest lecturers were used by 14 of the 18 respondents, or 78%. The average use appears to be two or three lecturers per term, and about half of these are crime laboratory analysts. Six instructors reported a lecture-laboratory breakdown; the amount of laboratory time per week varied from one-half to two hours. The amount of class time (including labs.) per term varied from 43.5 to 72 hours, but most totals were close to 48 hours. Eleven instructors, or 61%, had their students practice crime scene searches. Ten instructors, or 51%, dealt with the use of an evidence collection kit.

⁶²Charles E. O'Hara, Fundamentals of Criminal Investigation, (3rd Ed.; Springfield, Ill.: Charles C. Thomas, 1974).

⁶³J. J. Horgan, Criminal Investigation (New York: McGraw, 1974).

A few instructors reported the use of special methods for teaching crime scene search techniques or the analysis of physical evidence; this information was not included in Table 2. The methods were videotapes of students searching crime scenes, case examples, police department crime scene photos, and tours of crime labs, the latter used by two instructors.

Conclusions

Reviewing the police experience and the educational experience of the criminal investigation faculty as a whole, we can say that they have high field experience (averaging 15 years) and low educational experience, with 61% holding less than a Masters degree, and the average rating being 3.2, or a Bachelors degree plus 21 to 30 credit hours. These judgments are made in light of the opinions of criminal justice faculty questioned in Horn's thesis, who felt that desired related field experience should be 5 years, and desired educational experience would be a Masters degree.⁶⁴

This author considers the exceeding amount of police experience held by the criminal investigation faculty to be a moot distinction, as one can argue both benefits and losses from this extended service. However, the substandard academic preparation of these faculty is obviously a far more

⁶⁴Horn, Op. Cit., p. 217.

serious matter. Eastman, in her study of law enforcement higher education remarked, ". . . the advanced work of Masters programs provides faculty with an essential academic breadth, and the beginnings, usually, of research competence. These qualities are both important at the associate level."⁶⁵

If we make the assumption that the three instructors with ratings of three on Yankee's scale (Bachelors degree plus 20-30 credit hours) have enough momentum to carry them on to attainment of the Masters in the near future, that still leaves eight faculty, or 44%, far from the goal. In the author's opinion, this marks a serious deficiency in the academic preparation of a significant number of those who are given the task of preparing our police for their role as criminal investigators, a deficiency which is reflected in a loss of efficiency and effectiveness in the criminal justice system.

This research has also revealed that most instructors (14 of 18 respondents) have no experience as crime laboratory analysts. This is unfortunate, from the standpoint that laboratory analysts, as a profession, would probably make the best teachers of basic criminalistics. This opinion is based on their typical experience as criminal investigators, their mastery of the scientific analysis of evidence, their broad experience with the workings of the criminal justice system,

Eastman, Op. Cit., p. 217.

and their professional attitude toward the investigative process.⁶⁶

From the data on the criminal investigation instructors' use of the learning objectives of this study, three conclusions may be drawn: (1) With one exception, the instructors as a whole feel they utilize methods and course content which give their students the ability to "explain," "state," and "identify" the knowledge or concepts involved in the criminalistics student objectives of the standard police training course used in Michigan. (2) The confidence of the instructors in these same students to "demonstrate" knowledge or skills associated with crime scene searches is significantly less. (3) The instructors as a whole are much less confident that their students can explain the scientific analysis of the important classes of physical evidence: firearms, blood and other body fluids, soils and minerals, fabrics, plaster castings, and tool markings.

In general, we can conclude that major differences exist between the criminalistics content of the two-year education and mandatory training programs required of police in Michigan. It was one of the objectives of this program to measure such differences. Whether they are the result of

⁶⁶Observations on the profession made during a summer practicum at the Michigan State Police Crime Laboratory, East Lansing, Mich., 1972. Also note a related remark by Laboratory Director Lt. Donald Bennett that "laboratory analysts would definitely make the best teachers of evidence technicians" (personal conversation, May 14, 1973).

differing philosophical attitudes on the part of trainers and educators, or different facilities or other restraints remains to be investigated.

The percentage of objectives which the instructors felt their course taught varies from 40% in one case to 100% in four cases, with eight instructors responding at less than 75%. One can conclude that the opinions of the criminal investigation instructors on the ability of their students to meet the criminalistics learning objectives varied markedly, and this probably reflects marked differences in course content. The description of variation in basic criminalistics course content among the two-year programs was another objective of this study.

From a review of the data concerning teaching methods reported by the instructors, there seems to be a good deal of variation from one to another in the number of methods used. While some faculty use three or four of the audio-visual methods, guest lecturers, mock crime scenes, and an evidence collection kit, others report little or no use of these methods. We can conclude that the number of alternate and supplemental teaching methods used by the criminal investigation faculty varies widely. To the extent that the experiences provided by these supplemental methods can be considered course content, this variation in methods means a further variation in content, in addition to that noted in the paragraph above.

Summary

In this chapter the author's research of the status of basic criminalistics education in the two-year law enforcement programs of the state has been described. The basic research method was a questionnaire for gathering data on the experience of the faculty, the criminalistics content of their courses, and the methods they used to teach the courses. Data was reported on required courses only, limiting the scope of the study to eighteen criminal investigation courses and their instructors. Analysis of the data on the faculty, course content, and teaching methods led to the following general conclusions: (1) The faculty in question have a very high amount of police field experience (averaging 15 years), and a low academic background (less than half held a Masters degree). (2) Major differences exist between criminalistics education provided by two-year institutions and criminalistics training provided by standard police academies. (3) Major variations in the criminalistics course content and teaching methods are evident among the two-year institutions studied.

CHAPTER V

RECOMMENDATIONS

In this chapter, suggestions are made for methods of improving the overall quality of those faculty who teach criminal investigation and criminalistics, and for improving the criminalistics content of criminal investigation courses.

The Improvement of Criminalistics Teaching Skills

"Regardless of course title or course description, information and, more importantly, attitudes that are transferred from faculty to students are dependent upon the attitudes and knowledge of the instructor teaching the course."⁶⁷ These thoughts by Eastman suggest the folly of concentrating on the improvement of course content without considering the collateral improvement of the instructor. In other words, the best-designed "package" of criminalistics material must still be applied by a person, and to maximize the effectiveness of the former, there must be certain knowledge, skills, and attitudes in the latter.

This author sees two alternate ways of improving the cumulative teaching proficiency of instructors dealing with basic criminalistics. One way would be to start with better

Eastman, Op. Cit., p. 207.

personnel in the first place, i. e., hire instructors with the best knowledge, skills, and attitudes to do the job. It was mentioned in the conclusion section of the previous chapter that professional criminalists would be an excellent source of instructors. The author recommends that the law enforcement program coordinators of the various institutions, when searching for personnel who would be teaching criminalistics or criminal investigation, inform the directors of the state and local police crime laboratories that a need for such personnel exists. It is also recommended that the coordinators consider very carefully the attitudes, education, and experience of applicants for these positions, with an eye to the particular demands of the discipline.

