#### DCCUMENT RESUME

ED 307 558 CG 021 728

AUTHOR Anderson, Patricia S.; Deck, Dennis

TITLE Pegional Needs Assessment: Procedures and

Outcomes.

STITUTION Northwest Regional Educational Lab., Portland,

Oreg.

PUB DATE Mar 89

NOTE 12p.: Paper presented at the Annual Meeting of the

American Educational Research Association (San

Francisco, CA, March 27-31, 1989).

PUB TYPE Reports - Research/Technical (143) --

Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS \*Alcohol Abuse; \*Drug Abuse; Educational Assessment;

Elementary Secondary Education; \*Intervention; \*Needs

Assessment; \*Prevention; \*Research Methodology;

Research Needs; Resource Allocation

#### ABSTRACT

This paper presents the procedures used for carrying out a needs assessment concerning drug and alcohol abuse prevention and intervention efforts across nine western states and the Pacific territories prior to and subsequent to the receipt of United States Department of Education funds to implement training and technical services in the region. Methods which are described include focus group probing, key informant interviewing, personal interviews, questionnaires, review of existing data, and primary and secondary focus surveys. Outcomes for two needs assessments are presented historically with the pre-award findings first, followed by subsequent data. They are presented under the headings of adolescent alcohol and drug use, sc..ool and community programs, state agencies, and institutions of higher education. Annual needs assessments and development of plans for service delivery are envisioned due to the value of information in targeting training and technical assistance. The report concludes that managing a needs assessment across nine states and the Pacific territories is a major undertaking requiring an understanding of appropriate procedures and consumer audiences. (ABL)

Reproductions supplied by EDRS are the best that can be made

from the original document.

# Regional Needs Assessment: Procedures and Outcomes

U 8 DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality
- Points of view or opinions stated in this document do not necessarily raprasent official OERI position or policy

Patricia S. Anderson Dennis Deck

Northwest Regional Educational Laboratory
101 SW Main Street
Suite 500
Portland, Oregon

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) "

Spurred by the momentum of the Drug Free Schools and Communities Act (P.L. 99-570), staff at all levels of education have had the opportunity to implement alcohol and drug prevention and early intervention programs. Given the apparent conflicting and lack of proven effective methods (Klitzner, 1987; Ellickson and Robyn, 1987; and Newcomb and Bentler, 1989) one could ask "What technical assistance and training may be needed by school, district, and state educational personnel?"

This was the question faced by the staff of the Northwest Regional Educational Laboratory when we determined that we could provide a quality service in this area. A large incentive to proceed was offered in the form of a Request for Proposal (RFP) from the United States Department of Education (USDOE) to provide technical assistance and training to schools, districts, and state educational agencies as a Regional Center.

As we sought a method whereby we could develop of program of training and technical assistance, we recognized that we had to follow a systematic process of needs sensing, or we would be tempted to follow "conventional visdom" and assume minor variation across our region, offering a program si nilar to that offered in the past (USDOE, 1986).

We chose a simple planning method familiar to management in almost any field. This method requires a planning process, needs assessment, program implementation design, dissemination and evaluation--all cycling back to the planning process.

This paper will present the procedures for carrying out a needs assessment across nine western states and the Pacific territories prior to and subsequent to the receipt of USDOE funds to implement training and technical assistance services in this region.

#### **PURPOSE**

The simplest form of needs a sessment involves asking the potential consumers of services what are the problems, needs (or desires), and current resources in any specific content area--be it alcohol and drug prevention and intervention or housing programs. The objective is to identify the discrepancy between what exists now in a school, district, or state educational agency vis-a-vis the identified content area and what it should be. 1

## **METHOD**

Undertaking a needs assessment for a school, district, state or region requires essentially similar methods. That is, there are a combination of approaches which provide information and conclusions about the existing needs and resources. Taken together, information from several approaches can provide sufficient evidence and

<sup>1.</sup> It is clear that in the field of alcohol and drug abuse that for many schools or districts both the needs or problem as well as the desired state are difficult to articulate because of denial. Denial ranges from the conclusion that there are no problems here to the notion that the existing programs are sufficient to meet any potential needs.



direction for planning service delivery. The three methods used include focus group probing, key informant interviewing, and review of existing data. These methods are viable at the school level or a regional level and are presented to schools in our training (NWREL, 1988).

