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## **Structure and Components of Successful Educational Programs**

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### **Abstract**

Educational programs have been a mainstay of rehabilitation since penitentiaries first opened. A large number of offenders participate in correctional education while they are in facilities or in the community. There seems to be a general acceptance by the public and policy makers that education has benefits in its own right. Encouraging is the fact that education programs include many of the components of effective correctional treatment. Furthermore, research demonstrates that education programs such as basic education, GED, postsecondary and vocational are effective in reducing later recidivism and increasing future employment. In contrast, life skills programs have not been found to be effective in reducing recidivism. Questions remain about the effect of life skills when embedded within a multi-modal or holistic program. Research on education programs fails to untangle the issues of what works for whom, when, why and in what circumstances. Educators in facilities face tremendous difficulties in normalizing the experiences of student-inmates. Lockdowns, transfers facilities, and restricted movement in facilities limits the time students spend in classrooms. Security concerns prohibit use of the internet by students, thus limiting their ability to access information or use on-line library resources. Unless education programs are specifically designed to assist in re-entry there is little contact between educators within facilities and in the community meaning few offenders receive assistance in continuing their education upon release.

## **Structure and Components of Successful Educational Programs**

### **Education in Prisons and Reformatories**

Originally, education programs for offenders focused on religious instruction. This instruction was expected to help offenders achieve spiritual enlightenment (Gerber & Fritsch, 1995; Teeters, 1955). Consistent with the religious beliefs of those who were responsible for the early penitentiaries, offenders were thought to need time to reflect on their crimes and repent. Solitary confinement was intended to make offenders realize the error of their sinful ways and make them penitent. Religious instruction was expected to help in the process of penitence.

When the reformation era began, the focus of education programs changed from religious instruction to basic literacy and communication skills. Zebulon R. Brockway is usually credited with initiating the reformatory age in 1876 when he proposed his theory of rehabilitation at the first conference of the American Prison Association (the forerunner of the current American Correctional Association). Since that time academic education has been a cornerstone of correctional programming. As superintendent of the first reformatory in Elmira, New York, Brockway brought his revolutionary ideas into practice. The goal of the reformatory was to reform youth. The reformatory was designed to provide a physically and mentally healthy environment where youth would have access to academic education and extensive vocational training. Brockway believed that law-abiding behavior was attainable through legitimate industry and education (Reagan & Stoughton, 1976). Elmira was used as a model for both adult prisons and juvenile reformatories throughout the United States.

The reformatory age led to an era of rehabilitation in corrections when the use of indeterminate sentencing became an important component of decision making. Offenders were released when there was evidence that they had been rehabilitated. The goal of corrections was to “correct” through rehabilitation. Educational programs became a mainstay of correctional rehabilitation during this time. By 1930, academic and vocational educational programs were operating in most prisons, where they were considered to play a primary role in the process of rehabilitation. From the original basic literacy programs, the type and variety of educational programs grew to include opportunities for a high school or General Equivalency Development (GED) diploma, vocational education, life skills programs, postsecondary or college education, and educational release.

The focus on rehabilitation continued until the 1970s when corrections in the United States turned away from a rehabilitation philosophy to just desserts and crime control philosophies that emphasize retribution, deterrence and incapacitation (MacKenzie, 2006). Despite the “tough on crime” rhetoric of many decision makers and politicians, prisons continued to offer academic education. There appears to be a general belief that education has benefits in its own right (Applegate, Cullen, & Fisher, 1997; Cullen, Skovron, & Scott, 1990).

One reason for the continuing emphasis on educational programs is the strong correlation between educational level and criminal activity. Convicted offenders are, on average, less educated and have fewer marketable job skills than the general population (Andrews & Bonta, 2003; Harlow, 2003). For example, 41 percent of the inmates in prisons or jails and 31 percent of probationers have not completed high school or its

equivalent (Harlow, 2003). In comparison, only 18 percent of the general public had not finished the 12<sup>th</sup> grade. Incarcerated adults also have high rates of illiteracy. In an assessment of adult literacy, the U.S. Department of Education found in comparison to the general public, prison inmates were lower in their ability to search, comprehend and use information, use documents, and perform computations (Greenberg, Duleavy, Kutner & White, 2007). Ryan (1990) estimates that half of America's inmates are illiterate if sixth grade achievement is used as a cutoff. According to several researchers, the average reading level of incarcerated offenders may be below the fifth grade level. More than one half of all prison inmates have not completed high school, and those who have are often two to three grade levels behind in actual skills (Tewksbury & Vito, 1996).

