A review of recent sex education literature is presented in an attempt to integrate observations and recommendations related to both program development and innovation acceptance. A Developmental Research and Utilization Model is employed to systematically guide planning, implementation, evaluation, advocacy, and institutionalization. Curriculum development is discussed in terms of addressing age-related student needs and community readiness for comprehensive sex education programming. The comprehensive approach is proposed to augment basic instruction in reproduction (anatomy and physiology), pregnancy/contraception, and sexually transmitted diseases. Comprehensive sex education is described as an expansion of information-giving to include active student exploration of present and future choices which forge a positive, healthy, and satisfying sexuality over the life span. Considerable attention is paid to several important topics: program excellence, staff competence and integrity, administrative responsibilities, and community relations. The review concludes with lists of typical values underlying comprehensive sex education and recommendations for local program development. A reference list is given, and tables are provided which list tasks and concerns in developmental sexuality by age level from infancy through late adolescence, and which illustrate student readiness and community acceptance of selected topics in comprehensive sex education. Appendices contain the Developmental Research and Utilization Model and a list of sources of information about sex education. (Author/NRB)
Whither Sex Education?
Excellence in Comprehensive Program Development

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Running Head: Sex Education
Abstract

The present review of recent sex education literature attempts to integrate observations and recommendations related to both program development and innovation acceptance. A Developmental Research and Utilization Model is employed to systematically guide planning, implementation, evaluation, advocacy, and institutionalization. Curriculum development is discussed in terms of addressing age-related student needs and community readiness for comprehensive sex education programming. The comprehensive approach is proposed to augment basic instruction in reproduction (anatomy and physiology), pregnancy/contraception, and sexually transmitted diseases. Comprehensive sex education is described as expansion of information giving to include active student exploration of present and future choices which forge a positive, healthy, and satisfying sexuality over the lifespan. Considerable attention is paid to the important topics: program excellence, staff competence and integrity, administrative responsibilities, and community relations. The review concludes with lists of typical values underlying comprehensive sex education and recommendations for local program development.
Introduction

In spite of research findings and expert opinions establishing the efficacy and utility of public sex education, no more than ten percent of America's students receive comprehensive instruction that goes beyond coverage of basic anatomy and physiology (Scales, 1982). Sufficient literature exists to justify a sex education program that includes the following components: exploration of values and personal options; identification of opportunities for sexual decision making; preparation for constructing a healthy adult sexual identity and lifestyle; acquisition of interpersonal communication skills required to express individual preferences and counter peer and social pressures; and consideration of specific topics linked to prevention of problems resulting from inadequate or faulty sex information.

Some of the topics found in comprehensive, prevention-oriented sex education are adolescent pregnancy, sexually transmitted diseases, contraception, sexual exploitation, sex role orientation and identity, homosexuality, sexual variance, premarital sexual activity, abortion/adoption options, marriage and family alternatives, masturbation, and emotional correlates of sexual behavior (McCary, 1978; Yarber & Pavese, 1984). Although it is unlikely that any school district or public institution would have the time, interest, and resources to implement an ideal program, many of the aforementioned components would need to be included in order to address student, parent, and community needs.

A recent study of sex education in 23 American cities, commissioned by the Center for Health Promotion and Education of the U.S. Center for Disease Control, established that the two principal goals of sex education are reducing unplanned adolescent pregnancies and facilitating a positive, rewarding sexuality (Kirby, Alter, & Scales, 1979). In clarifying the second goal, it may be useful to add specifically, reducing incidence of sexually transmitted diseases, a major negative consequence of uninformed sexual activity among adolescents (Smith &
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Since basic biological programs have dominated the American sex education scene for over two decades, it seems reasonable to ask whether or not the traditional offerings in health, physical education, and life science courses will be sufficient to resolve sexual problems, which thwart the development of youth and plague the community at large. The purpose of this review is to explore answers to the various questions connoted by "Whither Sex Education?" A major goal is addressing the means and ends of comprehensive sex education, given extant research data and public education realities.

Why Sex Education?

The major concern in program planning, research, and development (see Appendix A) is identifying, then analyzing, some problematic human condition. In sex education programming, one does not need to look far in order to justify community involvement in what many would consider to be a domain of private and family concerns. The relatively high incidence of unwanted pregnancies and sexually transmitted diseases among public school students is generally regarded as sufficient cause for implementing sex education on some level (see Alan Guttmacher Institute, 1976; Smith & Gorry, 1980). More specifically, adolescent pregnancies represent considerable health risks to mother and child and social costs to the community. Unwanted pregnancy often leads to the student's termination of secondary education, which, in turn, contributes to inadequate job preparation, reliance upon public welfare, and perpetuation of an "other America" increasingly populated by women heads-of-household and their young dependents.

Similarly, sexually transmitted diseases create immediate and long-term demands for public health services, which divert dwindling resources away from the increasing needs of an aging population to a recurring problem in the under 25 age group. Both of these problems could be prevented by consistent, responsible contraception and family planning. Yet, sex information does not seem adequate for fostering rational, responsible adolescent sexuality.
Programs that simply provide information on anatomy and physiology, reproduction, venereal disease, and contraception not only fail to alter sexual behavior, but also, contribute to the problems of adolescent sexuality. Most factual sex information, even when it is presented in the schoolroom rather than the schoolyard, usually comes too late to be relevant and useful (Fabes, 1982; McCary, 1978). Programs are seldom tailored to the developmental needs of the students and their specific concerns in daily life. Instead, some well-intentioned curricula are implemented in accordance with perceived community interests—although school personnel strongly underestimate the extent of community support for the wide range of sex education topics for all students (Yarber & Pavese, 1984)—and the scheduling demands of an already full academic course of studies. In addition, teaching reproduction, contraception, and basic topics without addressing and legitimizing sexuality contributes to confusion, cognitive dissonance, and inconsistency in contraception and sexual behavior (Hacker, 1980).