Focus group probing. Focus group probing is a technique borrowed from the marketing field. It includes a variety of methods whereby potential consumers are brought together to explore need (desires) and service delivery strategies.

Upon receipt of the regional center award, NWREL continued using focus groups as a basis for determining service need. Two of these groups are formalized across the region and the others are being developed within each state. The regional groups include the Partners in Prevention (PIP) and an advisory group.

The PIP is composed of each state educational agency (SEA) DFSCA coordinator, and representatives of the single state agency (SSA) handling alcohol and drug treatment monies, state health and human services agency, and criminal justice agency in the nine states and the Pacific territories. This group meets twice a year.

The regional advisory committee is much more broadly representative of the constituencies interested in alcohol and drug prevention and intervention. Included are a state PTA president, national school board member, LEA alcohol and drug coordinator from the region's largest school district, assistant superintendent of one state, a judge, state attorney general, two school district superintendents, developer of curriculum, state human service agency assistant director and the like. This committee meets twice a year to provide networking and feedback on needs.

During the first sixteen months of award to NWREL's Western Center for Drug-Free Schools and Communities, three states developed an in-state partner's group: California, Nevada, and Oregon. Each of these groups brings together the major agency representatives in their respective states who are involved in community and/or school planning and implementation of programs for alcohol and drug prevention, in ervention, and treatment. These groups meet with NWREL's Western Center staff and provide regular feedback on service delivery needs.

Key informant interviewing. Key informant interviewing involves rersonal interviewing or questionnaire interviewing of one person at a time. They offer their observations from the view that includes both direct and indirect experiences that are broader than a single or personal experience. Thus the SEA coordinator for alcohol and drugs, the state prevention coordinator in the single state agency distributing ADAMHA prevention and treatment monies, the coordinator for Traffic Safety prevention funds, etc., have unique and "Key" information concerning needs and resources. Also, "key" contacts within the school or district offices (LEAs) or in Institutions of Higher education (IHEs) have information that would be useful for planning.

Figure 1 presents two approaches to key informant interviewing at the two time periods and the target groups involved.

<sup>2.</sup> The essential difference between focus and key informant is that in the focus group there are several potential consumers interacting in a group process to focus on total problems and delivery strategies. Key informants may be one up to a few, but the strategy is to seek information from their unique perspective.



2

	Prior to	End of 1st	
	Award	Year of operation	
Personal	SEA Coordinators <sup>a</sup>	SEA Coordinators <sup>a</sup>	
Interviews	SSA Staff <sup>a</sup> .	SSA Staff <sup>a</sup>	
	Criminal Justice <sup>b</sup>	Criminal Justice <sup>b</sup>	
	Traffic Safety <sup>b</sup>	Criminal Justice <sup>b</sup> Traffic Safety <sup>b</sup>	
	IHE Deans/Staff	·	
	Large School Dists		
Surveys	LEAs <sup>a</sup>	LEAs <sup>a</sup>	
		IHE deans <sup>a</sup>	

### Personal Interviews

A personal interview strategy involves developing a structured interview around a set of objectives for that interview. Structured interviews were developed for staff of several state departments, large school district staff, and IHE staff for the first wave of interviewing. All state education agency and alcohol and drug agency staff were interviewed along with representatives of justice, traffic safety and other pertinent state agencies.

A separate interview protocol was developed for school district and IHE staff based on a comprehensive model for drug free schools and communities (Fox, Forbing, and Anderson, 1988). With the exception of staff in the ten largest school districts in the nine states who were personally interviewed, a sampling strategy was designed to identify a sample of school districts and IHEs in the nine states. Telephone interviews were undertaken with 67 school districts representing small, rural to large, suburban districts in the nine states. (All large, urban were included). A smaller sample of IHEs from the nine states were called to add information about IHE training in the departments of education.

At the close of the first year of funding, a second round of personal interviews was undertaken. SEA and SSA staff from all nine states and the Pacific were personally interviewed. Other relevant staff at the state level in some states were also interviewed.

## **Questionnaires**

During the first year of the award, the Western Center developed a Profile of district and school level information. Some of the data elements matched the survey questions used in the personal interviews. The purpose of the profile was to provide information to staff about where the school and/or district was in their implementation of a comprehensive program in order to target training and/or technical assistance needs. School teams who had implemented more programs than others would obviously have different needs than those who were just beginning.

Profiles also provide an opportunity for school teams to rank their need for additional training. This information provides yet another source of information for our needs assessment.