### **Educational Programs Today**

Today most correctional facilities offer educational programs. Academic education is legally mandated for juveniles and youthful adults. However, correctional administrators do not limit the programs to only those for whom education is legally required. In a recent Bureau of Justice Statistics report, Harlow (2003) found over 90 percent (91.2%) of state prisons, all federal prisons and almost 90 percent (87.6) of private prisons offered educational programs. These facilities usually house offenders sentenced to a year or more, thus the inmates have sufficient time to achieve educational goals.

Many different types of programs fall under the rubric of education. The most commonly offered programs are basic education (including English as a second language special education and literacy classes), GED or high school, vocational education, and postsecondary education/college. Many facilities also offer life skills programs and vocational education. Life skills programs, also called social skills, are sometimes part of other curriculums such as basic adult education or vocational education.

At times, drug treatment and education, parenting, and cognitive skills programs are considered educational programs but since many of these are not taught by academically trained educators they will not be included in this review of educational programs. Cognitive skills programs emphasize changes in thought processes such as errors in thinking, problem solving, coping skills, antisocial attitudes and impulsivity. Sessions are usually taught by trained lay people and not educators. Parenting class are also frequently lead by people not trained as educators and they use varied models for presenting the information. Similarly, drug treatment and education is usually provided by drug counselors and not educators. Furthermore most studies examining the impact of drug treatment and education focus on a combination of treatment and education or treatment alone and not education alone.

Educational programs available to inmates differ somewhat by facility. Most state prisons offer basic adult education (80.4%) or secondary education (83.6%), and almost all of the federal prisons offer these programs (97.4 and 98.7 percent, respectively). Fewer private prisons offer basic adult education (61.6%) and secondary education (70.7%). Many of the state, federal and private prisons provide college courses (26.7 %, 80.5 % and 27.3 %, respectively) and vocational training (55.7 %, 93.5 %, and 44.2 %, respectively).

In comparison to prisons, local jails hold people from arraignment through conviction and for short sentences. Despite the fact that inmates spend a relatively short time in these facilities many jails (60.3%) provide educational programs (Harlow, 2003).

Many inmates take advantage of the education opportunities while they are incarcerated (Harlow, 2003). Over 50 percent of the state (51.9 %) and federal (56.4 %) inmates reported participating in educational programs since their most recent incarceration. Fewer jail inmates participate (14.1 %). Offenders on probation (22.9 %) also reported participating in educational programs. While there may have been a decline in the percent of inmates who were able to take advantage of educational programs over time due to the great increase in the numbers of inmates in prison, a large percent still participate in educational programs.

### **Theoretical Rationale for Association between Education and Recidivism**

Conspicuously absent from the research literature in the area of education is a discussion of a theoretical explanation for the connection between education and postrelease offending. Few correctional educators articulate the precise mechanism by which they expect the intervention to impact future offender behavior. There are many possible ways education may bring about changes that will reduce the future criminal activities of offenders.

One mechanism by which education will theoretically affect recidivism is through improvement in inmate cognitive skills. The way individuals think influences whether they violate the law (Andrews & Bonta; MacKenzie, 2006). Deficiencies in social cognition (understanding other people and social interactions), problem solving abilities, and the sense of self-efficacy are all cognitive deficits or “criminogenic needs” found to be associated with criminal activity (Foglia, 2000; Andrews, Zinger, Hoge, Bonta, Gendreau & Cullen, 1990; MacKenzie, 2006). Criminogenic needs are dynamic (or changeable) deficits or problems that are directly related to an individual’s criminal behavior. Educational programs that increase offenders’ social cognitions, ability to solve problems and belief in their ability to control events in their lives may reduce their future offending.

Other research examining inmate cognitive skills demonstrates a connection between executive cognitive functioning (ECF) and antisocial behavior. ECF is defined as the cognitive functioning required in planning, initiation, and regulation of goal-directed behavior (Giancola, 2000). It would include such abilities as attention control, strategic goal planning, abstract reasoning, cognitive flexibility, hypothesis generation, temporal response sequencing, and the ability to use information in working memory. From this perspective, education may be important in reducing crime because it improves the ability to use and process information.

Some researchers and educators argue that the importance of education and cognitive skills may be in its ability to increase individuals’ maturity or moral development (Batiuk, Moke and Rountree, 1998; Duguid, 1981; Gordon & Arbutnot, 1987). For example, academic instruction can help instill ideas about right and wrong, and these ideas may be associated with changes in attitudes and behaviors.