The other way of improving teaching proficiency in criminalistics is further education and training of the teachers. Certainly the conscientious instructor, realizing that his self-improvement is an ongoing process beneficial to both himself and his students, is constantly seeking, formally or informally, to increase his knowledge of the discipline. On the other hand, personal initiative varies, as do personal opportunities and restraints. It seems obvious that the greatest improvement of the faculty in question could be realized through an organized, institutional program.

Several methods could be recommended. One possibility would be a summer teaching methods institute for criminalistics and criminal investigation faculty offered by Michigan State

University. Such an institute could utilize the expertise of the School of Criminal Justice and of the University's Learning and Evaluation Service, and the facilities of the Michigan State Police central crime laboratory. A second method would be to offer the same sort of seminar or methods course through the various state universities, although staffing and diluted demand could present problems. A third method would be an extension course for criminal investigation instructors, perhaps the most difficult alternative in terms of effective course design, but most effective in reaching the maximum number of instructors.

The Improvement of Criminalistics Course Content

'Communities of ideas, gathered together around central themes deeply rooted in human consciousness form the "disciplines" of academic life. At a given stage of its development, each academic discipline represents a consensus on questions of priority, feasibility, research technique, continuity, and academic prestige. The disciplines, like their constituent ideas, have natural cycles of life. And the enterprise of learning works best when we nurse and nourish the newborn, while burying the dead with minimum expense and ceremony."⁶⁸

⁶⁸ Everett M. Hafner, "Toward a new discipline for the Seventies: Ecography," in Ecotactics: The Sierra Club Handbook for Environmental Activists, John G. Mitchell, Ed. (New York: Pocket Books, 1970) pp. 214-215.

If we view the short history of criminalistics taught to patrolmen in Michigan in comparison to fields of learning which have been established for many years--chemistry or mathematics or philosophy, for example--it truly is a "new-born" academic discipline. As such, I believe it has much nursing to go through before it reaches a state which could be called mature. As a first step in the nourishment of the discipline of basic criminalistics, I would recommend that the theories of learning system design be applied to the problems inherent in teaching this complex subject.

The first step in the learning system design process⁶⁹ is the description of the learning system as it currently exists. "The description of the current status provides the information and data needed to insure that design decisions will consider all of the relevant variables, facts, and problems before proceeding with the design."⁷⁰ This was the basic purpose of this paper. Although the information gathered was certainly not exhaustive, this study hopefully provided a profile of what is taught in criminalistics, how it is taught, and those who teach it.

The second step in designing an ideal basic criminalistics course is writing the learning objectives. This involves selecting what is to be taught from all that could be

⁶⁹As formulated by Davis, Alexander, and Yelon in their previously referenced work.

⁷⁰Davis, et al., Op. Cit., p. 9.

taught in criminalistics--probably the most difficult task facing the system designer. Fortunately, part of the labor has been done already. As noted in the sections on the importance of the problem and the literature review, studies have been performed to identify and analyze the goals, objectives, and tasks of the police, and much of this material is directly applicable to the process of writing the necessary objectives.

When considering the bulk of material which should be taught, it may be fruitful to conceptualize the matter in terms of a scheme taken from project STAR, in which the "learning elements" of knowledge, attitudes, and skills were related to the "behavior categories" of knowing (cognitive), feeling (affective), and doing (psychomotor), respectively.⁷¹ Let us divert, for a moment, to a typical crime scene problem, to see how these behavior categories can be used to identify criminalistics learning objectives.

Given a toolmark left on a door by the intruder in a breaking and entering, what must the police officer know, feel, and do in order to facilitate the processing of the toolmark into physical evidence which could be useful in the courtroom? First, he should know what a toolmark is, where

⁷¹American Justice Institute, "Project STAR: System and Training Analysis of Requirements for Criminal Justice Participants, Police Officer Role Training Manual" (Sacramento: California Commission on Police Officer Standards and Training, 1974) pp. 21-23.

to look for it, and how to collect it. It would also be helpful if he knew why the toolmark was valuable to the criminal justice system: how the crime laboratory analyst can individualize the toolmark as coming from the suspect's tool, and what this means to a judge and jury in the courtroom.

This "helpful" knowledge is related to the officer's attitude, or feeling toward the task of collecting the toolmark. It seems that the police have enough discretion in their actions that their feelings about a task might play an important part in determining whether or not it is performed at all, especially in roles and tasks which are not stressed as being an important or mandatory part of the officer's job.⁷²

Finally, the officer must have the psychomotor skills necessary to collect the toolmark, either by removal of the door, or by a reproductive method such as moulage or photography. Certainly more knowledge would be helpful at this point, e. g., which method of collection is more reliable; which is easier (cost-benefit analysis); does the crime laboratory have the space to store a door; and should a sample of the paint on the door be taken in case microscopic amounts were transferred to the tool?

The multiplicity of knowledge, attitudes, and skills necessary for the performance of this basic task reiterates the complexity of crime scene tasks in general. It is

⁷²It is the author's impression that this is often the case in Michigan and the rest of the nation.

important that the learning system designer be aware of the interplay of these learning elements when writing the learning system objectives or his system will produce results in the field which are less than optimally effective.

Another important step in the design of a general system of teaching of basic criminalistics is the application of the principles of human learning to the objectives after an analysis of the related tasks has been performed. Let us look at some of the general principles of human learning and motivation and recommend specific techniques which could be used in the classroom to help teach criminalistics effectively (refer to Appendix D for the original wording of the principles).

Principles 1 and 3, concerned with meaningfulness of the course material and modeling,⁷³ could be implemented very easily with a well-planned film or videotape portraying the system by which physical evidence is discovered, developed, and utilized, from the crime scene to the courtroom. Students should be made aware very early in the course that the evidence they search for and collect can have a major effect on the disposition of the crimes they are investigating.

In the film or tape, officers searching the crime scene act as models to the student: discussing the logic processes

⁷³ Modeling appears to be an excellent way of instilling the professional attitudes of the criminalist, probably the most difficult of the three types of knowledge with which an instructor will deal in a well-designed basic criminalistics course.

involved in their search, registering pleasure and excitement when they discover "good" evidence, and exhibiting proper techniques of collection. Following the evidence to the crime laboratory, the student would see the friendly communication which is characteristic of this encounter. They would then observe the evidence being analyzed by a technician who explains some concepts and principles behind his analysis and shows clearly how the individualization is established. Continuing on to the courtroom, the evidence would play a crucial part in the trial, as it often does in real life, and both the investigating officer and the laboratory technician would be modeled in their courtroom roles. The final verdict would provide the ultimate reward to the investigative team, and reinforce the student's perception of personal gains to be had as a result of good investigations.

