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## Alchemy of Transforming Iron into Gold: A Case Study of the U.S. Job Corps Program

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### Abstract:

*The study titled “Alchemy of Transforming Iron into Gold: A Case Study of the U.S. Job Corps Program” was conducted by this researcher with the purpose to examine the effectiveness of the U.S. largest funded youth program, conduct cost- benefit analysis, and suggest measures for improvement, and suggest improvement measures. The mixed method of research was utilized; a quantitative method with descriptive research design to measure the effectiveness of the program and conduct cost benefit analysis. The qualitative portion of the mixed method study was conducted through exploratory study of published documents and interviews of selected personnel of Job Corps program. The investigator served as a FT Math Instructor in the Job Corps Career Academy during 2006-2007.*

*The findings indicated that while the program scored above average on three criteria of effectiveness i.e. clarity of the program and purpose, strategic planning, and program management; however, the program was performing below expectations with regard to program results and accountability criteria of measuring efficacy. The cost benefit analysis revealed that program was extremely beneficial to both the trainees as well as the nation as whole. The socio-economic disadvantaged trainees of Job Corps are productively engaged in achievement of academic, vocational, and social objectives. A vast majority of them graduate with a High School diploma, vocational training certification with over 80% of them getting vocationally placed*

*in high demand jobs including the U.S. military. Many of them advance their careers by joining higher educational institutions. For each dollar of investment on these trainees, the US earns over two dollars by employing them on graduation, channelizing their energies gainfully in nation building tasks. If their talents were not harnessed at the right time and in the right direction, they would have strayed away from the righteous path of life into some anti-social activities or languish in poverty, and feed on welfare funds possibly. After getting vocationally employed, the Job Corps creates a win-win situation for the students and the nation. These trained and skilled graduates repay to nation in form of payment of regular taxes, contribute to the Gross Domestic Product (GDP) of nation by contributing their services to the production of goods and services, and become a source of inspiration to their family members and the nation at large.*

*The effectiveness of the program can be improved upon by making the training job oriented, enhancement of job internship and apprenticeship opportunities, rejuvenation of collaboration between education, workforce, and industry, improvement of knowledge, skills, abilities and competencies based on hiring needs, and partnering with employers with regard to training of new interns for on-the-job training.*

**Key words:** Job Corps, alchemy, effectiveness, cost-benefit analysis, Workforce Investment Act, drop outs

*“I believe in the Job Corps and its future .....The Job Corp will tell much about ourselves, our courage, our vision.....our sense of equality.....”*  
(Sargent Shriver, Founder of the Job Corps at the time of time of its raising in 1964.)

## **Introduction**

August 20, 1964 was a landmark day in the U.S. history when Lyndon Johnson, then President signed the Economic Opportunity Act, thus laying the foundation for socio-psychological-educational amelioration for the country's underprivileged class of citizens and permanent residents of age group 16 to 24 years. It is the largest U.S. funded program

which proudly serves approximately 60,000 young adults at its 125 centers which are spread out throughout the nation (National Job Corps Association, 2014). The trainees are provided cost-free high school (HS)/general education development (GED) education, vocational training, social skills, medical care, and follow up job placement after graduation. The program is administered through U.S. Department of Labor (Office of Job Corps, 2013).

Alchemy refers to the medieval chemical science and philosophy of converting base metals like iron into gold. It aims at investigating into causes of various diseases for identification of diagnosis, prevention, and treatment; the whole essence is achievement of longevity through holistic health. The same analogy of alchemy is applied to enrollees of the Job Corps program. The educational and vocational instructors and administrators at Job Corps centers, regional and national offices endeavor constantly to refine and transform raw students into academically sound, vocationally employable workforce for the competitive U.S. job markets, and socially amicable U.S. citizens. This is achieved by enhancing students' knowledge, skills, abilities, and competencies. Since its inception, about 2.7 million youths have graduated from various job centers. They contributed substantially towards the growth of gross domestic product (GDP) of the US (Job Corps Fact Sheet, 2014). Every year about 70-80% graduates are placed in various vocations including U.S. Armed Forces (Job Corps Fact Sheet, 2014). While bulk of the students join Information Technology (IT), culinary, health care, conservation, construction, auto repair, and hospitality professions, some students pursue higher education.