Education may also mitigate the harsh conditions of confinement or “pains of imprisonment” and reduce prisonization, the negative attitudes that are sometimes associated with incarceration. Deprivations of prison or imported criminogenic norms

lead to a prisonized subculture norms favoring attitudes hostile toward the institution and supportive of criminal activities. By providing safe niches and a more normalized environment, education may provide a basis for reconstruction of law-abiding lifestyles upon release from prison (Harer, 1995). Educational opportunities may also mitigate suffering and lead to attitudes accepting the legitimacy of administrative rules and regulations (Tyler, 1990; Bottoms and Hay, 1996).

In contrast to the perspective that educational programs will increase general problem solving, perspective taking, executive cognitive functioning, or stage of moral development, economic theories of crime hypothesize that the programs are important in reducing offending more directly via increased skills and employability. Employability may increase for several reasons. One, the offenders may obtain necessary credentials, such as a high school diploma or GED, that make them eligible for jobs for which they previously would not have been considered. Second, the educational programs may provide them the skills needed for specific jobs. From this perspective, education would increase an offender's chances of getting and keeping legitimate employment after release, thereby eliminating the need to commit crimes for financial gain. There is some evidence that education in prison is associated with an increase in employment. In a review of the research, Gerber and Fritsch (1995) examined the impact of educational program participation on post-release employment and concluded that inmates who participated in or completed prison education programs were more likely to be employed after release.

Obviously, the academic curriculum will differ depending upon the theoretical rationale for the relationship between education and offending. Although a general liberal arts curriculum might be crucial for increasing cognitive functioning, changing ones' antisocial beliefs, or increasing moral development, it might be less apt to provide specific job skills. If gainful employment is the theoretical link to reducing crime, then education programs would focus more directly on teaching the specific job skills offenders will need to find work in the community. Indeed, Duguid, Hawkey, and Pawson (1996) argue that evaluations should examine these theoretical differences in programs and intermediate outcomes to determine "what works for whom, when, why and in what circumstances." It is quite possible the needs of individuals differ and the type of educational program successful in reducing recidivism for one person will not be the same for another individual.

### **Theoretical Meta-analyses**

Systematic reviews and meta-analyses of correctional strategies and rehabilitation strategies, varying greatly in coverage and technique, have been surprisingly consistent in the overall findings (Andrews et al. 1990; Lipsey & Wilson, 1998; Lipsey & Cullen, 2007; MacKenzie, 2006). Supervision and management strategies focusing on deterrence and retribution as goals show little mean reduction in recidivism and, at times, have the opposite effect and increase reoffending. Studies of rehabilitation treatment, by comparison, show consistently positive and relatively large impacts on recidivism. The effects of different types of treatment programs vary widely depending upon such things as implementation, program design and type of participant. Yet, some principles of effective treatment have emerged from the theoretical meta-analyses.

Almost consistently, reviews of the literature, systematic reviews and meta-analyses demonstrate that correctional programs that are skill oriented, based on a behavioral or cognitive-behavior theoretical model and multimodal are more effective than other modes of treatment (Andrews et al, 1990; Palmer, 1996; Lipsey, 1992; Redondo, Sanchez-Meca, & Garredo, 1999). Meta-analyses are statistical methods for examining the impact of programs using studies as the unit of analyses. An attempt is made to obtain an exhaustive list of studies on a particular topic. The results of these studies are then examined in statistical tests. Correctional treatment such as casework, individual counseling, and group counseling have not been found to be effective in meta-analyses. In contrast, skills-based programs including those directed at improving cognitive skills as well as employment skills have been found to be effective..

Two good examples of theoretical meta-analyses are Lipsey's (1992; 1995) meta-analysis of juvenile delinquency interventions and Losel's (1995) review of meta-analyses. Lipsey examined characteristics of methods, treatment and delinquents. He found that the treatment modality had the largest effect. Treatment that was behavioral, skill oriented or multimodal was associated with reduced problem behaviors. When these interventions were compared to interventions based on deterrence, family counseling, group counseling or individual counseling he found a 20 to 40 percent reduction in recidivism. If the other interventions resulted in 50 percent recidivism, the skill, behavioral, and multimodel interventions resulted at times in recidivism rates as low as 30 percent.

Losel's (1995) study of meta-analyses supported these findings. Across all 13 meta-analyses in his study the highest effect sizes were found when the mode of treatment was behavioral, skill oriented, and multi-modal. Certainly, educational programs would fall under the rubric of skill-oriented programs described in these studies. Many vocational programs provide a range of services along with the education and, thus might be considered multi-modal. Similarly, some new life skills programs are targeting many aspects of the offenders' lives.