For example, adolescent pregnancy can be analyzed as a function of poor contraceptive problem-solving ability, not lack of information per se. Making available information about contraception does not overcome variable situational factors such as partner influence, rigid sex role enactment, alcohol use or substance abuse, sexual anxiety, inadequate self-esteem or sexual identity, or failure to possess the contraceptive device or agent at the time of intercourse (Hacker, 1980). Providing accurate and up-to-date sex information is a necessary but not sufficient approach to preventing some of the problems of adolescent sexuality. The comprehensive program planner will recognize the needs of young men and women to be accepted as developing sexual beings, who have normal sexual feelings and interests, as well as, the rights and responsibilities to choose sexual behaviors and accept identified consequences.

Another approach to analyzing the problematic human condition underlying
the need for sex education is selection of information sources (Appendix B). In order to establish relevant and attainable goals for a program, it is necessary to identify and accumulate basic data derived from empirical research, practice experience, and expert consultation. Students, parents, community members, civic leaders, government officials, and school personnel possess valuable perceptions and opinions about the problems of youth sexuality. It is especially important to consider the views of these stakeholders in sex education when reviewing the goals of instruction related to facilitating positive, rewarding sexuality (Kirby, Alter, & Scales, 1979).

While unplanned pregnancy and sexually transmitted diseases are obvious health-related problems of youth sexuality, the prevention of adult problems and enabling of optimal sexual development represent more subtle concerns. Practical experience and published research (Elias, 1979; Martinson, 1980; Masters, Johnson, & Kolodny, 1982; McCary, 1978; Meyer-Bahlburg, 1980; Shah & Selnick, 1980) indicate that sexual development consists of a series of age-related tasks and concerns. Furthermore, failure to master some of the tasks or comprehend the concerns can lead to adolescent and adult problems in sexuality. For example, some sexual dysfunction in adult couples and specific individual disorders (including exhibitionism and pedophilia) are fostered by lack of accurate, timely sex information and failure to develop interpersonal and communication skills required in mature, healthy sexuality (see Tollison & Adams, 1979). The following table reflects normal, positive aspects of developing sexuality as well as pitfalls for young persons in several age groupings.

| Insert Table 1 about here |

The educational implications of the developmental scheme in Table 1 include the significance of timing prevention activities, taking into account periodic
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transitions and individual differences in sexuality. Given the inevitability of sexual exploration, confusion about rapid physical and psychosocial changes, peer pressure for sexual activity and sex role enactment, and involvement in romantic love, it should be clear that the majority of public school students are at-risk for developing adolescent and adult problems. In addition, the pervasive failure of adults to discuss developing sexuality with youth in home, school, and church/temple reduces the likelihood that sexuality will be positive, healthy, and rewarding. As a matter of fact, the inability of parents and most adults to assist young people with this critical facet of development can be attributed to the sexual misconceptions, anxieties, and guilts engendered by previous failures of informal or inadequate sex education (McCary, 1978).

Although there is justified concern for intrusion of governmental bodies and public institutions into private lives and areas of traditional family authority (Richardson & Cranston, 1981; Scales, 1982), there is no question that schools are charged with the responsibility to provide sex education to some extent. Parents simply do not offer adequate sex information or ongoing exploration of developing sexual concerns (Coreil & Parcel, 1983; Mancini & Mancini, 1983; McCary, 1978; Swan, 1980). The majority of young men and women would prefer to learn about sex from their parents, but they must rely upon same-sex peers for most information and guidance (Gagnon, 1965). When sex education does occur in the home, mothers are typically charged with the responsibility of explaining menstruation and pregnancy to their daughters (Mancini & Mancini, 1983). Fathers, family physicians, and clergy play negligible roles, while teachers provide moderate amounts of sex education, especially to female students (Mancini & Mancini, 1983). Thus, sex education becomes an essentially "feminine" activity targeted for controlling young women's sexual behavior and reinforcing conventional sex role asymmetry (Coreil & Parcel, 1983). Yet, examination of sex bias and sex role stereotyping, a component of comprehensive
sex education, is seldom conducted in the classroom or the home.

Since there is a tremendous need for sex education, it is good that there is widespread community support for public school programs. Parents do not sit down with their children and explain sexuality because they have inadequate knowledge of the subject (especially about nonreproductive aspects of sex) and they are confused about their own values and preferences (Swan, 1980). Therefore, it is not surprising that they seek the expertise of professional educators. School personnel are wary about this community assignment because they realize that public education cannot "do it all" in a time of high academic expectations and external pressures on the profession (Goodlad, 1984). Professional educators and administrators know that the zero-sum game played in "a place called school" will result in indictments and additional pressures when delegated sex education programs fail to produce all outcomes desired by the myriad of special interests in the community. Thus, educators consistently underestimate true community support for comprehensive sex education and promote instead conservative, inadequate approaches to the needs of contemporary youth (Scales, 1982; Yarber & Pavese, 1984).

Professional educators also fail to attend to the full range of student sexual concerns because of their own difficulties with sexuality. Like adults in general, educators have difficulty understanding and accepting the sexual self (Swan, 1980; Yarber & Pavese, 1984). Similarly, their incomplete and inaccurate sex information predisposes slanted, negative, and lukewarm support for public sex education (Mandel, 1979). Male school administrators may not support programs because they have not been involved in their children's sex education at home (Coreil & Parcel, 1983; Mancini & Mancini, 1983). Men in educational administration, the majority in the field, may also have social and economic stakes in maintaining traditional sex role orientations, which inhibit comprehensive sex education. Furthermore, teachers (like nurses and members of
other traditionally "feminine" professions, occupied primarily by women) tend to possess more conventional and restrictive perceptions of sex roles than the general population (Hall, 1977; Southern & Caprara, 1984).