Due to heavy investment of taxpayer's funds into this program, it is imperative that regular evaluation of the program is done to assess the effectiveness of various components through performance management system (PMS). This is achieved though yearly evaluation of each center's

performance in terms of scores in four standards: program purpose and design, strategic planning, program management, and program results and accountability. The first evaluation parameter of purpose and design encompasses various elements: job placement and higher education, attainment of degree certificate, literacy and numeracy scores, cost per job corps trainee, alignment of the program with intended beneficiaries. The various departments for administration at Job Corps Centers consist of Outreach and Admissions (OA) agencies, Career Technical Training (CTT), Career Transition Services (CTS) agencies (Office of Job Corps Performance Management System, 2013). The PMS comprises various metrics in compliance with the Workforce Investment Act (WIA), 1998, Government Performance and Results Act (GPRA), Office of Management and Budget (OMB).

National Job Corps Association (NJCA, 2014) contended that program faced budget crunch. It led to freezing of enrollments of trainees and retrenchment of its personnel. However, the economic scenario improved and status quo was restored in its functioning. The economic uncertainty still looms large. Procurement of supplies and payment to vendors are still affected due to paucity of funds.

## **Problem Statement**

The U.S. population comprises 77.5 % whites, 13.2 blacks or African Americans, 1.2 % American Indians and Alaska natives, 5.3% Asians, and 0.2% native Hawaiian and other pacific islanders, 17.1% Hispanics or Latino, and 2.4% belong to two or more races (United States Census Bureau, 2013). United States Census Bureau (2014) indicate that median annual income of a white household is \$ 53, 706; African American household income is \$ 33, 321; Asian household income is 68, 636; Hispanic household income is \$39,005 at 90% confidence interval.

Similar disparities are seen in high school graduation rates amongst students of various races: black students achieved 69% graduation rates, Hispanic 73%, whites 86%, and Asian 88% (Ross et al., 2012). Some of the alarming statistics on socio-economic-educational disparities amongst U.S. citizens indicate that during 2003, 3.5 million young adults did not have High School Diploma (HSD) and were not enrolled in school (Bridgeland, DiJulio, & Morison, 2006). The dropout rate amongst high schools students in the US hovers around 30%. This rate is substantially higher for Latinos and African Americans (Barton, 2005; Thornburg, 2006). If the dropouts of the U.S. High Schools of the class of 2011 had graduated, the economy would have been richer by \$ 154 billion as additional growth of GDP over life span of these students (Alliance for Excellent Education, 2011).

Social scientists apprehend that drop-outs youths are vulnerable to various crimes and may be incarcerated for acts of juvenile delinquencies, may become victim of poor health delinquencies, and have shorter life expectancy than high school graduates (Martin & Halperin, 2006). One economist speculated that if the high school graduation rates was enhanced by 1%, criminal activities would decrease by 100, 000 per year. This would result in cost savings to society of 1.4 billion per year (Moretti, 2005). Based on this computation, Job Corps officials claim that for every dollar of investment, American society earns \$ 2.02. To overcome above mentioned socio-economic-educational disparities in American society, President Lyndon Johnson conceived the idea of Job Corps in 1964. The program costs nearly \$ 1.2 billion annually to the tax payers annually. It has annual enrollments of 70, 000 trainees; 70% of them belong to minorities. Job Corps is called upon to be more effective in terms of enhancement of student's enrollments and achievement of educational and vocational goals in the light of enormous federal investments in the

program and its lofty agenda (Management & Training Corporation, 2008).

## **Purpose Statement**

The purpose of this mixed method case study was to examine the effectiveness of the Job Corps program and suggest measures for improvement by reviewing various published documents on the program. The officials of the job corps centers, regional offices, and national office were interviewed for clarification on need basis. The four main parameters for ascertaining the efficacy were program purpose and design, strategic planning, program management, and program results and accountability. This doctoral faculty dovetailed his personal experiences as a math instructor at Grafton Job Corps Center, MA during 2006-2007 along with meta-analysis of the data and content analysis of published documents.

## **Research Questions**

**Question No. 1.** What is the effectiveness of the Job Corps program with regard to program purpose and design, strategic planning, program management, and program results and accountability?