Another important principle of effective treatment is need for integrity. Implementation of effective programs in corrections is a function of the ability of policy makers, program administrators, and service deliverers to translate knowledge and theory into practice with integrity (Leschied, Bernfeld, & Farrington, 2001). A program with integrity has a clearly identified rationale consistent with the human service theoretical literature, qualified and trained staff to deliver the program, treatment methods shown to be effective and a consistent protocol. Program intensity is also concerned with dosage issues. Dosage refers to the need for programs to have sufficient length and contact time. A program with poorly trained staff given once a week for five weeks to high risk offenders does not have treatment integrity. In support of the proposal of the importance of treatment integrity, in his meta-analysis, Lipsey (1995) found longer durations of treatment and more meaningful contacts were associated with reduced recidivism.

Educational programs would be expected to have integrity in the sense that there are clearly identified goals and curriculum of study. In most cases, the educators have the required credentials and training. Education programs may be less apt to fulfill the need for sufficient dosage or time-in-program. Enrollment figures may be much higher than attendance due to teacher vacancies, prison lockdowns, transfers, and lack of incentives for participation (Hill, 2008; Erisman and Contardo, 2005). While a large

percent of offenders may have been enrolled in classes during their time in prison, they may have actually attended only a limited number of classes. For example, while the California Department of Corrections and Rehabilitation (CDCR) has over 54,000 inmates (about 31 percent of the total inmate population) enrolled in education programs fewer than 4 in 100 earned a GED or vocational certification (Hill, 2008).

Effective programs also target dynamic, criminogenic needs or changeable (e.g., dynamic) deficits (e.g., needs) that are directly related to criminal activities (hence criminogenic) (Andrews and Bonta, 2003). According to Andrews and Bonta (2003) criminogenic needs are the attitudes and behaviors most highly correlated with criminal activities and these are the best-validated risk factors in the research literature: antisocial attitudes, antisocial associates, a history of antisocial behavior, antisocial personality pattern, problematic circumstances at home (family/marital), problematic circumstances at school or work, problematic leisure-time circumstances and substance abuse. Treatment should focus on these criminogenic needs. Certainly correctional education addresses the treatment need for changing problematic circumstances at school or work. It may also impact antisocial attitudes and behaviors and leisure-time activities. It is important to note self esteem, a common target of correctional programs, is not included in the risk factors for criminal activities. While self esteem may be changed by educational programs or in treatment it is not expected to have a direct impact on criminal activities. In contrast, antisocial attitudes, considered a criminogenic need, are strongly correlated with criminal behavior and therefore an educational program that reduces antisocial attitudes would be expected to have an impact on recidivism.

### **Meta-Analyses of Educational Programs**

Theoretical meta-analyses examine a wide range of interventions in order to identify general principles of effective treatment. In contrast, other researchers have completed meta-analyses focusing specifically on the effectiveness of educational and vocational programs. My colleagues and I conducted a meta-analysis of evaluations of correctional educational programs (Wilson, Gallagher, Coggelshall, & MacKenzie, 1999; Wilson, Gallagher, & MacKenzie, 2000; MacKenzie 2006). We began with an intensive search for published and unpublished evaluations. Each evaluation had to include a group who received an educational program and a comparison group who do not. The outcome we were interested in was a return to criminal activities. In total, we identified twenty-seven program-comparison contrasts: six ABE, three GED, five combined ABE and GED, thirteen of PSE and seventeen vocational education programs..

In these meta-analyses we also attempted to code and analyze the characteristics of the different educational programs that may have made them more or less effective. For example, we wanted to ask questions like: Were programs with smaller class size more effective? How effective was tutoring by peers or volunteers? Did programs that incorporated transition or re-entry programming more effective? Was obtaining a degree or certificate more effective than just participating? Did programs with drug treatment, parenting, cognitive skills or life skills result in better outcomes? However, based on the information given in the research manuscripts it was not possible to identify such characteristics and relate these to outcomes. Many studies compared those who participated in education to those who did not. Education records did not give sufficient information for researchers to code achievement (Streurer, Smith & Tracy, 2001).

Most of the research participants in these studies were men, none of the studies has a sample of women only. While others included men and women in the study there was insufficient information to determine the actual percentage of men and women. Women represented such a small proportion of the total that we do not believe that it is reasonable to generalize the findings to programs serving women. Most evaluations studied offenders who participated in education during their incarceration, only three studied probation. This probably reflects the more limited number of programs offered to offenders in the community. It means that the results of the meta-analyses can not be generalized to programs provided in the community.