The educators who are interested in sex equity and comprehensive sex education may find that they do not possess the professional status and community power needed to overcome obstacles imposed by mostly conservative, affluent males from the private sector who wish to reform education (e.g., see Task Force on Education for Economic Growth, 1983). Preoccupation with the "new basics" will not favor implementation of comprehensive sex education, which is likely to be perceived as peripheral to the mission of education. Therefore, the immediate concern in implementing comprehensive sex education, to address contemporary problems and developmental needs of students, is strengthening policies which promise to maintain existing programs in the increasingly "reactionary curriculum."

The present review establishes a need for sex education, not only for public school students in grades K-12, but also among parents, educators, school administrators, and community members. As we continue to consider the optimal extent of public sex education, it will be useful to analyze both the "Why?" and "Why not?" The "whys" of sex education include beneficial effects in promoting student health and community well-being, specifically, by reducing unwanted pregnancies and sexually transmitted diseases. The "whys" of comprehensive sex education are represented by the potentials for enhancing student self-esteem, identity, and responsible decision-making; facilitating positive and healthy sexuality over the lifespan; and reducing sexual dysfunction and deviancy in the adult population.

Perhaps the most significant rationale for comprehensive sex education is the need to break the intergenerational cycle of inadequate sex information, confusion, and sexual maladjustment. Careful sex education programming can serve the immediate needs of students and prepare the next generation of parents
to become more involved in home based guidance (e.g., Goodman & Goodman, 1976). In the next section, we will concentrate upon the "Why not?" in an attempt to understand, then change, the prevalent climate in which comprehensive sex education is stifled.

When and How Should Sex Education Be Implemented?

The obvious answers to the question are "Now," "In all grades K-12," "Across all relevant content areas in the sexuality domain," and "With full parental, community, and staff support." Such answers imply an ideal approach which has little probability of being implemented in the present milieu of public education. Implementation will require close attention to the politics of program planning and innovation adoption, as well as the demands of developmental research and utilization (Appendix A).

We have already suggested (p. 5) that the timing of sex education is a critical variable in determining its efficacy and relevancy for students. Timing is also important in establishing community support, preparing acceptance, and ensuring accountability. Therefore, the process of implementation should be systematically introducing the components of comprehensive sex education according to the developmental needs of students and the extent of community support, identified or generated for each component.

Since most schools include some instruction on reproduction (genetics, biology, anatomy, physiology, etc.), the ideal strategy for systematic implementation involves (1) reaffirming the significance of the topic in the academic and guidance curricula; (2) presenting any relevant evaluation data, information from literature reviews, and outcomes of consultation and site visitation; (3) constructing a revised and improved curricular component (with guides, activities, resources, etc.) which subtly shifts the focus from an informational approach to an active exploration and discussion model; and, most importantly, (4) moving the component to the grade level corresponding to the typical age group when
reproduction information and discussion are timely, interesting topics. These steps would apply in the implementation of any component of comprehensive sex education.

In the example of reproduction, students aged 3-8 are ready for information, exploration, and some discussion. The topic, biology of reproduction, consistently receives community endorsement with percentages of support ranging from 80 to 100 percent of surveyed citizens (Scales, 1982; Yarber & Pavese, 1984). Thus, the appropriate first step in comprehensive sex education is supporting existing reproduction curricula and ensuring that the topic is fully addressed in the K-2 grades. If extant curricula had been targeted for a higher grade level (e.g., middle school), it may be appropriate to retain this instruction for the purposes of reiteration and reinforcement. However, the main focus on reproduction should be reflected in an early childhood education curriculum, written at the correct reading and conceptual levels. Following the Developmental Research and Utilization Model (Appendix A), any changes in the sex education program or the overall curricular offering should be implemented on a small-scale, trial basis; subjected to empirical, process, and policy evaluation; and then diffused and adopted.

Pursuing the example of reproduction, it is important to consider the means and contexts of implementation. The biology of reproduction is a major learning in the life sciences and developmental guidance curricula. In terms of academic achievement, it is important in the sciences to master basic concepts such as genetics and heredity, body structure and function, physiology, conception, pregnancy, prenatal development, and childbirth. From the guidance perspective, it is essential that the student understand how her or his body functions and changes, why there are genital differences and similarities in girls and boys, when parents will (or will not) produce a baby sister or brother, what parents do in order to make the baby, and related matters. Given the present community
sensitivity to child sexual abuse (prompted by media, professional, and grassroots attention to the problem), it may be wise to include materials that address safety and prevention, what constitutes invasion of the body (e.g., "good touch versus bad touch"), and how to report abuse. Each of the guidance topics can be easily infused into new or existing curricula on reproduction. Various media will be used with young children to hold their attention and convey complex subjects. Conceptually abstract topics, such as the physiology of the menstrual cycle, would of course require elaboration at subsequent grade levels. Yet, the sex education program should be inaugurated with young children in grades K-2.

The key to the efficiency of the program consists in careful planning of developmental components, integrating the units of instruction across grade levels and academic subject areas, and securing support from teachers for this infusion of sex education in the overall course of studies.

Having considered the value of timing in the case of reproduction instruction, it may be useful to consider both student and community readiness for other topics in the sex education domain. The following table reflects optimal age range, corresponding grade level, and extent of community support (an index of "readiness") for a broad range of topics, which could be included in an evolving comprehensive sex education program.

The data in Table 2 suggest that there are important "when's" and "how's" in comprehensive sex education. If a program were planned, implemented, and evaluated according to this framework, the three traditional concerns in academic excellence (see Bailey & Stadt, 1975) could be addressed. The first concern is accountability, an omnipresent criterion in public scrutiny of education. When topics or components of sex education are implemented according to a
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developmental sequence, founded in the literature and substantiated by ongoing evaluation, the molecular effects of sex education can be isolated for empirical research and cost-benefit (policy) analysis. If the implementation of a component satisfies some developmental need or prevents some later problem, then the topic should be retained and institutionalized (diffusion and adoption—see Appendix A). With resolution of this basic issue in accountability, program planners can confidently move to the second index of program excellence, relevance.