Another simple way to provide models for the basic criminalistics student would be to require readings on some of the "greats" of the science. Jurgen Thorwald, in his classic works The Century of the Detective⁷⁴ and Crime and Science,⁷⁵ has provided a fascinating insight into the lives of the founders of criminalistics, portraying their meticulous attention to detail, their tenacity in investigations which lasted for

⁷⁴Jurgen Thorwald, The Century of the Detective, translated from the German by Richard and Clara Winston (New York: Harcourt, Brace and World, 1965).

⁷⁵Jurgen Thorwald, Crime and Science, translated from the German by Richard and Clara Winston (New York: Harcourt, Brace and World, 1967).

months or years, and their struggles in dealing with short-sighted police administrators and judicial systems. Students can re-live the histories of men like Bertillon, Gross, the Pinkertons, Goddard, and Locard, as well as more modern workers, feeling their thirst for truth and learning to appreciate their legacy of fact-finding skills.

One suggestion which Learning System Design makes in connection with Principle 4--open communication--is to avoid talking about a subject in its absence.⁷⁶ If one is teaching the recognition of physical evidence, for example, he should have examples on hand. This could be done at a mock crime scene, or in the classroom using audio-visual methods. One good resource for teaching the concepts and principles of identification and individualism of physical evidence would be Osterburg's text on the crime laboratory,⁷⁷ for the very reason that it brings a wide variety of evidence material into the classroom.

Principle 5 deals with novelty; it says variation in the style and means of presentation make the student more likely to learn. Thus, a good learning system design for criminalistics will include a broad spectrum of methods and resources to encourage this variety. A bibliography of audio-visual and reprint materials would certainly be of value, as would a description of techniques for teaching difficult topics. For example, the use of a mock courtroom trial would be an

⁷⁶Davis, et al., Op. Cit., p. 204.

⁷⁷Osterburg, Op. Cit.

excellent device for familiarizing students with the role of the investigator in the courtroom. Videotaped replays could help the students analyze their own and other's behavior "on the stand." Perhaps law students could be enlisted as attorneys and judges to add a heightened sense of realism. Other valuable methods of adding useful novelty to the classroom would be the use of guest lecturers such as crime laboratory technicians or crime scene investigators, and field trips to crime scenes, laboratories, and courtrooms.

Principles 6 and 7 of Learning System Design tell us that active, appropriate practice distributed over time provides for effective learning. This should be stressed especially in teaching crime scene searches. In a letter from Edward Whittaker, director of the Dade County Crime Laboratory, an illustrative remark on this topic is made: "The key ingredient to success [in crime scene technology training] is simply the insuring that the student does the operations himself, with his own hands. Lecture and study are fine, but actually doing the operations at a mock scene, in the laboratory and in the darkroom is the only assurance of capability for the graduate of the program. This concept cannot be stressed too much. It is absolutely requisite to success."⁷⁸

Letter from Edward Whittaker, Director, Dade County Crime Laboratory, November 20, 1974.

Perhaps part of the reason why most instructors do not use mock crime scenes is a lack of resources, especially the room and materials. A learning system design for criminalistics should take into account these shortcomings by suggesting alternate methods. In place of a room devoted permanently to mock crime scenes, one could use the classroom itself, a student lounge, or school theatre facilities. An abandoned house (with permission from the proper authorities) would make an ideal alternate. Also, one should not overlook the fact that many crime scenes are located outdoors or in office buildings or retail establishments, and practice sessions in these settings would broaden the students' perspective.

An important point should be made here. If a learning system for criminalistics is to be designed which can be used in all the institutions, it must have built-in flexibility. It must be able to accommodate the various constraints put upon teachers by their environments. Thus, some schools will have the resources for a permanent mock crime scene set-up; others will not. Some police agencies place heavy emphasis on the value of physical evidence; others do not. Some institutions have nearby state or local police crime laboratories which can be visited on field trips and whose analysts can be called in for guest lectures while others do not. The constraints put upon a teacher may be considerable, but in all too many cases they are self-imposed, and a good learning system design should help in both situations by guiding each

teacher to the optimum system for his situation.

An example of such a learning system design, applicable to many institutions, is an ongoing project of the MLEOTC entitled CÖSTER: Competency-Oriented System for the Training and Education of Recruits. The project is still in the development stages, and no materials have been published in final form, but an initial report⁷⁹ gives a good indication of the important principles and methods which should characterize the final product.

In accordance with learning system design, the authors of CÖSTER have used precisely-stated performance objectives as the basis for the direction and content of their teaching methods. Another notable method utilized by CÖSTER is in answer to the problem, noted above, of developing one system which can be used in many institutional settings. This is done by providing specifications for three sets of "instructional strategies" for each objective, allowing the teacher to pick between adequate, better, and best methods for fulfilling the objective. For each strategy the necessary personnel, materials, transportation, and equipment are outlined. This provides the variable response necessary to overcome local teaching constraints.

⁷⁹ Michigan Law Enforcement Officers Training Council, "Project CÖSTER: Competency-Oriented System for the Training and Education of Recruits, Phase 1 Report" (Lansing: MLEOTC, 1975). Also general information on the project was given in an interview with Mr. Jerry Stemler, project liaison officer, at MLEOTC offices on August 21, 1975.

It is recommended that the Michigan Criminal Justice Educators Association study the final version of project CÖSTER materials to determine their adaptability for use in the institutions of higher education, especially in the area of basic criminalistics. In the event that such adaptability is found to be lacking, it is recommended that the Michigan Criminal Justice Educators Association explore means for the development of a performance objective-based learning system for criminal investigation which can be applied in the two-year law enforcement program of the state. Two recommended alternate methods for this development would be the formation of a criminal investigation task force working under a federal or state grant, or the solicitation of a doctoral dissertation or study dealing with the problem.

In most two-year law enforcement programs the education in criminalistics which is offered is limited to the criminal investigation course. In a few programs, however, the student is given the opportunity to advance in the field through courses devoted purely to criminalistics.⁸⁰ The author sees this as valuable, in that it provides the police officer with another career route, or a chance to delve deeper into an unusual field which interests many practitioners.

Certainly there is a need for pure criminalistics courses. The basic treatment of the subject in the criminal investigation courses barely scratches the surface of this discipline,

⁸⁰ Advanced programs are underway at Jackson Community College, Oakland Community College, Macomb County Community College, and Delta Community College.

and the police officer has much to gain from continuing his education in criminalistics. Indeed, the practically untapped potentials inherent in advanced criminalistics education offers many institutions at all academic levels a chance to make a substantial contribution to the upgrading of Michigan's criminal justice systems.