It is important to note that any significant results can not be attributed with complete assurance to the effect of the educational intervention because the vast majority of the studies included in the meta-analyses used naturally occurring groups of participants compared to non-participants (Cecil, Drapkin, MacKenzie & Hickman, 2000; Wilson et al. 1999, 2000). Thus, the generally positive findings may result from differential characteristics of the offenders that existed prior to the program and not as a positive effect of program participation itself. That is, participating offenders may be more motivated to change and would have lower recidivism even if they didn't have a opportunity to participate in a program. A few studies used random assignment and some had stronger research designs by using propensity scores or comparing participants and non-participants in motivation levels (Streurer et al. 2001; Harer, 1995).

**ABE and GED.** Those participating in ABE, GED and combined ABE or GED recidivated at a lower rate than the comparison groups. We estimated that program participants recidivated at a rate of 41 percent relative to a base recidivism rate of 50 percent for the comparison group.

**Postsecondary Correctional Education (PSE).** Many people worried that loss of Pell grant funding would have a long term adverse impact on correctional education. This did happen immediately after the funding was abolished in 1994, but a recent survey of prisoners indicates that the level of college participation has returned to the percent participating during the Pell Grant period (Erisman and Contardo, 2005). Erisman and Contardo (2005) found approximately 5 percent of the total number of prisoners participated in PSE, a percentage similar to the time before the loss of the Pell Grants. However, wide differences existed among different jurisdictions. Forty four of the 46 responding prison systems and the Federal Bureau of Prisons (FBOP) offered at least some PSE programs. However, 89 percent of the participants were in only 14 states and the FBOP. This means the other state systems had very few participants.

What is interesting is that the type of PSE program has changed from the time of the Pell Grants until more 2003-2004. Today prisoners are taking more vocational classes instead of purely academic courses. Almost two-thirds of the prisoners enrolled in PSE in 2003-04 were enrolled in vocational certificate programs for college credit (Erisman & Contardo, 2005). Most of the others were taking college classes for an associate's degree program. Thus, few prison inmates are earning college degrees even at the associate's level. It is important to note the research examining PSE treats the courses taken for college credit as PSE and not vocation education. Conversely, research on vocation education does not include PSE vocation education certificate programs as part of vocational education.

Most of the education programs for prisoners are provided by community colleges. Only approximately 16 percent of the providers were public four-year institutions and only 4 percent were for profit institutions. Some inmates are enrolled in correspondence courses but since they are not funded by public funds correctional systems seldom have statistics about the type of college, courses or characteristics of the inmate participants.

While it seems reasonable to use technology for prison education programs few correctional facilities do so. Most use traditional instructional methods. In their survey, Erisman and Contardo (2005) found almost all of the courses were provided by on-site instructors. Forty five percent used some type of video or satellite instruction for at least some of their classes. Internet technology was least frequently used. Correctional educators cited security concerns as the reason the internet was not used more often. Of course limitations on the use of the internet to access information and library resources would be a severe disadvantage for prisoner students.

New Mexico is one jurisdiction using interactive distance education for college courses. Nine New Mexico correctional facilities were fitted with lab space, computers and a secure, high-speed network connection to a computer server at Eastern New Mexico University-Roswell. This is an internet-based program but prisoners enrolled in the classes are not able to access the internet to send email or view external websites. Inmate students do not have direct contact with the instructors. Department of Corrections facilitators with college degrees monitor the classes and pass messages between faculty and students. One major benefit to this system is that the program exists in nine prison, therefore when prisoners are transferred they may immediately enroll in the same course at the new facility.

One complication for PSE is that courses must be offered by degree-granting institutions if the students are to receive credit (Erisman and Contardo, 2005). In many states education programs at the ABE and GED levels are administered by in-house educators employed by the department of corrections. College courses require the involvement of external institutions. Some states with larger PSE programs have solved the problem of coordinating PSE and the institutions by centralizing the process (Erisman & Contardo, 2005). For example, the Washington Department of Corrections contracts with the State Board for Community and Technical Colleges for for-credit vocational education certificate programs. North Carolina has a formal interagency partnership between the Department of Corrections and the community college system.

According to our meta-analyses, PSE programs significantly reduced the recidivism of participants (. Compared to a base recidivism rate of 50 percent for the comparison, we estimate the participants would recidivate at a rate of 37 percent (Wilson et al. 1999). Insufficient information was given in the reports to enable us to determine the type of classes (vocational, academic) given to participants nor could we determine the type of inmate who most benefited from the courses.