**Question No. 2.** How do you perceive the benefits of the program vis-à-vis its cost to the United States?

**Question No. 3.** How can the Job Corps program be made more effective?

## **Definition of Important Terms**

**Alchemy.** It refers to the medieval science and practice of converting base metals like iron into gold, researching into various diseases for identification of their diagnosis, treatment,

and prevention, and achieving longevity through the application of concept of holistic health (Merriam-Webster, 2014).

**Career development period (CDP).** During this stage, an enrollee receives vocational training, driving training, GED/HSD academic instructions and training for social and vocational skills (Job Corps Fact Sheet, 2014).

**Career path.** Job Corps adapts its program options in conjunction with job market demand, knowledge, skills, abilities, and competencies inventory. Some of the vocations available to graduates include grass root positions at the entry level in the field of advanced manufacturing, automotive and machine repair, construction, health care, homeland security, renewable resources, office administration, paralegal, hospitality, IT, retail sales, and transportation (Job Corps Fact Sheet, 2014).

**Career preparation period (CPP).** This phase focuses on acculturation of students with the program, testing for reading, writing, and math skills, medical tests, CV improvement, and exploration for job opportunities. This period lasts for one month.

**Career transition period (CTP).** This stage starts immediately after a student graduates. A career transition specialist (CTS) collaborates with students for facilitating their career search and possibly placement (Job Corps Fact Sheet, 2014).

**Cost-benefit analysis (CBA).** It refers to business analysis of various investment options for achievement of revenue and profitability goals (Hanley & Spash, 2003).

**Effectiveness.** It refers to the ability to achieve the desired outcomes (Drucker, 2006).

**Job Corps.** It is the largest federally funded youth program of the US for the socio-economic-educational amelioration of disadvantaged youth, mainly African American and Latin Americans. The cost free education, residence, and vocational training is imparted to youth in the age group 16-24 (Job Corps Fact Sheet, 2014).

**Outreach and admissions (OA).** It refers to the preliminary phase of admissions of trainees wherein prospective students communicate with Admission Counselor to learn about the program. The students are provided free conveyance for moving their luggage to the center (Job Corps Fact Sheet, 2014).

## **Research Method**

Considering the research questions on effectiveness of the program, cost benefit analysis, challenges, improvement measures, efficacy of the program, a mixed method case study with content and meta-analysis of research design has been adopted. For qualitative portion of the study, interview of key officials of National Office, Regional Offices, and some of the centers including currently serving and retired personnel was undertaken for acquiring better perspectives of the ground realities. The quantitative analysis of the data was conducted based on the study of program conducted by Mathematica Inc. This researcher had earlier worked as a full time Math Instructor at Grafton Job Corps Career Academy. So, the interview process was smooth and effective for verification of facts.

Mixed methods research has high validity than a single qualitative and quantitative method (Venkatesh, Brown & Bala, 2013). It facilitates in providing insights into functioning



of Job Corps as well as measuring its efficacy. Human resources professionals look upon variety in research methods a strength and have employed an array of methods over the years (Venkatesh, Brown & Bala, 2013). The outcomes of one research method interface with the other (Venkatesh, Brown & Bala, 2013). This technique of employing information from both research techniques to analyze each research problem is called triangulation (Venkatesh, Brown & Bala, 2013). An embedded methodology utilizes data to answer questions that are both qualitative or quantitative (Venkatesh, Brown & Bala, 2013). Explanatory methods employ qualitative information to increase the understanding of quantitative findings (Venkatesh, Brown & Bala, 2013). Exploratory method entails use of quantitative data to underline relationships found in quantitative findings (Venkatesh, Brown & Bala, 2013). Each of these methods reinforce and complement findings, provide diversified perspectives, facilitates in dealing with new questions based on information from one set of data, deepen our understanding, corroborate and confirm findings, make up for a weakness in a single method, and provide varied perspectives of the same phenomenon (Venkatesh, Brown & Bala, 2013).

### **Validity of Findings**

Mixed research method with a case study design was ideal in this scenario. Qualitative portion of the study with an exploratory design provided greater flexibility to ask questions from respondents (Simon, 2006). At the same time, numerical data from various published and authenticated documents was analyzed using descriptive statistics to compare and integrate qualitative perspectives in terms of definite numerical data. Thus, a high internal and construct validity was ensured for the quantitative study and design, analytical, and inferential validity for the qualitative portion of the study. Since Job Corps program is a unique program of the USA, the external validity

of the program with regard to its applicability to other countries is doubtful due to prevalence of different socio-economic-educational-cultural environment worldwide.