Sex education is frequently perceived as nonsense by students and parents because the instructional components do not seem to address pressing concerns or foreseeable needs. The developmental approach enhances relevance by advocating the scheduling of topics when it is likely that they are most interesting to students and (by implication) their parents. Since parents want help in answering their children's questions, having a program which seems to reduce student need for accurate information should satisfy the relevance criterion. Additionally, it is important that we listen to the young men and women. Their questions and concerns represent the fundamental source for comprehensive needs assessment. However program planners should not assume that students can talk easily about the things that really matter. Students who have greatest need and concern will not reveal themselves by asking questions and thus risking special identification. The entire program should normalize sexuality (i.e., "Sex is nothing special; it's a normal part of living") by actively presenting topics for exploration rather than waiting for questions that may arise late, if ever.

The final criterion for sex education excellence is utility. By simultaneously addressing student developmental needs and community acceptance of sex education, it is possible to estimate the value of a specific component's use in the overall program. If a topic presents great potential for student information and problem-solving, then it deserves a trial in the process of program
development. Should empirical findings indicate that a controversial topic has only moderate or low value to the students, it should be noted that the component has little utility. It neither helps students nor enhances community acceptance of the overall program. Occasionally, curricula will have limited developmental significance, yet, their inclusion in the program will be essential to support for the comprehensive program. In this situation, the utility criterion may take precedence over relevance. In no case, should a component which produces poor or harmful outcomes remain in a program. Thus, accountability is the cornerstone for successful program planning.

We have tried to demonstrate the possibilities of developmental programming for ensuring utility, relevance, and accountability. An obvious means for exploiting the power of the developmental approach is involving students, parents, and interested community members in all stages of program planning. Now, we are ready to address one of the most significant questions in sex education: "Who is qualified to plan, implement, and evaluate comprehensive sex education?" By extending the criterion of accountability to the matters of staffing and administration, we can truly address excellence in sex education.

Who Should Develop, Implement, and Evaluate Sex Education?

There is a consensus that parents should be involved in sex education, yet they seldom exercise their rights and responsibilities in this essential area of student development. Public sex education inevitably faces the issue of whether professional educators should assist parents with home-based instruction or assume the primary teaching responsibility (Smith & Gorry, 1980). Since we attempted to make the case in an earlier section that inadequate sex information is a function of parental misconceptions and difficulties with sexuality, we favor maximum involvement of professional sex educators in developing, implementing, and evaluating comprehensive sex education.

The personal qualities, attitudes, and adjustment levels of teachers
involved in the program may be the most critical factors in the success or failure of sex education (Hurston, 1977; Schiller, 1977). Two groups concerned with sex education, the National Commission on Family Life Education and the American Association of Sex Educators, Counselors, and Therapists (AASECT), emphasize the importance of educator competence in promoting comprehensive sex education at the local and national levels. Since the most crucial aspects of sex education are taught unconsciously, including nonverbal behavior and selective coverage of material, the sexual valuing system and comfort of educators are important concerns (SIECUS, 1970). Unfortunately, there exists a learning gap in the graduate school preparation of counselors and educators who may become involved in sex education (Fyfe, 1980). Sex educators should receive systematic instruction in the major areas covered by a sex education program. In addition, they should intensively explore values and sexual biases/preferences before engaging in work with impressionable children, or adults for that matter.

Standards for the competence and integrity of sex educators have been offered by AASECT, a major organization for professional sex educators. According to the AASECT Code of Ethics (AASECT Ethics Committee, 1980, pp. 12-13), sex educators should be knowledgeable about the following areas:

1. sexual and reproductive anatomy and physiology;
2. developmental sexuality (from conception to old age);
3. dynamics of interpersonal relationships;
4. sociocultural factors in sexual values;
5. medical factors that may influence sexual function, including illness, disability, drugs, pregnancy, contraception, and fertility;
6. techniques and theories of sex therapy, including more than single model;
7. marital and family dynamics;
8. psychopathology;
9. principles of evaluation and referral;
10. ethical issues in sex education;
11. educational program evaluation methods;
12. techniques and theory of teaching;
13. sex and the law; and
14. sexology (the study of sex).

In addition to the call for extensive education in the content areas of human sexuality, AASECT specifically addresses the personal qualifications of the educator.

Sex educators should be aware of the personal value system that they introduce into the teaching situation and should disclose these values to students when such information is relevant to learning. Moreover, sex educators should avoid gratuitously enunciating opinions or prescribing values that reflect their personal biases rather than being responsive to the needs and well-being of their students. In addition, sex educators should be aware of the diverse cultural and religious backgrounds of their students, which may create differences in the responses of students to materials presented in the classroom or to materials that students are assigned to read or view. With this in mind, sex educators should strive to create an atmosphere where this individual diversity is valued (AASECT Ethics Committee, 1980, p. 13).

In order to encourage good sexual adjustment among sex educators, AASECT certification (in sex education, counseling, or therapy) requires participation in a Sexual Attitude Reassessment (SAR) workshop in which beliefs, values, attitudes, and preferences are closely examined. Although the qualifications of the teachers, who have direct contact and influence with students, should be keynote, the background and orientation of the administrator charged with representing the sex education program are also important considerations.

Ideally, the administrator of a comprehensive sex education program should
be a skilled professional who has enjoyed success in practice and survived the ongoing peer review afforded by involvement in research, policy analysis, advocacy, and publishing. Also, the administrator should be competent in curriculum development, educational innovation and planned change, and evaluation of learning and teaching. Since there is much value in decentralizing the program to the neighborhood school, which can then accurately address student needs and community interests, the administrator in charge will probably be the school principal. Provided the administrator can effectively balance the concerns of a diverse community with the concerns of professional sex educators, who possess unique knowledge, skills, and mission identity, the principal can represent the sex education program without special preparation in the field.