**Life Skills.** “Life skills” programs are a relatively new educational program. The rationale for these programs is that adult basic education programs, which focus on basic academic skills, may not address a number of other important deficiencies of offenders (Finn, 1998). While inmates may have serious difficulties reading and writing, they may also have difficulty with other things, such as conducting job searches, balancing a checkbook, controlling anger, establishing healthy interpersonal relationships, and setting

and meeting goals. Life skills programs are designed to address such skill deficiencies that may hinder the attempts of offenders to function successfully in everyday life. The actual components of life skills programs vary widely. Some common components include budgeting, building interpersonal relationships, conflict resolution, tax and credit management, job search skills, cultural diversity training, anger and stress management, decision-making and goal setting. Life skills programs are often combined with other types of programs and may or may not be delivered by educators. At times the programs are delivered by laypeople and are similar to cognitive skills-type programs.

Programs have been designed for adults and juveniles and for those in facilities or in the community. Vermont's Workforce Development Program is an example of a unique, holistic or multimodal approach to life skills training (<http://wdp.doc.state.vt.us/programs.htm>). The program was designed to teach life skills to offenders as a means of reducing recidivism. Participants are immersed in educational, work and living unit settings that use a "strength-based approach" that supports offender development. Males and females incarcerated in state correctional facilities live in specialized units. The program seeks to create a single organization culture of shared purpose, values and language across professional disciplines and between staff and participants which is expected to assist participants in making a successful transition to the community. A variety of employees in the facilities were given specialized training in strength-based supportive supervision principles and practices. The holistic nature of this program makes it very different from other life skills programs. Preliminary data examining the performance of program participants and non-participants suggest that participants were more successful in obtaining employment immediately after release and had lower recidivism rates.

Most life skills programs provide much more limited instruction and do not provide separate living units. A common life skills program model is the Staying Out Successfully (SOS) program in the San Diego County jail. SOS programming focuses on communication, anger management, career planning, goal setting, time management, job skills, relationship building, personal budgeting, and drug use issues. Melton and Pennell (1998) compared the recidivism of the participants to a comparison group. Participants had lower recidivism rates but the differences were not significant.

Life skills programs are also given to offenders who are in the community on probation. Ross, Fabiano, and Ewles (1988) compared the recidivism rates of probationers who received cognitive skills training, life skills training or probation-only. The life skills group participated in several hours of training in money management, leisure, activities, family and criminal law, employment-seeking skills training and alcohol/drug education. Ross and colleagues found the cognitive skills group had the lowest recidivism rates but the life skills training group had lower recidivism rates in comparison to the probation only group.

Another example of a life skills program is the Delaware Life Skills Program (Miller, 1995, 1997). The main goal of this program is the reduction of general and violent criminal behavior through the development of life skills. The curriculum includes units on self-development, interpersonal relationships, communication skills, job and financial skills and family values. The program also includes components on academic education and violence reduction.

MacKenzie's (2006) systematic review and meta-analysis did not find a significant difference between life skills programs and comparison groups. There are several problems in drawing conclusions about the effectiveness of these programs. First, there are relatively few studies that used strong research designs (MacKenzie, 2006; Bouffard, MacKenzie & Hickman, 2000). Second, the theoretical model for life skills varies greatly in implementation. At times it is more like a counseling program with a focus on adjustment, anger control and changes in attitudes. At other times the life skills programs are delivered by educators and are more like a practical education program teaching people about skills needed to successfully live in U.S. society such as balancing a checkbook, opening a checking account or completing tax forms. Another reason these programs may not be effective is because they do not focus on cognitive change. The skills emphasized in the program are very practical but may not bring about the type of cognitive transformation needed to change offender's criminal activities (MacKenzie, 2006). A more holistic program like the Vermont program may be successful in changing offenders but to date there is no study demonstrating the impact of this program on recidivism. None of the programs in the meta-analysis used a holistic model like Vermont's Workforce Development program.

The life skills programs that have been evaluated are those which are not part of a comprehensive program and this makes it difficult to draw conclusions about the effectiveness of the programs that are embedded within larger more comprehensive programs. For example, Texas' Project RIO (Re-Integration of Offenders) is a multimodal program devoted to placing parolees in jobs after release from prison (Finn, 1998). The program provides job preparation services to inmates while they are still incarcerated in state prisons so they have a head start in finding employment upon release. In-prison services include assessment and testing to evaluate the participant's skills and work history, assistance in gathering documentation needed for jobs (e.g., birth certificates, social security cards, school transcripts), job readiness training, and employability and life skills workbooks. The school also offers a 90-120 hour, 65 day life skills program for participants with six modules addressing: (1) self concept/anger management; (2) family relationships; (3) civic and legal responsibilities; (4) victim awareness; (5) personal health and hygiene; and (6) job preparation. Upon release Project RIO employment specialists match parolees with job openings. For those who need it a weeklong, all-day life skills and job search course is given at the parole offices. The specialists also have parolees in other areas of their lives. An evaluation suggests that RIO parolees are more apt to be employed, to keep their employment longer and to commit fewer crimes than a comparison group who were not part of the program. The study suffers from that of many educational studies by using previously existing group who most likely differ prior to the program. The study did not examine the effect of the life skills programs within the overall RIO program.