To this end, it is recommended that the institutions of higher education offering law enforcement or criminal justice programs, in cooperation with the local and regional law enforcement agencies and planning agencies, consider the establishment of courses and curricula in criminalistics which would assist the student in preparing for a related career, whether this be police officer, detective, crime scene technician, or crime laboratory analyst.

CHAPTER VI

SUMMARY

The continually rising crime rate in the United States has led to massive efforts to improve the criminal justice system; part of this effort has been aimed at improving the nation's police through education. This new accent upon education, in league with federally funded scholarships and grants, have created a demand for law enforcement education programs which has been filled most rapidly at the Associate degree level. The development of these programs has been "hasty" in the eyes of some educators, and there has been much interest in standardizing the curricula for the sake of uniform police education across the country and this state.

This study has gone one step further, and examined the uniformity, or lack thereof, in education for the area of basic criminalistics for patrolmen. The problem was stated as (1) a lack of knowledge concerning methods and subject material used to teach criminalistics, and (2) a lack of knowledge about the professional qualifications of the educators who are called on to teach basic criminalistics.

The study was limited to those of Michigan's two-year institutions which offer an Associate degree in law enforcement or criminal justice, and to the types of knowledge which

a patrolman would be expected to apply in normal investigations. For the purposes of this paper, criminalistics was used in a limited sense, denoting the recognition, recovery, protecting, and transporting of physical evidence, these being typical tasks of the patrolman performing a preliminary investigation.

In order to justify the importance of criminalistics to the criminal justice system and the seriousness of the problem, several approaches were taken. First, authorities on the police function, most notably a federal and a state commission on the goals and standards of the criminal justice system, have identified and stressed the patrolman's role as preliminary investigator. Then it was shown that the problem of criminalistics education is non-trivial; that there are complex skills and knowledge which must be ingrained in the police officer if he is to perform adequately in this role. Finally, the present and potential use of criminalistics to alleviate problems which the criminal justice system faces was detailed, with special emphasis on the impact of common crimes such as burglary upon the people, the general failure of police to utilize physical evidence, and the impact of this failure upon the court system.

Philosophical differences over the part education should play in "training" or "educating" the police have resulted in a wide variety of curricula being proposed by authorities for use in two-year law enforcement programs. Some of these curricula make good provisions for basic criminalistics education, while others appear to lack these provisions entirely.

The literature dealing with basic criminalistics course content is quite limited, consisting mostly of a set of rudimentary performance objectives for criminal investigation developed by the Michigan Law Enforcement Officers Training Council, an accompanying outline of main points, and a similar outline written by the Michigan Criminal Justice Educators Association for a recommended criminal investigation course. Literature on methods for teaching criminalistics for patrolmen was found to be almost nonexistent, however a theory for designing "learning systems" was outlined, as general principles of the theory can serve in place of specific methods. Previous studies dealing with the professional qualifications of law enforcement faculty were examined, but the applicability of their results to the faculty of this study was questioned.

The research method used to gather the information describing the courses dealing with basic criminalistics was a questionnaire. It asked for three categories of information: the experience and education of the instructors, the content of their courses, and the methods they used to teach the courses. The course content was evaluated with 25 learning objectives dealing with basic criminalistics. These were drawn from the student objectives of the mandatory police training program used in Michigan's police academies. The instructor's opinion as to whether his students could perform the objective was used to judge the criminalistics content of his course.

In order to give the data increased coherency and ease of interpretation, only courses required in the institution's curriculum were reported. This limited the data to descriptions of 18 criminal investigation courses. Data analysis revealed the faculty teaching these courses had an average of 15 years of related field experience and an average academic preparation of a Bachelors degree plus 21 to 30 credit hours.

The percentage of the 25 learning objectives these faculty taught varied from 40 to 100%, and most of the faculty taught over half of the objectives. The percentage of instructors who taught each objective varied from 6% to 100%, with seven objectives being taught by all instructors. The objectives could be grouped into low, medium, and high classes of usage. Most objectives which called for the student to explain the analysis of certain categories of physical evidence were in the low class, being taught by an average of 44% of the instructors. The six objectives which would have the student physically demonstrate a skill associated with crime scene work were in the middle class, being taught by 70% of the instructors. The remaining 13 percentages were in the high class of percentages, averaging 96%.

Educational methods and materials used by the criminal investigation faculty and the percentages of those which used them are: slides (72%), films (50%), literature reprints (39%), video tapes (17%), and overhead projectors (28%). Guest lecturers were used by 76% of the faculty, and about half of these are crime laboratory analysts. Mock crime scenes

were used by 61% of the faculty, and 51% dealt with the use of an evidence collection kit.

The following conclusions were drawn from the analyzed data: (1) As a whole, the faculty investigated in this study have a high amount of field experience, and low educational experience. (2) Only a very few of the instructors have experience as crime laboratory analysts. (3) Major differences exist between the criminalistics content of the required courses of the two-year education programs and the mandatory training programs for Michigan's police officers. (4) Marked differences exist among the criminal investigation courses offered by the two-year institutions, when evaluated on the basis of criminalistics content. (5) The number of supplemental teaching methods used by the criminal investigation faculty of this study varies widely from one to another.

Two ways of improving the cumulative teaching proficiency of instructors dealing with basic criminalistics were recommended. First, law enforcement program coordinators should communicate with the managers of crime laboratories when searching for personnel, in order to attract professional criminalists to their staffs. Second, faculty could be provided with specialized criminal investigation teaching methods courses or seminars through Michigan State University, other state universities, or through extension courses.

In order to improve the criminalistics content of the criminal investigation courses it was recommended that the theories of learning system design be applied to the problems of teaching this subject. Application of principles from the

theory was illustrated. A competency-oriented training system being developed by the Michigan Law Enforcement Officers Training Council was offered as an example of a learning system applicable to varying teaching environments, and it was recommended that the Michigan Criminal Justice Educators Association evaluate this system, when completed, for its applicability to the educational programs of the state. In the event that such applicability was found to be lacking, it was recommended that the MCJEA undertake the design of a performance objective-based learning system for criminal investigation through a funded task force or through the work of a doctoral candidate. Finally, it was recommended, in light of the potential benefits of continued education in criminalistics, that Michigan's institutions of higher education with law enforcement or criminal justice programs consider the establishment of courses and curricula in advanced criminalistics.

BIBLIOGRAPHY

BIBLIOGRAPHY

Coordinating Criminal Justice Education in Michigan: The Michigan Criminal Justice Educators Association. [East Lansing]: Michigan Criminal Justice Educators Association, 1974.