For the administrator to represent appropriately the comprehensive sex education program, the person must possess good data, derived from needs assessment and evaluation studies. The administrator must be aware of the professional and personal requirements in sex education in order to select the best curriculum specialists, teachers, and support personnel. The most important skill in terms of the survival and expansion of sex education is community relations.

Scales (1982) reported that no less than 80 percent of community members approved of sex education in the schools. No more than one percent of parents in this national study refused permission for their children to be in sex education classes. Furthermore, less than one-half of one percent of community members actively opposed the sex education program in their schools. Therefore, the administrator must first recognize that there is widespread community and parental support. Then, the administrator can address the special interests of the vocal minority who oppose public sex education.

One of the techniques advocated by Scales (1982) to promote good community relations is studying the arguments of opponents; preparing sound, empirical responses; and rehearsing the responses which effectively refute opponent arguments.
Critics of sex education typically present one or more of the following criticisms in their attempts to undermine public sex education (Allen, 1974; Scales, 1982; Smith & Gorry, 1980).

1. Sex education threatens parental and family values.
2. Sex education encourages sexual experimentation.
3. Sex education causes moral decline, promiscuity, and deviancy.

In the first argument, there is probably some truth to the contention that introduction of sex education and breakdown in parental/familial organization are related. However, sex education has not caused changes in parenting and family relations. Perhaps, sex education has flourished in response to modifications of traditional family structures, religious institutions, and social groups. These same modifications affect education generally in America (Goodlad, 1984). In truth, public school sex education courses tend to reflect the most conservative values in the community (McCary, 1978; Yarber & Pavese, 1984). Thus, the first criticism has little substance or merit.

The second argument represents a common concern of rational critics of sex education. Again, the truth in relation to the argument is actually contrary to the contention. That is, sex education actually decreases sexual experimentation in some cases. In others, there is no effect on frequency of sexual behaviors, but contraception and responsibility increase (McCary, 1978). While sex education tends to shift attitudes toward more liberal, tolerant views, premarital behavior rates are generally not affected. On the other hand, informal (peer group) sex education does lead to greater incidence of premarital sexual intercourse. In one study of the long term effects of sex education (Klein, 1984), students reported more control of sexual behavior, willingness to set limits with romantic partners, ability to not become involved in coercive sexual activity, and self-esteem and body comfort.

The third argument is barely defensible. Its contention runs counter to
the stated aims and demonstrated effects of sex education. Instruction in sexuality is sometimes linked with greater acceptance and availability of explicit (so-called "pornographic") reading and audiovisual materials. However, research reported by Athanasion (1980) establishes that exposure to erotica actually reduces aggression, incidence of deviance, and sexual dysfunction. Persons opposed to availability of erotica and explicit educational materials tend to be dogmatic, authoritarian, and intolerant. They hold traditional, restrictive views of sexuality and do not discuss sex in the home. A subset of opponents to erotica (e.g., those who lobby for legislation banning public availability of magazines and other resources) is likely to represent the most vocal group of sex education critics. It will be difficult to persuade these opponents of the validity of research establishing the merits of sex education. However, an appeal to rationality and empirical decision-making is the professional response to unfounded, biased propaganda.

Scales (1982) provided some other recommendations for establishing and maintaining effective community relations. Administrators must not only be skilled in managing controversy by powerfully responding to the arguments of critics, but also, they must be skilled in organizing segments of the community that support sex education. Since professionals do not possess the only valid input to sex education program development, parents, community members, and students should be actively recruited for planning, implementation, and evaluation groups. These stakeholders will provide the best data and guidance regarding the handling of sensitive issues.

Community organizing also involves some concerted political action. The barriers to program momentum must be overcome by advocacy and activism. Scales (1982) recommended small-scale program development efforts in order to circumvent controversy and inflated power of the critical minority, both of which are fostered by mass meetings and media attention. Furthermore, potentially adverse
effects of school board decision-making must be minimized or controlled by building relationships with supporters on the board and voting in school board elections. The formation of coalitions and networks, involving key professionals, civic leaders, and community members, is an effective means for influencing school board and administrative review of sex education programs.

An ongoing commitment of the administrator in charge of sex education is evaluation. Nothing is more influential than ongoing data gathering and empirically-oriented decision-making. The application of rational, scientific approaches to evaluation will persuade most stakeholders of the program's accountability, relevance, and utility. Occasionally, program excellence is a less important evaluative criterion than cost-benefit analysis. The Developmental Research and Utilization Model, when applied with systematic policy analysis, affords an excellent heuristic for administration. Finally, it should be noted that program evaluation is not always an empirical or economic process. All sex education programs will be subject to some biased review based on the values of staff (administrators, educators, planners, curriculum specialists, etc.) and community members.

Adequate program planning, implementation, and evaluation require careful attention to data and values. Sex education is not value-free. The administrator must be able to represent program values in clear statements of mission, policy, and procedure. The instructional leader must also possess skills in negotiation, conflict resolution, and relationship building in order to render program values and mission as generally acceptable, as possible. Scales (1982) provided a list of typical sex education values, which could serve as a catalyst for staff and community values clarification.

1. Information about sexuality is helpful, not harmful, in student development.

2. Students should respect their own sexual values, as well as those of others.
3. It is usually preferable for students to postpone sexual intercourse until they have awareness of self and personal motivations, and skills in decision-making and interpersonal communication.

Some additional statements of value (underlying program assumptions) apply to comprehensive sex education. They may be incorporated with the earlier list.

4. Students should be actively involved in exploring and discussing the range of topics relevant to their age group, throughout the public educational experience.