The important thing to note about the RIO program from the perspective of life skills programs is that some type of life skills program is offered in three different ways – in prison working with the employment specialist, in prison through the school and out of prison while they are on parolee. This type of program that incorporates life skills within such a multimodal, holistic program is not the type of program examined in the meta-analyses. We do not know how important life skills programs may be when imbedded within a larger program such as in RIO or Vermont's Workforce Program.

**Vocational education.** Vocational education is one of the most widely implemented educational programs in correctional systems because it addresses the high incidence of academic and employment failure of offenders. Over 50 percent of the state prisons, most Federal prisons (93.5 percent), 44.2 percent of private prisons and some jails (6.5 percent) offer vocational training. Over 30 percent of the inmates in state and federal prisons report participating in a vocational program while in the facility.

Similar to life skills programs, vocational education programs vary greatly making it difficult to draw any conclusions about their effectiveness. Programs include class-room based education, job training and apprenticeships in areas such as electricity and carpentry.

Some vocational education programs are holistic programs designed to address multiple deficiencies. For example, the Sandhills Vocational Delivery System (VDS) of the North Carolina's Department of Corrections was designed to improve the post release employment prospects of youthful inmates using integrated training and employment services (Lattimore, Witte & Baker, 1990). A variety of state agencies provided services in a comprehensive program with the goal of improving the postrelease employability and employment of the inmates. The protocol included individual work with inmates to identify vocational interests and aptitudes, individual plans of study, providing the needed vocational training as well as other services, and helping inmates to obtain postrelease employment. Other services included such things as academic programs, self-improvement and life enrichment activities.

Frequently vocational education programs begin with classroom instruction aimed at giving the inmates work-related knowledge such as basic math skills needed for automotive mechanics or construction tasks. Some programs such as the Wisconsin Department of Corrections offer accreditation to offenders who complete vocational education programs enabling them to obtain a necessary trade license (Piehl, 1995). Other programs may offer more hands on training such as the Home Builders Institute's Project Trade, which offers a series of construction job training programs for both juvenile delinquents and adult offenders (Home Builders Institute, 1996). Furthermore, through a partnership between the correctional institution and local tradespeople, postrelease employment possibilities are improved. That is, offenders can gain actual work experience in the community under the guidance of the Project Trade instructors.

Systematic reviews and meta-analyses of vocational education programs indicate that these programs are successful in reducing the later criminal activities of participants (Wilson et al., 2000; Wilson et al., 1999; MacKenzie, 2006). Wilson et al. (1999) estimate that if the comparison group's recidivism rate was 50 percent, the recidivism rate of those who participated in a vocational education program would be 38 percent. Vocational educational programs also increase the employment rate of offenders and higher recidivism rates are associated with lower employment rates. One reason for the findings that vocational education has an impact on recidivism and employment may be because many of the programs are very comprehensive, giving inmates classes and assistance while they are in the facilities but also assisting them in finding employment after release. This transitional help may be important in helping offenders adjust in the community. There is insufficient research and information to examine the effectiveness of different components of the programs.

Two difficulties arise if we try to conclude that vocational education participation leads to increases in employment and decreases in criminal activities. The first difficulty is ruling out alternative explanations for the results due to the poor scientific quality of the research. Almost all the studies use previously existing groups for the comparisons so we can never be sure that the effects are due to the vocational program and not self-selection into the program. It may be that the groups differed prior to the program and this is the reason for the differences in outcomes. It is highly likely that the participants are more motivated individuals who would be more apt to find employment and stop committing crimes even if they did not participate in the program. However, two studies (Lattimore et al., 1990; Saylor and Gaes, 1996) used strong research designs and the results of both demonstrated a significant reduction in recidivism lending credence to the overall findings.

The second problem in drawing conclusions about the impact of the programs on later criminal behavior is that many of the studies combine vocational education with other services or institutional work. Participants receive vocational education but they may also be given a prison industry job or receive academic education and other services. Thus, we can't rule out the possibility of a combination or multimodal aspect having the impact and not the vocational program alone. One reason for the success of vocational educational programs may be that they include an educational component and provide environmental opportunities. The educational component may cognitively change participants so they are ready to take advantage of the work opportunities.