Profiles were sent to all schools who were enrolled in the USDOE Challenge program as well as those served by the previous regional center contractor. All schools and districts who were trained by the Western Center were asked to complete a team Profile. At this time, the Western Center has team Profiles from over 550 school or district teams.



The Profile will also serve as an evaluation tool for the Westerr. Center. Schools trained by the Center will receive a Profile annually. These updates will indicate progress (or lack of it) in implementation of programs.

A new IHE survey was developed in the first year of the award and sent to every IHE in the nine states and the Pacific.

Review of existing data. Existing data provide a wealth of information to program planners. Data may be collected for other or similar purposes and can provide a support to the key informant and focus group information. Two types of data collection can be identified for this needs assessment activity: primary and secondary data collection. For this report, we would describe primary focus data collection as those data that represent cur primary concern-use of alcohol and drugs by students--as measured by student use surveys: and secondary focus data collection--as other data collected to represent the nature and extent of the problems (e.g., juvenile alcohol or drug related arrests) or available resources.

Primary focus. Student use surveys represent the best information that is available about the nature and extent of drug and alcohol use among students in our schools. Not only do they provide information that can combat denial among school staff, parents, and the community, but repeated surveys of student use form the basis of prevention and intervention program evaluations.

Student survey data were available at the state and local level in some of the nine states prior to the grant award. Figure 2 indicates the status of the states in undertaking statewide surveys prior to the award and 16 months later.



State	Prior to award	End or 1st Year of operation	
Alaska	1983	Completed 2nd survey-1988	
California	1986	Completed 2nd survey-1988	
Hawaii	In process	Completed 1987 2nd survey scheduled Fall, 1989	
Id <b>ah</b> o	None	None	
Montana	None	In Progress 1989	
Oregon	1985	Completed 2nd survey-1988	
Washington	None	1989	
Wyoming	None	None	

Within the first sixteen months of the award, two states had completed a statewide survey and three had completed the second and one state was in process of completing a survey. Since only the Hawaii and second Alaska survey provide school district or school results, many school districts have undertaken their own surveys. Our Profiles reveal that only 21% of the school teams have completed a formal needs assessment, most often including a student use survey.

Secondary focus. Supplementary data were available in the form of state plans for alcohol and drug prevention and treatment from the SSAs, SEA applications (plans) for the DFSCA funds, LEA applications for DFSCA funds, and special studies (e.g., Alaska completed a special youth study, Washington completed an Interagency study on alcohol and drug abuse).

During each needs assessment period (prior to the award and one year after) data were analyzed using both quantitative and qualitative methods. Key findings were abstracted and reviewed by the staff who conducted the personal interviews. The following pages present the key findings identified prior to the award (spring of 1987) and fifteen months following the award (winter of 1989).

### **OUTCOMES**

The outcomes for the two needs assessments are presented historically with the pre-award findings first, followed by the subsequent data. They are presented under the headings of adolescent use, school and community programs, state agencies, and institutions of higher education. The information from the first needs assessment were drawn from Deck (1987).



## Adolescent Alcohol and Drug Use

**Spring**, 1987

Finding: The use of drugs and alcohol by American youth, particularly in the West, is a critical problem that has persisted for years.

Substance abu e by adolescents is higher in the West than in other regions of the country except the Northeast (Johnston, O'Malley, and Bachman, 1986). Over half (53%) of the high school class of 1985 in the western states reported illicit drug us in the past year. Cocaine use was paticularly high (20%). Western seniors also reported a high rate of alcohol use (66%) in the past, but this rate is lower than some other regions.

Student use surveys in four of the western states suggest that the national survey may have underestimated abuse in the region, though there are important methodological differences among all of the studies. Oregon high school juniors reported higher use of many drugs than reported by western seniors in national studies (Egan, 1985). Alaska students reported particularly high levels of alcohol and marijuana (Segal, McKelvy, Bowman, and Maia, 1983). Hawaii residents of all ages reported less alcohol and tobacco use than the mainland but more use of cocaine, hallucinogens, and heroin (Hawaii Department of Health, undated). California 11th graders consistently reported higher use of alcohol, marijuana and most drugs, during the last six months, than seniors reported for the last year in the national survey (Skager, Fisher, and Mackiahian, 1986).

Finding: Adolescent use of alcohol and drugs is a problem that cuts across geographic, cultural, and socio-economic boundaries.