5. Parents should be involved in comprehensive sex education, but students should not be deprived of education crucial to development and adjustment.

6. Parents, community members, and school personnel (i.e., all interested adults) should have access to the sex education program, including planning, implementation, evaluation, and even instruction.

7. Sex educators should be highly competent, professionally and personally.

8. A wide range of sexual attitudes, behaviors, roles, and lifestyles should be tolerated in a pluralistic, democratic society; therefore, individual differences should be protected in the common public education.

9. Professional educators and administrators have the right and responsibility to accept the public mandate for comprehensive sex education.

In this final section, we have tried to document the importance of staffing and community relations to the overall sex education effort. Frequently, our attention shifted back to the matters of sexual information, values, and preferences—all concerns for the consumers of sex education. Students are not the only ones in need of timely sex education. Adults who would become involved in public programs must have excellent knowledge, personal adjustment, and interpersonal skill in order to facilitate the sex education of others. Program planning, implementation, and evaluation require ongoing exploration of personal values and mission goals. Even community relations can be viewed as extensions
of sexual values clarification.

As suggested in previous sections, the ultimate success of comprehensive sex education is a function of attention to excellence. Accountability, relevance, and utility can be achieved by (1) systematically implementing curricula tailored to the developmental needs of students and special concerns of the community surrounding the neighborhood school; (2) constructing and evaluating the curricula according to the Developmental Research and Utilization Model and related policy analysis; (3) involving representatives from all stakeholder groups in planning, implementing, evaluating, and advocating the emerging program; and (4) maintaining a simultaneous commitment to empirical decision making and values clarification. On the basis of these observations, several recommendations can be offered.

Recommendations

This review established the general merits of public sex education and some specific potentials for comprehensive (as opposed to traditional or basic) sex education. The following recommendations are related to means and ends, process and content, in the comprehensive program. Some of the recommendations are based in the recurrent themes of the review (e.g., developmental timing) while others are representative of less obvious ways of attaining comprehensive sex education for all students (e.g., by exploring restrictive sex role orientations).

1. Parents, students, professional educators, interested community members, and other stakeholders should be involved in every stage of Developmental Research and Utilization that results in planning, implementing, evaluating, and advocating comprehensive sex education.

2. The comprehensive program should be implemented by first establishing support for existing curricula and then systematically introducing novel components according to the identified developmental needs of students and concerns of community members.
3. The program should be developed, implemented, and evaluated at the level of the neighborhood school, under the administration of the school principal and with the support of at least one professional sex educator.

4. The comprehensive program should be based upon infusion of developmentally appropriate sex education components within the existing academic and guidance curricula, with integration of topics across subject areas and coordination of instruction across grade levels.

5. Program excellence should be based upon accountability, relevance, and utility, which depend upon ongoing evaluation, in the forms of empirical research, policy analysis and values clarification.

6. Special attention should be paid to the competence and integrity of program staff, the protection of parental and student rights, and the recognition of individual differences in the common educational experience.

7. The comprehensive sex education program should emphasize active, structured exploration of age-related questions and concerns over the entire course of studies.

8. The program should emphasize positive, healthy, and satisfying sexuality in addition to the traditional concerns of reducing rates of adolescent pregnancy and sexually transmitted diseases.

9. The program should emphasize exploration of contemporary alternatives in adult lifestyles, including examination of the effects of sex bias, sex role stereotyping, and exaggerated sex role enactment.

10. Decision-making and problem-solving skills should receive considerable attention in the development of the comprehensive curriculum.

11. Program evaluation should include at least some long-term follow-up of students and some attention to actual incidence of sexual behavior and adolescent sexual problems.

12. The comprehensive sex education program, when demonstrably excellent, should be supported by the school board and community coalitions.
References


Sex Education

25


Table 1
Tasks and Concerns in Developmental Sexuality

<table>
<thead>
<tr>
<th>Period</th>
<th>Age Range</th>
<th>Tasks, Characteristics, and Emerging Concerns</th>
</tr>
</thead>
</table>
| Infancy/Preschool  | 0-3       | °Childbirth preparation and education  
°Nursing, suckling, bonding  
°Toilet training  
°Periodic genital play  
°Child-other affectional interactions, such as kissing and hugging  
°Regular sensory stimulation |
| Early Childhood    | 3-8       | °Recurrent need for kissing, hugging, and affectional display  
°Intentional sex play and masturbation  
°Awareness of genital and sex role differences  
°Periodic interests in bathing, elimination, and sexual reproduction  
°Increasing questions about body structure, function, and parental intercourse  
°Longing for new same-sex baby  
°Sex role orientations in home and work are crystallized  
°"Erotic awakening," linking love and sex  
°Vulnerability to sexual exploitation by older children and adults  
°Child-child sexual exploration, including "doctor games"  
°Transition from parental protection and home to uncertainties of schooling |

(Continued)
Table 1 (Continued)

Tasks and Concerns in Developmental Sexuality

<table>
<thead>
<tr>
<th>Period</th>
<th>Age Range</th>
<th>Tasks, Characteristics, and Emerging Concerns</th>
</tr>
</thead>
</table>
| Middle/Later Childhood | 7-12      | °Increasing self-consciousness about body and its functions, exaggerated modesty
|                      |           | °Vulnerability to being perceived as physically different
|                      |           | °Increasing interest in romance and opposite-sex friendships
|                      |           | °Sensitivity to sexual anxiety and guilt in parents
|                      |           | °Rapid establishment of sexual norms and values from overt and unconscious injunctions by parents
|                      |           | °Sexual joking based on misconceptions, anxieties, and exaggerated sex roles
|                      |           | °Deficient vocabulary and conceptual level for describing developing sexuality
| Early Adolescence    | 12-16     | °Onset of pubertal maturation, including growth spurt, secondary sexual characteristics, and menstruation
|                      |           | °Increasing nocturnal emissions and sex dreams
|                      |           | °Preoccupation with heterosexual attractiveness, flirting, and heterosocial skills
|                      |           | °Vulnerability to being perceived as different, physically or socially
|                      |           | °Increasing sexual arousal and involvement in sexual behavior