In the given study, answers to research were retrieved through meta-analysis and content analysis of various published documents. These documents are again very authentic and reliable due to their origin from federal sources including White House and studies conducted by a globally renowned company, namely Mathematica Inc. However, some bias of respondents during the interview process is not ruled out. Therefore, the findings may lack some objectivity due to use of secondary and archived data.

Qualitative research is unstructured and the outcome of investigation depends on the interpretation of the documents by the investigator (Zikmund, 20009). Case study analysts need to be interpretive, innovative, intelligent, and dedicated to objective and dispassionate case analysis (Zikmund, 2010).

## **Literature Review**

Job Corps is a cost free youth program for low income young adults of the age group 16 to 24 under Economic Opportunity Act. The program comprises education up to HSD/GED, vocational training, social skills training, and job placement on graduation and follow up. The idea of Job Corps was the brain child of Lyndon Johnson, President of USA in 1964. He founded the program with the goal of tackling poverty head on. Initially, Job Corps was organized on the lines of Civilian Conservative Corps (CCC) which was raised during the period of depression in 1930. The CCC provided food and lodging and employment to many unemployed youths. The Job Corps adopted many policies and procedures from CCC. The Job Corps program is now institutionalized under title -1 C of Workforce Investment Act (WIA), 1998.

The program has come a long way by helping more than two million American youths in training for various skills and upgrading their educational standards. One hundred twenty five Job Corps Centers are located throughout USA which serves about 70, 000 eligible youths every year. The eligibility criteria for new entrants comprise U.S. citizenship or permanent resident status and an aggregate income of the household below the poverty line.

### **Placement**

During the academic year 2012, approximately 75% of graduates were absorbed in various vocations; 13.5% were enrolled in higher education after earning their High School diploma (HSD) or General Educational Diploma (GED).

### **Stages of Career Development**

The career stages are identified as outreach and admissions (OA), career preparation period (CPP), career development period (CDP), and career transition period (CTP).

During OA stage, both students and admission counselors communicate about enrollment. Students use the transport provided by the center.

A month long CPP phase entails acculturation of the new entrants with the Job Corps program and its unique culture, taking reading, writing, and math tests, medical examination, writing curriculum vitae, rejuvenation of job research skills, computer familiarization, social skills development, workplace ethics awareness, and with the center routine in general.

### **Important Milestones in the History of Job Corps Program**

The Job Corps program was founded on August 20, 1964 during war on poverty as a sequel to enactment of Economic Opportunity Act. During early 21<sup>st</sup> century, the cost of the

program was \$ 1.2 billion and enrollment of students was 70,000.

### **Effectiveness of Job Corps Program**

Management Training Corporation (2008) contended that Job Corps program was an efficient vocational program for socio-economic disadvantaged youth, mainly drop-outs from various high schools in the US. With the U.S. economy becoming highly technology based, the skilled workforce is needed much more than ever before. By 2020, it is expected that additional 14 million workforce would be required (Carnevale, 2005). Population growth in the USA has declined to 0.88% from 0.92% about ten years ago (U.S. Census Bureau, 2008).. With the slow growth of population, newer jobs are being created faster than rate of induction of newly trained youths into the workforce (Holzer & Lerman, 2007). Many of the Job Corps students offer a great challenge to both educators and counselors due to their below average reading, writing, and quantitative skills, and emotional instability.

Advisory Committee on Job Corps (2008) asserts that job applicants need to attain some post-secondary qualification in addition to HSD/GED qualification. It is estimated that in 2007 there were 14 million U.S. citizens in the age group of 16-24 years who could not earn HSD/GED due to some socio-economic-psychological issues (San Francisco Chronicle, 2008). Now, 78 % of all jobs require 2-4 years of associate/baccalaureate degree (Council of Competiveness, 2008). Job Corps centers are doing a yeomen's service in helping many economically weaker minority students to acquire skills. More than 75% of new entrants of Job Corps program lack HSD/GED qualification due to their special needs (Management Training Corporation, 2008). In 2007, 19, 499 trainees earned HSD/GED qualification in the program (National Job Corps Association, 2014). Had the drop-outs of U.S. High Schools of the class of 2011 graduated, the economy

of would have been richer by \$ 154 billion as additional income over their life span (Alliance for Excellent Education, 2011).