### **What Works in Corrections?**

Cognitive changes that occur as a result of educational programs may be particularly important in changing offenders. After reviewing 284 research studies judged to be of sufficient scientific rigor and completing systematic reviews and meta-analyses, I (MacKenzie, 2006) conclude that the treatment and management strategies focusing on rehabilitating offenders were effective in reducing recidivism. In contrast to the more theoretical meta-analyses, I examined specific types of strategies such as boot camp, intensive supervision, cognitive skills and educational programs. Programs emphasizing punishment, deterrence, or control such as boot camps, Scared Straight, or intensive supervision were ineffective. Programs with poor or little theoretical basis or poorly implemented programs were also ineffective (e.g., psychosocial sex offender treatment; residential programs for juveniles; treatment for batterers). Similarly, programs that emphasized the formation of ties or bonds without first changing the individual's thought process were ineffectual. Examples of the latter programs are life skills education, correctional industries and multi-component work programs.

Almost all the effective programs focused on individual-level change. In contrast, the ineffective programs frequently emphasize developing opportunities. For example, cognitive skills programs emphasize individual-level changes in thinking, reasoning, empathy, and problem solving. In contrast, life skills and work programs, examples of ineffective programs, often focus on giving the offenders opportunities in the community. Based on these observations, I proposed that effective programs must focus on changing the individual. This change is required before the person will be able to take advantage of opportunities in the environment. She proposes individual-level change must precede changes in ties or bonds to social institutions. The social environment may be conducive

to the formation of ties, but the individual must change if the bond is to form. To get along with family, keep a job, support children, or form strong, positive ties with other institutions, the person must change in cognitive reasoning, attitude toward drug use, antisocial attitudes, reading level, or vocation skills. Giordano and her colleagues call this change a cognitive transformation (Giordano, Cernkovich, & Rudolph, 2002). Such transformations are necessary before a person makes initial moves toward a different way of life. Only if a transformation occurs is the person able to sustain a new life. Thus, educational programs that bring about a cognitive transformation would be expected to be effective in changing offenders.

Prison industries or other work programs may not be effective for correctional populations because the programs focus on giving opportunities for employment but do not emphasize individual change. The person may not have the individual abilities and/or attitudes to take advantage of the environmental opportunities, and thus a bond with the world of work is not formed. I found education and vocational education programs effective in reducing recidivism. I conclude they may be effective because they focus on changing the thinking skills of the students. This in turn, may increase an exoffender's ability to find and keep employment. The individual becomes more educated, this makes employment more likely, which in turn permits the person to form a tie or bond to the work of work.

These findings have direct implications for the development of effective re-entry programs. Programs would be expected to be most effective if they focus on individual transformations. There will be a temptation to focus on programs that increase opportunities for work, reunite families, and provide housing. Obviously, these are important needs of the re-entering ex-prisoners. Such programs provide opportunities for the formation of ties or bonds to the community. However, the research on "what works" suggest that an emphasis on these opportunities for ties will not be effective if there is not also a focus on individual-level transformation such as might occur with academic and vocation education programs. From this perspective education programs are important in bringing about a change in thinking and cognitions and not in their ability to directly impact the offender's ability to get employment.

### **The Blackbox of Correctional Education**

The good news from research on correctional education is that ABE, GED, PSE and vocational education appear to reduce the recidivism of offenders as well as increase employment. There is, however, serious concern about the quality of the research and whether these results will be upheld if more rigorous randomized trials that eliminate the self-selection problem are conducted. On the other hand, many education programs are consistent with the principles of effective programs and they also would be expected to bring about the cognitive transformations associated with effective correctional programs.

There are still many unknowns about correctional education. Questions remain about the exact curriculum that is effective and what works for whom, when, why and in what circumstances. Does the link between education and recidivism depend only on cognitive change or some combination of cognitive change and increased opportunities for additional schooling or employment in the community?

We also know little about the exact curriculums that may be most effective for different types of offenders. Strong arguments have been made about the importance of

gender and race/ethnicity sensitive programming. However, we do not know if such “responsive” programming would increase academic progress, be more effective in reducing recidivism or assist in employment success.

Finally, there have been few studies examining educational programs that assist offenders in the process of re-entry. Most research has examined programs that are provided in institutions and some have examined programs provided in the community but few have examined holistic, multi-modal programs that take participants from institution to the community.

Some structural problems exist in facilities that greatly restrict the achievement obtained by student inmates. Lockdowns, transfers between institutions and restricted movement in facilities limit classroom time. Concerns about security prohibit internet use, thus greatly reducing the ability of offenders to obtain information and use library resources. Studies have examined education participation and not achievement. No do the studies examine the specific components of educational programs. While overall the evidence indicates that education is effective, more work needs to be done on the questions of whom, when, why and what.

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