Criminal Justice Education Programs in Michigan. First Edition. East Lansing: School of Criminal Justice, Michigan State University, 1972.

Criminal Justice Education Programs in Michigan. Second Edition. East Lansing: School of Criminal Justice, Michigan State University, 1975.

Crockett, Thomas S., and James D. Stinchcomb. Guidelines for Law Enforcement Education Programs in Community and Junior Colleges. Washington, D. C.: American Association of Junior Colleges, 1968.

Davis, Robert H., Lawrence T. Alexander, and Stephen L. Yelon. Learning System Design. New York: McGraw-Hill, 1974.

Eastman, Esther M. Police Education in American Colleges and Universities: A Search for Excellence. Doctor of Philosophy Dissertation, Kent State University, 1972.

Fox, Richard H., and Carl Cunningham. Crime Scene Search and Physical Evidence Handbook. Law Enforcement Assistance Administration. Washington, D. C.: U. S. Government Printing Office, 1973.

Gammage, Allen Z. Police Training in the United States. Springfield, Illinois: Charles C. Thomas, 1963.

Garza, Manuel, and Kenneth Pierce. "A Comparative Study of the Project STAR Police Terminal Performance Objectives and the Michigan Law Enforcement Officers Training Council Basic Training Objectives." Unpublished Masters thesis, Michigan State University, 1973.

Gribbon, August. "The Cop-Out Cops." The National Observer (August 3, 1974).

Hafner, Everett M. "Toward a New Discipline for the Seventies: Ecography." Ecotactics: The Sierra Club Handbook for Environmental Activists. John G. Mitchell, Editor. New York: Pocket Books, 1970.

Headlough, Warren E. Development Police Training and Education in Florida. Law Enforcement Assistance Administration. Tallahassee: Florida Police Standards Council, 1969.

Hefron, Floyd N. Evidence for the Patrolman. Springfield, Illinois: Charles C. Thomas, 1958.

Horgan, J. J. Criminal Investigation. New York: McGraw, 1974.

Horn, William G. "A Profile of the Law Enforcement Faculty in the Community Colleges of Michigan." Unpublished Masters thesis, Michigan State University, 1971.

Instructor Guidelines Basic Training Manual. East Lansing: Michigan Law Enforcement Officers Training Council, 1972.

Kingston, C. R., and J. L. Peterson. "Forensic Sciences and the Reduction of Crime." Journal of Forensic Science. Volume 19, Number 3 (July, 1974).

Mager, Robert F. Preparing Instructional Objectives. Belmont, California: Fearon/Lear Siegler, 1962.

Marsh, Richard F. "A Core Program Proposal of Undergraduate Studies for the Professional Preparation of Law Enforcement Personnel in Four-Year Colleges and Universities." Unpublished Masters thesis, Florida State University, 1969.

Michigan Criminal Justice Educators Association Recommended Associated Degree Core Curriculum in Law Enforcement. [n. p.]: Michigan Criminal Justice Educators Association, 1973.

Nelson, John G. Preliminary Investigation and Police Reporting: A Complete Guide to Police Written Communications. Beverly Hills, California: Glencoe Press, 1970.

O'Hara, Charles E. Fundamentals of Criminal Investigation. Third Edition. Springfield, Illinois: Charles C. Thomas, 1974.

Omnibus Crime Control and Safe Streets Act of 1968. Public Law 90-351, 1968.

Osterburg, James W. The Crime Laboratory. Bloomington, Indiana University Press, 1968.

Osterburg, James W. "Police Academies Can Teach the Recognition and Preservation of Physical Evidence." Police, Volume 14, Number 4 (March-April, 1970).

Project CÖSTER: Competency-Oriented System for the Training and Education of Recruits, Phase 1 Report. Lansing: Michigan Law Enforcement Officers Training Council, 1975.

Project STAR: System and Training Analysis of Requirements for Criminal Justice Participants, Police Officer Role Training Manual. American Justice Institute. Sacramento, California: California Commission on Police Officer Standards and Training, 1974.

Report of the National Advisory Commission on Criminal Justice. Police. U. S. Department of Justice. Washington, D. C.: U. S. Government Printing Office, 1973.

Report of the Michigan Advisory Commission on Criminal Justice. Criminal Justice Goals and Standards for the State of Michigan. Lansing: [Michigan Office of Criminal Justice Programs], 1975.

Rutherford, James W. "The Feasability of Instituting a Police Curriculum at the Junior College Level." Unpublished Masters thesis, Michigan State University, 1964.

The Michigan Public Speaks Out on Crime. Lansing: Michigan Office of Criminal Justice Programs, 1974.

Tessmer, Charles W. Book review of Scientific Evidence in Criminal Cases. Journal of Criminal Law, Criminology, and Police Science. Volume 65, Number 1 (March, 1974)

Thorwald, Jurgen. The Century of the Detective. Translated from the German by Richard and Clara Winston. New York: Harcourt, Brace, and World, 1965.

Thorwald, Jurgen. Crime and Science. Translated from the German by Richard and Clara Winston. New York: Harcourt, Brace, and World, 1967.

Vaupel, Carl F. "A Survey and Analysis of Two-Year Police Science Curricula in the United States with Recommended Criteria." Unpublished Masters thesis, University of South Dakota, 1968.

Whittaker, Edward. "The Adversary System: Role of the Criminalist." Journal of Forensic Sciences, Volume 18, Number 3 (July, 1973).

Yankee, William J. "A Description and Evaluation of the Associate Degree Law Enforcement Curricula in the Public Community and Junior Colleges of Michigan." Doctor of Philosophy dissertation, Michigan State University, 1970.

APPENDICES

APPENDIX A

INSTRUCTOR GUIDELINES⁸¹

⁸¹Michigan Law Enforcement Officers Training Council, Instructor Guidelines Basic Training Manual (East Lansing: MLEOTC, 1972) pp. C 5.1 - C 5.5.

APPENDIX A

INSTRUCTOR GUIDELINES⁸¹

- I. TITLE: Collection and Preservation of Evidence - 2 Hours
- II. OBJECTIVES: When the trainee completes this lesson, he will be able to:
 - A. Describe the various types of physical evidence typically found, differentiating between corpus delicti and associative evidence.
 - B. Identify proper protection of evidence.
 - C. Explain appropriate packaging of the various types of evidence.
 - D. Describe appropriate ways to mark evidence.
 - E. Identify the requirements for maintaining chain of evidence.
 - F. Explain the use of photography.
- III. SUGGESTED TEACHING ACTIVITIES
 - A. This unit of instruction will provide the trainee with the proper techniques for collecting and preserving evidence. Emphasis will be made to assure that physical evidence is both admissible and valid in court.
 - B. The SUGGESTED OUTLINE OF MAIN POINTS which follows is not intended to replace the initiative, imagination and creativity of the instructor. They include only minimum instructional requirements, which in all instances should be magnified and expanded upon by the instructor. However, the OBJECTIVES listed above MUST be met. A major deviation from

⁸¹Michigan Law Enforcement Officers Training Council, Instructor Guidelines Basic Training Manual (East Lansing: MLEOTC, 1972) pp. C 5.1 - C 5.5.

the outline and/or objectives must be cleared with the school coordinator first to avoid fruitless duplication and redundancy of subject matter taught in another unit.