During the year 2000, 91% of the graduates with HSD/GED qualification or after completion of vocational program entered the workforce; 73 % of separated trainees got employed or joined an institution of higher education (Job Corps Fact Sheet, 2014). About 21 % of Job Corps students abandon the program within two months of their admission due to adjustment, homesickness, and discipline issues.

Mathematica (1993) in a 4-year national longitudinal study measured Job Corps' impact on participants' employment and other outcomes to ascertain if program's benefits were more than the expenditure incurred. The program was evaluated between Nov. 1994 and Dec 1995. Interviews with trainees were conducted in a random manner for over four years. Mathematica (2000) found that for every dollar expended by Job Corps, the benefit to American society amounted to \$ 2.02; it was an increase from \$ 1.46 from the earlier impact study in 1982. The benefit accrues from decreased income maintenance payments, additional income and enhanced taxes payments by employed Job Corps trainees as result of successful completion of the program, and reduced jail sentences.

Mathematica (2000) also observed that Job Corps program participants displayed significant enhancement in education and training including GED attainments, employment and learning gains, high paying jobs with better remuneration, decline in delinquent acts like arrests, convictions, and incarcerations, and less dependence on public welfare program.

American customer satisfaction index survey (2000) indicated 80% satisfaction rating of parents and guardians of Job Corps students with regard to quality of education, and vocational training. This score was higher than other federal agencies (68.6%) and private companies (71.2%). It is noted that parents and guardians' trust with regard to Job Corps program

was measured at 86% with reference to their recommendations of the program to other parents and guardians.

## Detailed Assessment of the Job Corps Program

### Section 1: Program Purpose and Design

Serial No.	Program Parameters	Answer	Score
1.	Clarity of Program Purpose.	Yes	20/20=100%
2.	Handling of a specific problem and need of the program.	Yes	20/20=100%
3.	Duplicity of the Program with any other federal, state, or local, or private organization. At the federal level, AmeriCorps, National Civilian Community Corps (NCCC), and National Guard's Youth Challenge program exists; however, job corps program is unique.	Yes	20/20=100%
4.	Is the job corps program structure free from defects which will restrict the program's efficacy?	No	0/20= 0%
5.	Alignment of the Program with Beneficiaries	Yes	20/20=100%
	Total Score Section1: Program Purpose and Design		80/100=80%

### Section 2: Strategic Planning

Serial No.	Program Parameters	Answer	Score
1.	Limited number of long term performance measures that focus on outcomes and reflect the objectives of the program.	Yes	11/11=100%
2.	Ambitious goals and timelines	Yes	11/11=100%
3.	Limited number of specific annual performance measures that demonstrate progress towards attainment of long term objectives.	Yes	11/11=100%
4.	Baseline and challenging goals for annual measures	Yes	11/11=100%

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5.	Coordination of all partners including grantees, sub grantees, contractors, other government agencies and cost sharing partners for annual and long term goals.	Yes	11/11=100%
6.	Regular conduct of annual evaluations with regard to quality and scope for ensuring improvement of the program.	Yes	11/11=100%
7.	Degree of Alignment of budget requests with annual and long term goals.	No	0/11=0%
8.	Corrective steps towards strategic planning deficiencies.	Yes	11/11=100%
9.	Conduct of meaningful and credible analysis of alternatives including tradeoffs between cost, schedule, risks, and performance goals.	No	0/11=0%
	<b>Total Points on Section 2: Strategic Planning</b>		<b>78/100=78%</b>

**Section 3: Program Management**

Serial No.	Program Parameters	Answer	Score
1.	Regular collection of performance data including details of main program stakeholders for enhancing performance.	Yes	12/12 =100%
2.	Accountability of Federal Managers for scheduling and performance outcomes.	Yes	12/12= 100%
3.	Timely availability of funds and their purposeful expenditure and accounting.	Yes	12/12 = 100%
4.	Existence of SOP (e.g. competitive sourcing and cost comparison for achieving economy in terms of cost effectiveness) for program implementation	Yes	12/12= 100%
5.	Coordination and Collaboration of Job Corps Program	Yes	12/12=100%
6.	Application of sound financial management conventions	No	0/100=0%

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1.	Steps to tackle management inadequacies	Yes	12/12= 100%
2.	Maintenance of well-defined deliverables: reliable cost and schedule goals	Yes	12/12= 100%
	Overall Score in Program Management		88%