While drug use may be viewed by some as a problem of urban poor, the student use surveys and interviews with key informants revealed that it affects all parts of the region--all social, economic, and ethnic groups. For example, while there is more use of illicit drugs in large urban cities (53% of seniors), the difference between large, urban and non-metropolitan areas where 43% of the seniors have used, is not large, and is viewed as narrowing in the last years.

Key informants told of many small, rural areas where drinking among adults and teens is the norm. They described these places as "hard drinking towns."

In planning the service delivery strategies, NWREL planned to deliver services in as many places across the region as we: interested in training or technical assistance. It was viewed as important to provide services in rural Wyoming as it was central urban cities. Further, trainers needed to be aware that drug use and abuse cuts across ethnica and economic lines--no one was immune.

Finding: Abuse starts with "gateway drugs" as early as the elementary grades and expands to illicit drugs by the end of high school.

One of the national findings, known to many, is that for the gateway drugs--alcohol, marijuana, and tobacco-users start before high school. We found that National findings are likely to overestimate the age of first use.

There are several potential reasons for this, ranging from the suspicion that early users of illegal substances are
more likely to become addicted (Hawkins, et. al., 1986) and drop out of school to seniors being less able to
recall as accurately as those closer to the age of onset.

Studies in the West, administered to rades other than seniors, found that a greater proportion of sixth graders were using alcohol and other illegal substances than would have been expected from the 12th graders recall. Almost 40% of sixth graders in one study had used beer or wine, and one-third had tried merijuana. In California, 40% of the sixth graders reported using wine or beer in the last month.

In planning for service delivery, it was clear that local programs needed to understand the developmental needs of elementary children in order to plan prevention and early intervention programs.



Winter, 1989

Finding: While national and some local districts show slight declines in drug use, many new studies continue to demonstrate very high use of alcohol and slight increases of other drugs.

Three states have completed a second wave of student use surveying with mixed results in terms of student use. California found major drops in marijuana, cocaine, and polydrug use among 9th and 11th graders. Alcohol continued to be the drug of choice with no change in percent of students using. Only slight reductions were reported by 11th graders who reported being intoxicated at least once (65% to 62%) but larger drops were found in the percent of ninth grade students who reported being intoxicated at least once (47% to 38%) (Skager, Frith, and Mackiahian, 1988).

Oregon results were less positive. Modest decreases were seen in alcohol use for both 8th and 11th graders and slight decreases in marijuana and cocaine use were noted for 11th graders. Eighth graders, on the other hand, posted slight increases in use of marijuana and cocaine (Egan, 1988).

Alaska results were even less positive. While the full report lists only lifetime use, increases among the combined sample were noted in marijuana (49% to 53%), hallucinogens (8.7% to 13.2%) and inhalants (16.5% to 25.9%). Decreases of 1% to 4% were noted in use of tranquilizers and cocaine. However, in comparison to the national household survey, Alaska's use rates far surpass the national samples (Segal, 1988).

Many local school districts completed surveys with widely varying results. Some districts had lower than national average use of alcohol and other drugs and some districts had far higher use. For example, one LEA reported 57% of its seniors drinking five or more drinks in a row in the previous two weeks. Another LEA reported 27% of its seniors using marijuana in the last 30 days.

These results present challenges to program planning, in that while all areas continue to report what is easily considered unacceptable levels of use of illegal substances in some areas there is especially high use. These areas often represent high levels of denial in the school, in the community or both.

School and Community Programs

**Spring**, 1987

Key informants and the original focus group of assistant state school superintendents provided range of information prior to the award.

Finding: Nearly all districts surveyed reported some level of prevention or intervention program....ag, but iew had a comprehensive program.

The first interviews in the sample districts indicated that most of the districts had some activity that could be labeled substance abuse prevention or intervention. Most identified an overall or specific health curriculum in one or more grades. Few, however, had implemented a comprehensive program across all grade levels. Next popular was some kind of prevention program ranging from assemblies to "Just Say No" clubs. Almost two-thirds indicated that they had some kind of substance abuse policy in the district. Further probing, however, revealed that most of these were simply the required disciplinary policies common to their states.

Finding: Local technical assistance needs depend upon the state of program implementation, available resources, and specific local needs.

The districts we contacted identified a wide range of technical assistance needs. Teacher training headed the list, with awareness training the highest priority. Training in specific curricula and development of student assistance programs were next highest.