- C. Refer to the M.L.E.O.T.C. Instructor Guidelines Basic Training Manual Appendix for a sample lesson outline which may aid you in developing a personalized lesson presentation.
- D. It is strongly recommended that numerous questions be asked throughout the lesson to obtain feedback on the students' grasp of the concepts and generate class discussion and participation.
- E. OBJECTIVES are statements of the desired outcome of the instructional unit. All instructional aids such as slides, charts, etc., should be selected to fit the OBJECTIVES of the course, and be presented in such a manner as to assure the maximum value to the students' learning experience by heightening interest and attention, broadening understanding, and increasing retention.

IV. SUGGESTED OUTLINE OF MAIN POINTS

- A. Discuss the value of physical evidence such as:
 - 1. Serve as the starting point of the investigation.
 - 2. Item of information about the crime.
 - 3. Information retrievable from physical evidence often depends upon circumstances and conditions.
 - a. Time
 - b. Weather
 - c. Training and ability of the investigator to:
 - (1) Recognize evidence.
 - (2) Handle evidence.
 - (3) Interpret evidence.
 - 4. May indicate Modus Operandi.
 - 5. May establish a connection between a suspect and the evidence.

6. May also eliminate persons and things from consideration.
- B. Discuss the value of individual characteristics of objects such as:
1. Wear
 2. Peculiarities of manufacture
 3. Accidental changes
 4. Purposeful changes
- C. Discuss protecting evidence such as:
1. Prevent destruction
 2. Prevent contamination
 3. Prevent unauthorized removal.
- D. Discuss the following types of physical evidence, differentiating between corpus delicti and associative evidence.
1. Firearms
 2. Ammunition
 3. Clothing
 4. Tools
 5. Fibers
 6. Blood
 7. Paint
 8. Documents
 9. Liquor
 10. Impressions
 11. Poisons
 12. Drugs
 13. Glass
 14. Soil

- E. Describe and demonstrate proper methods of collecting, marking, recording, packaging, and transporting the above types of physical evidence.
- F. Discuss the requirements for maintaining the chain of evidence.
 - 1. Limit the number of persons handling the evidence.
 - 2. Have a record indicating who located it, who handled it, until presented in court, including dates, time and reasons.
 - 3. Testimony in court will have to establish that the evidence was:
 - a. Found at the scene
 - b. In possession or control of the suspect
 - c. Related to the crime in some manner
 - d. Has not been altered
 - e. Has been positively identified
 - f. Taken from whom and given to whom
- G. Photography is utilized to provide a permanent visual record of the crime scene and physical evidence located. Briefly discuss the legal points of law concerning admissibility of photographic evidence:
 - 1. The object pictured must be material or relevant to the point in issue.
 - 2. The photograph must not appeal to the emotions or tend to prejudice the court or jury.
 - 3. Photographs may not be unduly prejudicial to the defendant.
 - 4. A photograph must be free from distortion and not misrepresent the scene or the object it purports to reproduce.
- H. Summary.
 - 1. The summary will be a review of the most important points presented, including the Instructional Scope and the Training Objectives.

All questions should be answered. A short quiz should serve as an evaluation of both the trainees' understanding and the teaching ability of the instructor.

V. RESOURCE MATERIAL

Publications:

Internal Association of Chiefs of Police.
EVIDENCE COLLECTION. Training Key 70.
HANDLING AND TRANSPORTING FIREARMS. Training Key 126.
FINGERPRINT EVIDENCE. Training Key 72.
TOOL MARKS. Training Key 45.

Michigan Law Enforcement Officers Training Council.
INSTRUCTOR GUIDELINES BASIC TRAINING MANUAL. Book
Bibliography.

Film Catalogs:

Carpenter, Glenn B. LAW ENFORCEMENT TRAINING
MATERIALS DIRECTORY. Glenndale, Maryland, Capitol
Press, 1969.

Department of State Police. FILM CATALOG. East
Lansing, Michigan. Public Affairs Division, Depart-
ment of State Police, 1971.

International Association of Chiefs of Police, Inc.
POLICE FILM CATALOG. Eleven Firstfield Road,
Gaithersburg, Maryland.

Michigan State University, University of Michigan.
EDUCATIONAL FILMS. Audio-visual Education Center,
The University of Michigan, 416 Fourth Street, Ann
Arbor, Michigan, 48103, or Instructional Media Center,
Michigan State University, East Lansing, Michigan,
48824.

Video-Tape Recordings:

Michigan Law Enforcement Officers Training Council.
INSTRUCTOR GUIDELINES BASIC TRAINING MANUAL. Refer
to Appendix C.

Michigan Law Enforcement Officers Training Council.
(Consult school coordinator for latest listings).

Sound-On-Slide System:

Michigan Law Enforcement Officers Training Council.
(Consult school coordinator for latest listings).

APPENDIX B

TRAINING GUIDE CRIMINAL INVESTIGATION OBJECTIVES

APPENDIX B

TRAINING GUIDE CRIMINAL INVESTIGATION OBJECTIVES

INVESTIGATION

- C.1.A. Explain the objectives and basic tools of criminal investigation.
- C.1.B. Explain scientific analysis of at least the following types of evidence: Firearms, blood and other body fluids, soil and minerals, fabrics, plaster casting, and tool markings.*
- C.1.C. State the elements and investigative techniques associated with: Burglary, larceny, assaults, robbery, homicide, sex offenses, checks - forgery - frauds, and arson.
- C.1.D. Cite examples of the types of offenses for which false reports are most often made, and specify the usual motives for making false reports in these cases.
- C.2.A. Define vice violations.
- C.2.B. Explain organized crime's involvement in vice activities.
- C.2.C. Describe illegal gambling activities.
- C.2.D. Cite several common gambling devices.
- C.2.E. State the meaning of the laws pertaining to prostitution, gambling, and non-licensed liquor violations.
- C.2.F. List several concepts utilized for the investigation of vice activity.
- C.2.G. Explain the procedure for establishing the creditility of an informant.

*Chosen as a learning objective for the purposes of this study.