**Section 4: Program Results and Accountability**

Serial Number	Parameter	Response	Score
1.	Achievement of long term performance goals	To small extent	6/16= 37.5 %
2.	Achievement of annual performance goals	Small extent	6/16= 37.5 %
3.	Cost effectiveness in achievement of yearly program goals	No	0/16 = 0 %
4.	Comparative Cost of Job Corps program with other similar programs e.g. YouthBuild, Department of Defense’s Youth Challenge.	Large extent	11/16 = 68.75%
5.	Effectiveness of the program in achievement of results per the independent evaluation	Small	6/16 = 37.5%
6.	Achievement of goals within budget costs and schedules	No	0/16 = 0%
	<b>Overall program results /accountability</b>	<b>29%</b>	

Mean Score on four criteria of program effectiveness = 68.5%

Standard Deviation of the scores of Job Corps program effectiveness,  $\sigma = 23.68$

Variance of scores of Job Corps program effectiveness,  $\sigma^2 = 560.75$

When the mode is ill defined as in this case, we measure Karl Pearson’s Coefficient of Skewness of the program effectiveness,,  $Sk_p$  as shown below.

Karl Pearson’s Coefficient of Skewness of the program effectiveness,  $Sk_p = - 1.33$

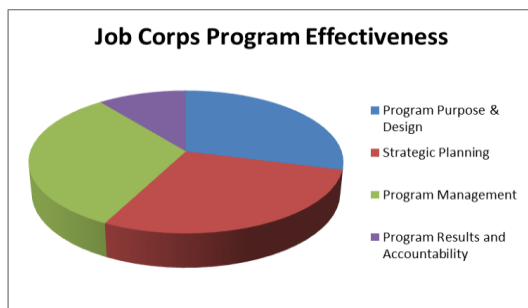
**Overall Analysis of Results of Assessment of Job Corps Program**

Out of four broad criteria of program assessment: program purpose and design, strategic planning, program management,

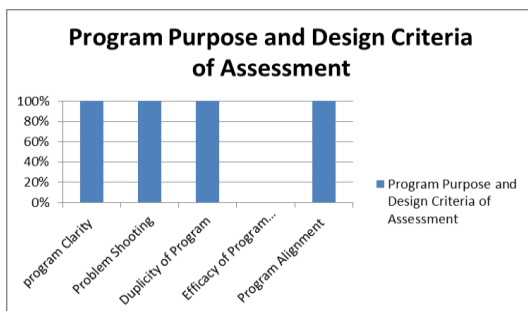


and program results and accountability, program management with 88 % overall score (eight critical factors were considered within program, management) was considered the forte. However, the program scored as ineffective in application of sound financial management conventions; job corps property was reportedly kept in objectionable condition. Amongst the four broad criteria, program results and accountability with overall score of just 28% in six parameters was considered the least effective component due to cost ineffectiveness in achievement of program goals and failure to achieve goals within budget costs and schedules.

### **Diagrammatic Representation of Job Corps Program’s Effectiveness**



**Figure 1. Overall Job Corps Program Effectiveness Based on the Study by Mathematica Inc.**



**Figure 2. Job Corps Program’s Effectiveness on Purpose and Design Criteria of Assessment**



Figure 3. Job Corps Program’s Effectiveness on Strategic Planning Criteria of Assessment

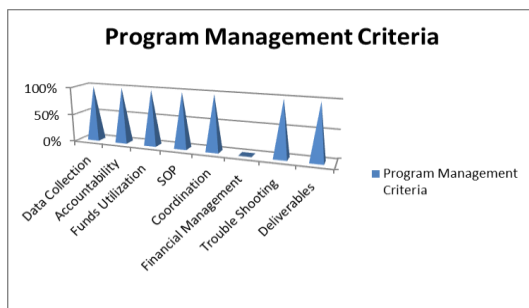


Figure 4. Job Corps Program’s Effectiveness on Program Management Criteria of Assessment