Districts with well-established programs were concerned with training of trainers, identifying strategies for working with parents or with special population groups and conducting useful program evaluations. Districts in the early stages of planning programs were more concerned with breaking down denial in their program, visiting exemplary programs, and identifying appropriate resources.

# Finding: Service delivery must be efficiently provided across a vast, sparsely populated region.

Probably the most important finding was that school staff responded uniformly concerning the delivery of training and technical assistance. They felt strongly that training could not be in 5 to 7 days segments far away from their home school districts. Availability of substitutes as well as funds to pay them were concerns expressed. Secondly, they were concerned that any district interested and willing to be trained should have the opportunity to be trained.

Finally, school districts were in differing levels of implementation, with some having histories dating to the mid-1970s having advanced programming, while others were just starting.

These findings led to a significantly different approach to training. They led to training based on level of program development, two-day or less training segments, and training distributed across the nine states.

Winter, 1989

# Finding: Training teams in specialized topics is in greater demand following the introductory planning training.

During the first year of training, emphasis was placed on training teams in both the planning tools and content necessary to implement drug free schools (Fox, Forbing, and Anderson, 1988). Subsequently teams that were trained and developed action plans were looking for advanced topics. Coupled with teams who were already at advanced levels of involvement, teams identified advanced topics in implementing student assistance programs, training for group facilitators, training development of programs for children identified as "at risk" in the elementary grades, and specific evaluation tools.

## Finding: Training of LEA alcohol and drug coordinators to train others is needed.

Far less than half of the school districts (LEAs) have a full time alcohol and drug coordinator. Most have a person identified as the DFSCA contact. That person's responsibility is growing to include not only the grant preparation for the school district, but training and overall supervision of the district's program. Increasingly these individuals are asking for training for themselves- local empowerment--to train on an ongoing basis their own school staffs, parents and community members.

# Finding: Providing ideas for local school and community teams to involve parents and provide training for them is a widespread need.

Beyond the first year implementation, school staff come to the conclusion that a major feature in their success will be the involvement of parents and ommunity members. Schools may have good policies in place, evenly administered, a curriculum, and student assistance program, but if parents are looking the other way on weekly "keggers" or directly encouraging use of alcohol, schools feel they cannot win the battle. Whether large or small district, most districts are indicating training in parent involvement and parent awareness.

## Finding: Mcst district programs have not been evaluated.

The emphasis over the first year of the DFSCA is to implement programs. Uniformly, even in large districts who have long-standing programs, evaluation of the programs is lacking. Profiles completed by over 500 revealed less than 11% of school teams having any kind of evaluation. With the requirement added to the



DFSCA that LEAs demonstrate "effectiveness", there is renewed interest among LEAs in techniques and training in evaluation.

## State Agencies

**Spring**, 1987

Finding: The emerging partnerships among state agencies are having an impact but they are fragile.

Prompted by the perceived demands of the DFSCA and/or the Governor's desire for efficiency, every state in the western region developed one or more interagency collaborating committees. Despite some early signs of productive collaborations, these emerging partnerships among agencies are somewhat fragile. State education staff assigned to coordinate prevention activities are typically health education staff with many other duties. Other departments of state government (e.g., SSA) have had the major responsibility for many years in both prevention and treatment in their states and see themselves as more knowledgeable about what is needed. Criminal justice agencies are not only concerned with interdiction but have developed expertise in prevention programs as well.

Finding: State coordinators would welcome coordination and a wider range of service from a regional technical assistance center.

State coordinators identified assistance in providing technical assistance and training to LEAs as a major role that a technical assistance center could provide. All coordinators felt the need to coordinate the delivery of local training through their respective offices.

Most states identified the need to network with other states and among the various state departments with an interest in this field. Many felt that the regional center could play an outside, expert, and supportive role in the collaborations.

Winter, 1989

Finding: The emerging partnerships are strengthening with real networking and sharing or resources occurring.

Three of the states have developed regular meetings among state or statewide agencies interested in alcohol and drug prevention and intervention programs. These states (Nevada, California, and Oregon) have jointly sponsored projects (e.g., guide to resources), training, and advocacy. Other states are involved in time limited interagency collaborations (e.g., Washington's Interagency Report on Drug Abuse) or informal but regular meetings. Six states are now co-sponsoring with other state agencies an annual drug conferences.