- C.3.A. Discuss the sources, effects, and appearance of the following categories of abused drugs: Barbituates, Amphetamines, Opiates, Hallucinogens, Cocaine, Marijuana, and Toxic Agents (glue, paint, etc.).
- C.3.B. Explain the psychological and physiological results of abuse, emphasizing the distinction between psychological dependence and physiological addiction.
- C.3.C. Discuss recognition of drug abusers, including the paraphernalia typically found.
- C.3.D. Discuss applicable federal and state statutes, emphasizing the distinction between narcotic and dangerous drug classifications.
- C.3.E. Explain techniques of drug investigation emphasizing the roles of the undercover agent and the informer.
- C.3.F. Discuss the role of organized crime in drug trafficking, and the consequent enforcement difficulties.
- C.3.G. Explain social aspects of the drug abuse problem, i.e., relation of problem to general legitimate increase in drug use, social effects of drug abuse, rehabilitative efforts.
- C.4.A. State the significance, purpose and objectives of crime scene search.*
- C.4.B. Explain the importance of safeguarding a crime scene.*
- C.4.C. Describe the role of the first officer at a crime scene.*
- C.4.D. Explain various systematic methods of search.*
- C.4.E. Identify means of locating microscopic evidence.*
- C.4.F. Describe proper methods of drawing a crime scene search.*
- C.5.A. Describe the various types of physical evidence typically found, differentiating between corpus delicti and associative evidence.*
- C.5.B. Identify proper protection of evidence.*

*Chosen as a learning objective for the purposes of this study.

- C.5.C. Explain appropriate packaging of the various types of evidence.*
- C.5.D. Describe appropriate ways to mark evidence.*
- C.5.E. Identify the requirements for maintaining chain evidence.*
- C.5.F. Explain the use of photography.*
- C.6.A. Define investigation, interviewing and interrogation.
- C.6.B. Explain the difference between interviewing and interrogation.
- C.6.C. Describe appropriate physical settings conducive to effective interviewing and interrogation.
- C.6.D. Explain the importance of the interrogator's attitude and adequate preparation.
- C.6.E. State and explain effective psychological approaches for various types of subjects.
- C.6.F. Explain the function and use of polygraph examinations.
- C.6.G. State the legal preface and conclusion necessary for a proper statement.
- C.7.A. Discuss the purpose of fingerprint identification.
- C.7.B. Identify basic fingerprint classification.
- C.7.C. Identify the methods of discovering and lifting latent prints.*
- C.7.D. Demonstrate ability to roll ink prints and lift latent prints through practical exercises.
- C.8.A. Demonstrate ability to protect the scene of the crime.*
- C.8.B. Demonstrate ability to conduct a crime scene search.*
- C.8.C. Demonstrate ability to properly collect various types of evidence.*
- C.8.D. Demonstrate ability to conduct a latent print search.*

*Chosen as a learning objective for the purposes of this study.

- C.8.E. Demonstrate ability to conduct effective interviews and/or interrogations.
- C.8.F. Demonstrate ability to draw a crime scene sketch.*
- C.8.G. Demonstrate ability to analyze an investigation, and reach a logical conclusion.*
- C.9.A. Explain the size and seriousness of the stolen vehicle problem.
- C.9.B. Explain the basic information needed on a stolen vehicle complaint and ways of recognizing the false complaint.
- C.9.C. State conditions which may lead to the discovery of stolen vehicles.
- C.9.D. Explain the importance of V.I.N.
- C.9.E. Discuss proper procedures for searching for a stolen vehicle.

APPENDIX C

MICHIGAN CRIMINAL JUSTICE EDUCATORS ASSOCIATION COURSE GUIDELINE

APPENDIX C

MICHIGAN CRIMINAL JUSTICE EDUCATORS ASSOCIATION COURSE GUIDELINE

Criminal Investigation

- I. General
 - A. Methods of Investigation
 - 1. Nature of investigation
 - 2. Information
 - 3. Interrogation
 - 4. Instrumentation
 - 5. Identification
 - 6. Tracing and locating criminal
 - 7. Proving guilt
 - 8. Corpus Delicti
 - 9. Elements of offense
 - 10. Role of reason
 - 11. Representative approach
 - B. The investigator's notebook
 - 1. Purpose
 - 2. Materials
 - 3. Recording notes
 - 4. Recording aids
 - C. Report writing
 - 1. Importance
 - 2. Purpose
 - 3. Qualities
 - 4. Sequence of reports
 - 5. Parts of reports
 - 6. Practice exercises
- II. Initial investigative steps
 - A. Crime scene search
 - 1. Protection of scene
 - 2. Assignment of duties
 - 3. Estimate of situation
 - 4. The search
 - a. Mechanics of search
 - b. Methods
 - c. Precautions
 - d. Evaluation

5. Reconstructing of crime
 6. Equipment
 7. Practice exercises
- B. Crime scene photography
1. Equipment
 2. Evidence rules
 3. What to photograph
 - a. Overall views
 - b. Deceased
 - c. Evidence
 - d. Environs
 4. Special techniques
 5. Photographic data
 6. "Posed" photographs and markers
 7. Practice exercises or demonstration
- C. Crime scene sketch
1. Equipment
 2. Rough sketch
 3. Elements of sketch
 - a. Measurements
 - b. Essential items
 - c. Scale
 - d. Compass direction
 - e. Title and legend
 4. Projection
 5. Finished drawing
 6. Practice exercises
- D. Care of Physical Evidence
1. Types of physical evidence
 - a. Corpus delicti
 - b. Associative
 - c. Trace
 2. Evaluation of evidence
 3. Procedure
 - a. Protection
 - b. Collection
 - c. Identification
 - d. Preservation
 - e. Transmission
 - f. Disposition
 4. Chain of custody
- III. Obtaining information
- A. Interviews
1. Introduction to the art
 2. Qualifications of interviewee
 3. The place and time
 4. Approaches
 5. Types of interviews
 6. Preparation

7. Techniques
 - a. Types of subjects
 - b. Situations
8. Evaluation
9. Notebook
- B. Interrogations
 1. Fundamental rules
 2. Procedure
 3. Purpose
 4. The interrogator
 - a. Knowledge
 - b. Conduct
 - c. Dress
 - d. Attitude
 5. The interrogation room
 - a. Privacy
 - b. Simplicity of room
 - c. Distracting influences
 - d. Seating arrangements
 - e. Technical aids
 6. Supreme Court guidelines
 7. Detection of deception
 - a. Physiological symptoms
 - b. The lie detector or polygraph
- C. Admissions confessions and written statements
 1. Purpose
 2. Voluntariness
 3. Content
 4. Methods of taking
 5. Statement forms
 6. Witnesses
 7. Tests of admissibility
 8. Duress and coercion
 9. Deception and promises
- D. Recording interviews and interrogations
 1. Methods
 - a. Mental notes versus written notes
 - b. Stenographic notes
 - c. Sound recording
 - d. Sound motion picture
 2. Types of sound recording
 - a. Overt transcripts
 - b. Surreptitious transcripts
 3. Techniques
- E. Informants
 1. General
 2. Motives
 3. Obtaining confidential informants