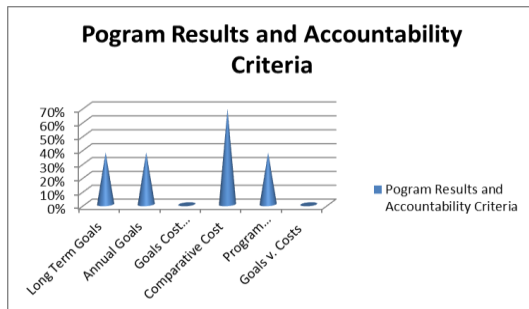


Figure 5. Job Corps Program’s Effectiveness on Program Results and Accountability Criteria of Assessment

## Cost Benefit Analysis of the Job Corps Program

### Financial Benefit

Mathematica (2000) found that for every dollar expended by Job Corps, the benefit to American society amounted to \$ 2.02;

it was an increase from \$ 1.46 from the earlier impact study in 1982. The benefit accrues from decreased income maintenance payments, additional income and enhanced taxes payments by employed Job Corps trainees as result of successful completion of the program, and reduced jail sentences.

Per the U.S. inflation calculator (2014), an item which was priced at \$ 1.00 in the year 2000 will cost \$ 1.38 in the year 2014 due to cumulative rate of inflation of 37.9% over the last 14 year; inflation rate being 1.7% every year. So, in the year 2014, an investment of \$ 1.38 (equivalent to \$ 1.00 in the year 2000) on a Job Corps trainee would result a return of \$ 2.79 (equivalent to \$ 2.02 in the year 2000).

Considering that approximately 60,000 trainees graduate from the various 125 Job Corps Centers in USA and at least 80 % of them (48, 000) get placed in various vocations, then return on investment can be computed as follows:-

Yearly investment of a Job Corps trainee in the year 2000= \$ 17,000 /year (Mathematica Policy Research Inc. 2001)

So, considering a yearly inflation of 1.7 % and cumulative inflation of 37.9% over 14 years (2000-2014), the current cost of training including lodging etc. works out to \$ 23,439. 96

Investment on approximately 60, 000 trainees in a performance year = 60,000x 23, 438.96  
= \$ 14,06,337600.00 (Fourteen Billion, Six Million, and Three Hundred Thirty Seven Thousand and six hundred Dollars).

Using the law of proportion on investments and return, we get:-

Return /Investment = Return /Investment

Let X be the return on a yearly investment of \$ 14,06,337600.00

$$2.79 / 1.38 = X / 14,06,337600.00$$

$$X = 39, 23, 681, 904/1.38$$

$$X = 28, 43, 247, 756$$

So, every year an addition of approximately 48,000 graduates of the Job Corps program from 125 centers in the country to the U.S. Workforce contribute to approximately twenty eight billion, forty three million, two hundred forty seven thousand, and seven hundred and fifty six dollars to the Gross Domestic Product of the United States.

### **Non-Financial Benefits**

The addition of high school drop outs to the workforce results in reduction in crime rate in the country, contribution to federal and state taxes by the newly employed graduates, better quality of life for U.S. citizens, enhanced level of knowledge, skills, abilities, and competencies inventory of the U.S. workers, and overall socio-economic-psychological well-being for everyone. The program, in a nutshell, creates a win-win situation for the Job Corps graduates, their families, as well as for the country as a whole.

### **Suggestions for Improvement of Job Corps Program**

1. **Enhancing Job Effectiveness of the Job Corps Program.** The workforce innovation and opportunity act entails that more job oriented training programs aimed to skills development be developed for the 21 million U.S. citizens every year. These vocational programs will benefit mainly the retrenched working professional, veterans, and other youth including workers with disabilities who lack skills.
2. **Enhancing the Employment Generation Capacity of Training Programs.** Over 21 millions U.S. citizens benefit from various federal training programs each year. These programs are designed to meet the needs of veterans, retrenched workers, adults needing basic workforce skills development, personnel with disabilities, and those pursuing better career opportunities. The enactment of

Workforce Innovation and Opportunity Act (WIOA) has improved the job potential of training programs.