(Continued)
Table 1 (Continued)

Tasks and Concerns in Developmental Sexuality

<table>
<thead>
<tr>
<th>Period</th>
<th>Age Range</th>
<th>Tasks, Characteristics, and Emerging Concerns</th>
</tr>
</thead>
</table>
| Early Adolescence | 12-16     | °Frequent masturbation to orgasm, especially in young men  
°Highest orgasmic frequency for young men at end of period  
°Gradually increasing rates of intercourse  
°Infrequent use of contraception and many misconceptions about risks for pregnancy and sexually transmitted diseases  
°Increasing reports of romantic love  
°Recurrent concern for sexual identity  
°Emergence of homosexual feelings and preferences  
°Transition from dependency of elementary and middle school to secondary school demands for greater independence |
| Later Adolescence | 15-19     | °Demands for adult life planning across domains without sufficient experience or decision making skill  
°Needs for sexual expression confront restrictions imposed by parents and society  
°Increasing involvement in romantic-sexual relationships  
°Dramatically increasing frequencies of all sexual behaviors, including intercourse  
°Convergence of sexual patterns of young women with those of young men |
Table 1 (Continued)

Tasks and Concerns in Developmental Sexuality

<table>
<thead>
<tr>
<th>Period</th>
<th>Age Range</th>
<th>Tasks, Characteristics, and Emerging Concerns</th>
</tr>
</thead>
</table>
| Later Adolescence   | 15-19     | °High vulnerability to pregnancy and sexually transmitted disease risks due to increasing sexual activity and resistance to contraception  
                |           | °Highest rates of sexual activity in lowest and highest socioeconomic groups, lowest rates in middle class  
                |           | °Conflicts between religiosity and sexuality  
                |           | °Vulnerability to sexual exploitation by peers, especially among women  
                |           | °Entry into adulthood with inadequate preparation for responsible decision-making and problem-solving  
                |           | °Increasing incidence of substance abuse, risk taking, self-destructive and suicidal behaviors |
Table 2

Student Readiness and Community Acceptance of Selected Topics in Comprehensive Sex Education

<table>
<thead>
<tr>
<th>Topic</th>
<th>Optimal Student Age/Corresponding Grades</th>
<th>Percentage of Community Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology of Reproduction</td>
<td>3-8/K-2</td>
<td>100</td>
</tr>
<tr>
<td>Female-male Sex Roles</td>
<td>3-8/K-2</td>
<td>80</td>
</tr>
<tr>
<td>Masturbation-Body Exploration</td>
<td>3-8/K-2</td>
<td>57d</td>
</tr>
<tr>
<td>Codes and Values in Sexuality</td>
<td>7-12/5-7</td>
<td>75</td>
</tr>
<tr>
<td>Birth Control</td>
<td>7-12/6-8</td>
<td>89</td>
</tr>
<tr>
<td>Sexually Transmitted Diseases</td>
<td>7-12/6-8</td>
<td>98f</td>
</tr>
<tr>
<td>Alternatives to Marriage</td>
<td>12-16/8-10</td>
<td>58g</td>
</tr>
<tr>
<td>Homosexuality</td>
<td>12-16/8-10</td>
<td>65</td>
</tr>
<tr>
<td>Masturbation-Autoeroticism</td>
<td>12-16/8-10</td>
<td>57</td>
</tr>
<tr>
<td>Sexual Behaviors and Options</td>
<td>15-19/10-12</td>
<td>86h</td>
</tr>
<tr>
<td>Premarital Relations</td>
<td>15-19/10-12</td>
<td>72</td>
</tr>
<tr>
<td>Abortion and Birth Options</td>
<td>15-19/10-12</td>
<td>71</td>
</tr>
<tr>
<td>Adult Development and Lifestyles</td>
<td>15-19/10-12</td>
<td>naj</td>
</tr>
</tbody>
</table>

aAll but one of the topics were drawn from a study of community support and educator perceptions of comprehensive sex education (Yarber & Pavese, 1984).

bThe figure reflects percentage of community members expressing support or acceptance of the topic.

cThis is a key developmental period for healthy exploration of the entire body, including the genitals. Parents and overly concerned adults may actually be the population needing assistance in accepting the child's natural exploration.

dThis percentage reflects acceptance of the topic generally. Since masturbation
Table 2 (Continued)
Student Readiness and Community Acceptance of Selected Topics in Comprehensive Sex Education

dreceived the least community acceptance, it may be wise to postpone coverage of the topic until the active period of 12-16 years of age—especially if early coverage might jeopardize the future of an evolving program.
eThis topic represents a synthesis of contents related to rules and norms, laws and ethics, and choices and decisions. Needless to say, these are crucial cognitive skills which should be mastered before confrontation with the range of sexual options afforded by adolescence in the public school.
fThe topic of STD is so well-received by the community that it represents a good opportunity for strengthening support for the entire sex education program. Thus, the topic should be exceptionally well-developed and implemented in order to increase the likelihood that more controversial topics will be accepted.
gAlternatives to traditional marriage include the increasingly common forms of adult relationships such as divorce, serial monogamy, exclusivity/openness in marriage, living together, and commitments over time. Since the topic may be controversial, its introduction in the comprehensive program should be carefully planned.
hThis topic reflects the range of sexual behaviors and preferences incorporated in normal and variant daily lifestyles.
iThis topic was not included in the study (Yarber & Pavese, 1984), but it is extremely important to students in the developmental sense (see Table 1). The topic corresponds to the values clarification of ages 7-12; however, the synthesis is a higher-order one and the focus is on decision-making over the lifespan.
jSince the topic is novel, no community data are available.
Appendix A
Developmental Research and Utilization Model