4. Protecting the informant
 5. Treatment
 6. Communicating with
 7. Evaluation of informant
- F. Tracing and sources of information
1. Missing persons (witness, victim, other)
 2. Tracing the fugitive
 3. Agencies possessing informative records and other sources
 - a. Governmental agencies
 - b. Private sources
 - c. Directories
- G. Surveillance
1. General
 2. Surveillance of places
 3. Shadowing or tailing
 - a. By foot
 - b. By automobile
 4. Practice exercises
- H. Undercover assignments
1. Introduction
 2. Objectives
 3. Types of assignments
 4. Preparation
 - a. Study of subject
 - b. Cover story
 - c. Conduct of assignment
 - d. Communications with headquarters
- IV. Identification and reproduction
- A. Observation and description
1. Physical description
 2. Modus operandi
- B. Identification by witnesses
1. Methods
 - a. Verbal
 - b. Photographic files
 - c. Artist's assistance
 - d. Police "line up"
- C. Fingerprints and the mechanics of recording
1. Importance
 2. The nature of a fingerprint
 3. Recording fingerprints
 - a. Equipment
 - b. Technique
 - c. Judging acceptability
 - d. Practice opportunity

- D. Crime scene fingerprints
 - 1. Types of fingerprints
 - a. Visible
 - b. Plastic
 - c. Latent
 - 2. Searching for fingerprints
 - 3. Developing the impression
 - a. Powder
 - b. Chemical
 - 4. Fingerprint photography
 - 5. Handling and transmission
 - 6. Lifting fingerprints
 - 7. Practice exercises
- E. Classification of fingerprints
 - 1. Ridge characteristics
 - a. Type line
 - b. Delta
 - c. Core
 - 2. Pattern types
 - a. Arches
 - b. Loops
 - c. Whorls
 - 3. Blocking Out
 - a. Symbols
 - b. Rules
 - c. Ridge counting and tracing
 - 4. Primary classification
 - 5. Practice exercises

APPENDIX D

PRINCIPLES OF LEARNING AND MOTIVATION⁸³

⁸³Robert H. Davis, Lawrence T. Alexander, and Stephen L. Yelon, Learning System Design (New York: McGraw-Hill, 1974), pp. 198-208.

APPENDIX D

PRINCIPLES OF LEARNING AND MOTIVATION⁸³

Principle 1--Meaningfulness: A student is more likely to learn things that are meaningful to him.

Principle 2--Prerequisites: A student is more likely to learn something new if he has all the prerequisites.

Principle 3--Modeling: The student is more likely to acquire new behavior if he is presented with a model performance to watch and imitate.

Principle 4--Open Communication: The student is more likely to learn if the presentation is structured so that the instructor's messages are open to the students' inspection.

Principle 5--Novelty: A student is more likely to learn if his attention is attracted by relatively novel presentations.

Principle 6--Active Appropriate Practice: The student is more likely to learn if he takes an active part in practice geared to reach an instructional objective.

Principle 7--Distribute Practice: A student is more likely to learn if his practice is scheduled in short periods distributed over time.

Principle 8--Fading: A student is more likely to learn if instructional prompts are withdrawn gradually.

Principle 9--Pleasant Conditions and Consequences: A student is more likely to continue learning if instructional conditions are made pleasant.

⁸³ Robert H. Davis, Lawrence T. Alexander, and Stephen L. Yelon, *Learning System Design* (New York: McGraw-Hill, 1974), pp. 198-208.

APPENDIX E

QUESTIONNAIRE

APPENDIX E

QUESTIONNAIRE

Please continue your answers on the reverse side of the questionnaire when the space provided is inadequate.

respondent _____

institution _____

Please give the number of years of experience you have in the following fields:

patrol officer on a police force _____

detective on a police force _____

command position(s) in a police force _____

other special police positions _____; specify _____

crime laboratory analyst _____ give fields of specialization as an analyst _____

full-time educator _____

part-time educator _____; give no. of terms/year and no. of courses/term as a part-time instructor _____

Give the course title of your criminal investigation or criminalistics course _____

(Please use separate questionnaires if more than one course is relevant to the educational objectives listed below).

Place a check next to the item if the content of your criminal investigation or criminalistics course and the teaching methods you employ in the course will educate your students to the point where they will be able to:

1. _____ explain scientific analysis of firearms.
2. _____ explain scientific analysis of blood and other body fluids
3. _____ explain scientific analysis of soil and minerals
4. _____ explain scientific analysis of fabrics
5. _____ explain scientific analysis of plaster castings
6. _____ explain scientific analysis of tool markings
7. _____ state the significance, purpose, and objectives of crime scene search
8. _____ explain the importance of safeguarding a crime scene
9. _____ describe the role of the first officer at a crime scene
10. _____ explain various systematic methods of search
11. _____ identify means of locating microscopic evidence
12. _____ describe proper methods of drawing a crime scene sketch
13. _____ describe the various types of physical evidence typically found, differentiating between corpus delicti and associative evidence
14. _____ identify proper protection of evidence
15. _____ explain appropriate packaging of the various types of evidence
16. _____ describe appropriate ways to mark evidence
17. _____ identify the requirements for maintaining chain of evidence
18. _____ explain the use of photography in crime scene work
19. _____ identify the methods of discovering and lifting latent prints
20. _____ demonstrate ability to protect the scene of a crime

21. _____ demonstrate ability to conduct a crime scene search
22. _____ demonstrate ability to properly collect various types of evidence
23. _____ demonstrate ability to conduct a latent print search
24. _____ demonstrate ability to draw a crime scene sketch
25. _____ demonstrate ability to analyze an investigation, and reach a logical conclusion

What text(s) is/are used in this course? _____

What other educational materials (such as: slide presentations, film loops, and other audio-visual methods; literature reprints, etc.) are used in the course?

Are guest lecturers employed? _____ If so, how often _____ and are they experienced laboratory analysts? _____ others: _____

How many lecture hours per week and laboratory hours per week do you use? lecture _____ lab. _____ How many weeks in a term? _____

Do your students practice crime scene searches?

Are your students educated in the use of an evidence collection kit?

Please outline any other methods or equipment you use to teach evidence recognition and collection.

If you teach the analysis of physical evidence, outline the methodology and equipment used.

Check here if you wish to have a copy of the results of the study. _____