3. **Job Driven Check List.** Clymer, Conway, Freely, Maguire, & Schwartz (2010) contended that a check list to steer administrative overhaul towards definite goals be prepared. This will enable U.S. citizens about the objectives of various federal funded training programs. Such a check list is based on practical positive experiences e.g. research studies indicate that trainees with high employer engagement within an industry are paid \$ 4, 500 more per year than those who participated in other training programs. Reed et al. (2012) confirmed that trainees in registered apprenticeship programs earned approximately \$ 7, 000 more per year after six years of registration than those interns who did not subscribe to registered apprenticeship. During their life time, registered trainees earned approximately \$ 300, 000 more than non-registrants.
4. **Liaison with Employers.** Coordination with employers, industry associations, and labor unions enable job seekers to know the hiring needs and effective design of training programs. The interface with employers helps in development of skills in high demand, and provision of work-oriented learning opportunities and hiring of graduates. E.g. The Virginia Peninsula Career Pathways initiative is engaged to help prospective manufacturing employees by engaging a group of 14 main employers, along with six school districts, community colleges, labor unions, and workforce investment boards.
5. **Learn and Earn Internships.** Myriad work-based internship and training provide employment avenues to successful students besides learning the company's work culture. Such job-driven training programs include pre-apprenticeships, paid apprenticeship, on-the-job training (OJT), and registered apprenticeship.

6. **Information on Employment Opportunities.** In order to make the most of the employment opportunities by the job seekers, they should be provided ready-made information on career opportunities: labor market, projected job growth, and job conditions.
7. **Supportive Services.** The facilities like transport, crèche for children care, counseling on finance and benefits, accommodation for workers with disabilities are immensely helpful to underprivileged job seekers.
8. **Evaluation of Employment and Earnings Outcomes.** By dissemination the results of a training program in terms of number of participants, number of trainees who were hired and retained, their wages, service conditions etc., job seekers and employers will be able to make informed decisions about employment. The website, called New Jersey Training Opportunities, displays information on training programs in the state. It also shares information on previous programs' participants besides employment and retention rates, earning potential after six months, one and two years after graduation. New Jersey's legislation requires that training programs conducted at public two years schools and some four years schools should disseminate information on graduates.
9. **Regional Initiatives.** Coordination and collaboration between job centers, educational institutions, labor, and non-profits is essential to optimize the potential of available candidates in the job market. These partners provide multitude of services: networking for employment, training, and service to underprivileged population.
10. **Job Oriented Training Innovations.** Disconnected youth and low skilled individuals should be motivated to join the employment main stream through effective training strategies. Job oriented education and training programs should lay more emphasis on earning potential of demonstrated skills instead of time expenditure in a

classroom. Funding of self-paced, competency based training program with Pell grants of students loans would benefit more than 25 million low skilled work force. In addition, it would also help over 30 million people with some college education but without a degree. United States Census Bureau (2014) indicates that many veterans and parents engaged in raising children need educational credentials. The U.S. Department of Education intends to set up four experimental sites (X sites). The higher education seeking students can test their prior knowledge with student financial aid in the competency based education models and assessments.

11. **Coordination between Federal Training Programs with States' Initiatives.** Though challenging, it can be achieved by encouraging collaboration between state and town administration and then with states by aligning resources and training events. Strategies need to be developed to find collaborative solution to common training issues and sharing of successes. The Department of Labor and Commerce are working in tandem for alignment of training with economic initiatives; they need to emphasize the importance of apprenticeship to employers. The Department of Labor and Agriculture are coordinating between the Supplemental Nutrition Assistance Program (SNAP) Employment and Training program. The Department of Housing and Development (HUD) and Department of Labor collaborate to provide assistance between public housing authorities and employer-led workforce investment boards for generation of employment opportunities for HUD beneficiaries. For socio-economic amelioration of people with disabilities, 10 federal agencies are cooperating to help them in recruitment and retention in various vocations.

## **Conclusion**

Job Corps is the largest federally funded youth program which is administered by the U.S. Department of Labor for socio-economic-educational amelioration of disadvantaged youth aged between 16 and 24. The program has evolved over the years since its inception in 1964. Mathematica (2000) found that Job Corps program scored high in effectiveness in three criteria of evaluation: program purpose and design, strategic planning, and program management. However, in the criteria on program results and accountability, it scored low. The effectiveness of the program can be improved upon by making the training job oriented, enhancement of job internship and apprenticeship opportunities, rejuvenation of collaboration between education, workforce, and industry, improvement of knowledge, skills, abilities and competencies based on hiring needs, and partnering with employers with regard to training of new interns for on-the-job training. For each dollar of investment on Job Corps program, the country earns over two dollars in returns due to productive engagement of trainees in various vocations after graduation. Thus, Job Corps program is achieving its aims and objectives for which it was raised.

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