<table>
<thead>
<tr>
<th>Research Phase</th>
<th>Concerns</th>
<th>Operations</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Analysis</td>
<td>A. Problematic</td>
<td>1. Problem Statement</td>
<td>Problem analysis and identification; &quot;State of the art&quot; review</td>
</tr>
<tr>
<td></td>
<td>Human Condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B. Basic Information</td>
<td>2. Information Selection</td>
<td>Selection of basic/applied research, technology, practice experience;</td>
</tr>
<tr>
<td></td>
<td>Source</td>
<td></td>
<td>Selection of curricular language, goals, and objectives</td>
</tr>
<tr>
<td>II. Development</td>
<td>C. Relevant Data</td>
<td>3. Information Gathering</td>
<td>Assessment, literature review, site visitation, and consultation</td>
</tr>
<tr>
<td></td>
<td>D. Product Design</td>
<td>4. Product Innovation</td>
<td>Novel assembly, application, or invention</td>
</tr>
<tr>
<td></td>
<td>E. Product Preparation</td>
<td>5. Product Realization</td>
<td>Construction of prototype, product, or statement of practice procedures</td>
</tr>
<tr>
<td>III. Evaluation</td>
<td>F. Field Trial</td>
<td>6. Trial Application</td>
<td>Pilot implementation or demonstration</td>
</tr>
<tr>
<td></td>
<td>G. Outcome Analysis</td>
<td>7. Data Collection</td>
<td>Collection of relevant data from trial</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. Product Evaluation</td>
<td>Empirical research study, program evaluation, curricular review, policy</td>
</tr>
</tbody>
</table>

(Continued)
Appendix A (Continued)

Developmental Research and Utilization Model

<table>
<thead>
<tr>
<th>Utilization Phase</th>
<th>Concerns</th>
<th>Operations</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV. Diffusion</td>
<td>H. Diffusion Media</td>
<td>9. Diffusion Media</td>
<td>Preparation of guides, manuals, and training media</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10. Information</td>
<td>Publication, professional presentation, and demonstration</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dissemination</td>
<td></td>
</tr>
<tr>
<td>V. Adoption</td>
<td>I. Product Acceptance</td>
<td>11. Implementation by Users</td>
<td>Systematic use by practitioners, administrative and community support</td>
</tr>
<tr>
<td></td>
<td></td>
<td>J. Product Renewal</td>
<td>Maintenance of staff, administration, and community support for product;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Follow-up, periodic review, and quality control;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Revision or expansion of product and planned change</td>
</tr>
</tbody>
</table>

Note: Parts of this model were suggested by Edwin Thomas of the University of Michigan.
Appendix B
Sources of Information About Sex Education

<table>
<thead>
<tr>
<th>Journal/Organization</th>
<th>Editor/Contact Person</th>
<th>Address/Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Lifestyles</td>
<td>Barry Singer</td>
<td>Department of Psychology, California State University, Long Beach, CA 90840 [213-498-5053]</td>
</tr>
<tr>
<td>Family Relations: Journal of Family Relations: Journal of Applied Family and Child Studies</td>
<td>Michael Sporakowski</td>
<td>Department of MHFD, Virginia Tech University, Blacksburg, VA 24061 [na]</td>
</tr>
<tr>
<td>Journal of Divorce</td>
<td>Craig A. Everett</td>
<td>111 W. Congress, Tucson, AZ 85701 [602-792-8468]</td>
</tr>
<tr>
<td>Journal of Homosexuality</td>
<td>John P. deCecco</td>
<td>Room 503, Psychology Building, San Francisco State University, San Francisco, CA 94132 [415-469-1137]</td>
</tr>
<tr>
<td>Journal of Marital and Family Therapy</td>
<td>Alan S. Gurman</td>
<td>Department of Psychiatry, University of Wisconsin Medical School, 600 Highland Avenue, Madison, WI 53792 [608-263-4140]</td>
</tr>
<tr>
<td>Journal of Sex Education and Therapy</td>
<td>Gary F. Kelly</td>
<td>Clarkson College, Potsdam, NY 13676 [315-268-4434]</td>
</tr>
<tr>
<td>Population and Environment: Behavioral and Social Issues</td>
<td>Vaida D. Thompson</td>
<td>Department of Psychology, University of North Carolina, Chapel Hill, NC 27514 [919-962-5037]</td>
</tr>
<tr>
<td>Sexuality and Disability</td>
<td>Ami Sha'ked</td>
<td>Purdue University, 1201 East 38th Street, Indianapolis, IN 46205 [na]</td>
</tr>
</tbody>
</table>

(Continued)
### Appendix B (Continued)

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<tbody>
<tr>
<td>Journal of Sex Research</td>
<td>Clive M. Davis</td>
<td>Department of Psychology, Syracuse University, Syracuse, NY 13210 [315-423-3658]</td>
</tr>
<tr>
<td>Family Planning Perspectives</td>
<td>Lynn Landman</td>
<td>360 Park Avenue South, New York, NY 10010 [212-685-5858]</td>
</tr>
<tr>
<td>The Society for the Scientific Study of Sex</td>
<td>(Director)</td>
<td>P.O. Box 29795, Philadelphia, PA 19117 [215-782-1430]</td>
</tr>
<tr>
<td>Sex Information and Education Council of the U.S.</td>
<td>Deryck Calderwood</td>
<td>80 Fifth Avenue, Suite 801, New York, NY 10011 [na]</td>
</tr>
<tr>
<td>Masters and Johnson Institute</td>
<td>Ruth Clifford</td>
<td>4910 Forest Park Boulevard, St. Louis, MO 63108 [314-361-2377]</td>
</tr>
</tbody>
</table>

Note: Some of the names of contact persons, addresses, and telephone numbers may not be the most current for the journal or organization.