Finding: All states have encouraged and supported the Western Center training in their states with a total of nearly 900 teams and 6,800 individuals trained in the first 15 months of operation.

All of the states of the region have et couraged their respective LEAs in availing themselves of the Western Center. Hawaii made it possible for all schools in the state to participate in the planning training; Washington assists training participants by providing mini-grants for the expenses for the two day conference to Educational Services Districts; and Alaska and Wyoming SEAs and Oregon SSA provide financial assistance to school teams who travel distances to come to a training or require assistance for substitute teachers. The Western Center has been asked to participate in state supported conferences in each of the nine states.

Institutions of Higher Education

**Spring**, 1987



Finding: Few higher education institutions have or plan to implement teacher training programs in drug and alcohol prevention and intervention.

While many higher education institutions offer courses in alcohol and drug abuse in their curriculum. few of the education departments offer or require courses for completion of requirements in education. One dean in the education department summed it up with "Until the course(s) is required for certification, we will not require it-our course requirements are already too full."

Winter, 1989

Finding: Some higher education institutions have added courses in drug and alcohol but only a fee/ require even one course for education majors.

Education departments of IHEs do not require or even offer courses in alcohol or drug prevention or intervention. Eleven colleges in the Northwest states now require one course. However, the majority (63%) do not require such a course. Of the Northwest colleges reporting, 51% now offer at least one course in drug and alcohol topics. Barriers to providing the courses include heavy requirements for educating analysis, alcohol and drug courses not being remired for certification, and availability of faculty (Anderson, 288).

Respondents to the latest survey indicated that they hoped the Western Center would provide intensive workshops for faculty and offer conferences for faculty.

#### **CONCLUSION**

Managing a needs assessment across nine state and the Pacific territories is a major undertaking requiring an undertanding of appropriate procedure ard conumer audiences. This paper presented the method used by the Northwest Regional Educational Laboratory to plan for the delivery of training and technical assistance services in anticipation of a USDOE training and technical assistance award and to develop annual service plans. Due to the value of this information in targeting training and technical assistance, annual needs assessment and development of plans for service delivery are envisioned.



#### References

Anderson, Patricia S. (1988). Institution for higher education survey results for the states of Alaska, Idaho, Montana, Oregon, Washington, and Wyoming. Northwest Regional Educational Laboratory. Portland, Or.

Deck, Dennis. (1987). Assessing the needs of drug and alcohol prevention programs in the west. Northwest Regional Educational Laboratory. Portland, Or.

Egan, D.M. (1985) Drug use among Oregon Public School Students. Lewis and Clark College, Portland, Or.

Egan, D.M. and Hallan, J. B. (1988). Drug use by Oregon public school students. Halpern, Inc. Portland, Or.

Fox, C. L., Forbing, S. L., and Anderson, P. S. (1988). A comprehensive approach to drug-free school and communities. <u>Journal of School Health</u>, 58 (9), 365-369.

Hawaii Department of Health. (Undated). Hawaii state substance abuse survey: 1979. Hawaii Department of Health. Ionolulu, Hi.

Hawkins, J.D., Lishner, D.M., Catalano, R.F., and Howard, M.O. (1986). Childhood predictors of adolescent substance abuse: Toward and empirically grounded theory. <u>Journal of Children in Contemporary Society</u>, 8:1, 11-48.

Johnston, L.D., O'Malley, P.M., & Bachman, J.G. (1986) Drug use among American high school students, college students, and other young adults: National trends through 1985. National Institute on Drug Abuse: Rockville, Md.

Segal, B., McKelvy, J., Bowman, D., and Maia, T.A. (1983). Patterns of drug use: school survey. Center for Alcohol and Addiction Studies: University of Alaska, Anchorage, Ak.

Segal, B. (1988). Drug-taking behavior among Alaskan youth - 1988: A follow-up study. Center for Alcohol and Addiction Studies: University of Alaska, Anchorage, Ak.

Skager, R., Fischer, D., and Mackiahian, E. (1986). A statewide survey of drug and alcohol use among California students in grades 7,9, and 11. Office of the Attorney General. Sacramento, Ca.

Skager, R., Frith, S.L., and Mackiahian, E. (1988). A second statewide survey of drug and alcohol u<sup>2</sup> among California students in grades 7, 9, and 11. Office of the Attorney General. Sacramento, Ca.

U.S. Department of Education. (1986). The school team approach. U.S. Department of Education. Washington D.C.



12