Effectiveness of California Higher Education Legislation (Senate Bill 1644) and National Implications of Higher Education as a Right or Privilege

John E. Quinto
Linda Hauser
California State University, Fresno

California legislature made a policy change with Senate Bill (SB) 1644 (2000), shifting Cal Grant Programs to focus on entitlement; counter to the national trend of merit based grant programs. This article describes a study examining effectiveness and extent to which SB 1644 is meeting its legislative objectives: increase in higher education opportunities and lower student loan debt. Additionally, demographic characteristic differences of student populations seeking higher education opportunities (20-year period) and factors influencing California policy to embrace entitlement grants are presented. The national implication and political (value) question derived from this study was: Is higher education a right or a privilege?

> *Education, beyond all other devices of human origin, is a great equalizer of the conditions of men.*
>
> Horace Mann, Father of American Education, 1848

> *Education, especially public education, fulfills many of the nation's basic goals and has done so since the country's founding. According to the beliefs of Thomas Jefferson, it provides an avenue to ensure the continuation of U.S. Democracy.*
>
> Bernard Mayo, 1942

> *There is no more senseless waste than the waste of the brainpower and skill of those who are kept from college by economic circumstance*.
>
> Lyndon Johnson, *Special Message to Congress,* March 16, 1964

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Democratic citizenry need to be educated in order to be active and engaged participants in a democratic process (Mayo, 1942; Gaus, 1947; Gawthrop, 1998; Kraft & Furlong, 2004). Kraft and Furlong (2004) contended that education has helped to assimilate large numbers of immigrants and is the primary mechanism for social mobility in the United States; arguing that educated people are better able to gain employment, which brings about social and economic status. A review of research revealed that poverty and education levels are correlated, and the national and state policies enacted since the 1980s have promoted economic segregation causing polarization; rich getting richer and the poor getting poorer, resulting in the loss of a middle class that was growing before WWII (Moffet, 1989; Kraft & Furlong, 2004; Harrigan & Nice, 2008). During the years of 1975 through 2002 for workers over the age of 18, the average income for high school graduates and some college increased from an income of $10,000 to approximately $30,000 (overall increase of approximately $20,000); however, the average income for education attainment of a bachelor's and advanced degree increased from an income of $10,000 and $15,000 to approximately $50,000 and $70,000 respectively, an increase of $40,000 and $55,000 respectively (U.S. Census Bureau, 2008).

This article describes the mixed methods study conducted to examine the effectiveness of California's Higher Education Entitlement Grant Program enacted by passing SB 1644 and presents impact results with national implications. The 1980 national policy shift from cooperative to new federalism increased states' authority over education funds and allowed states the autonomy to enact their own system for providing education grants, with merit grants the predominant type over entitlement (Harrigan & Nice, 2008). Heller (2000) asserted that since the 1980s, the practice of awarding financial aid based on financial need was decreasing and merit aid was increasing. Heller (2003) contended, "The rise of merit aid with its resulting implications for college access is part of a broader trend nationally that has placed more emphasis of meeting the college affordability needs of students from middle-income and wealthier families, rather than promoting college access for poorer students" (p. 6). Between 1982 and 1999, the spending on need-based scholarships increased by 7.2% whereas merit based scholarship spending increased by 12.7%. A merit based student aid system is defined as a program that awards aid based on some measurement of merit (Heller, 2003).

Georgia's Helping Outstanding Pupils Educationally (HOPE) scholarship program, the nation's first broad based state merit aid program, has taken root in a number of other states. Heller explained that states look across their borders when making policy decisions and borrow legislation; referring to this action as the "diffusion of innovation in policy innovation" (Quinto, 2011, p. 78). Nationally from 1993 to 2000, the share of merit based program spending has grown, 10% to 25%, respectively (Heller, 2003). The Civil Rights Project at Harvard University examined the impact of four of the largest state merit scholarship programs in the nation: Florida, Georgia, Michigan, and New Mexico. The results revealed that students generally awarded, predominantly White and upper-income students, were likely to attend college without financial support from public resources (Heller & Marin, 2002). Only two states have maintained a commitment to using aid to promote equal access to higher education, Indiana and California (Heller, 2003).

Research has shown a national trend of states adopting merit aid focused on meeting college affordability needs of students from middle-income and wealthier families, rather than promoting college access for poorer students. Financial aid and student persistence research indicates that students from lower socio-economic levels have financial access barriers to

higher education, and the type of higher education aid available to overcome those barriers impacts student persistence. Loans were found to be ineffective among lower-income students while the converse is true for grants (Mortenson, 1989; Campaigne & Hossler, 1998; Perna, 2000; Bettinger, 2004; Burdman, 2005; Usher 2006).

The *California Plan for Higher Education of 1960* (Donahoe Act) established a postsecondary education system which defined specific roles for the existing University of California (UC), California State Colleges (CSC) now known as California State University (CSU), and California Community College (CCC) systems. In 1999, *Senate Concurrent Resolution 29*, called for the creation of a new Master Plan for Education, and a new California road map was developed focused on two primary goals: "provide every family with the information, resources, services, involvement, and support it needs to give every child the best possible start in life and in school; and to provide every public school, college, and university with the resources and authority necessary to ensure that all students receive a rigorous, quality education that prepares them to become self-initiating, self-sustaining learners for the rest of their lives" (California Postsecondary Education Commission [CPEC], 2002, p. 1).

A cornerstone of California's *Master Plan for Higher Education* was a promise that the State would ensure all qualified students access to quality higher education (California Student Aid Commission [CSAC], 2004b), therefore, the State adopted the California Grant System to help meet those ends. In 2000 the California legislature made a policy change, enactment of SB 1644, revamping the Cal Grant Program by shifting the focus of these funds to entitlement, which was counter to the national trend of merit-based grant programs. Since the adoption of SB 1644, program-related annual reports have been published, but no evaluation has been conducted to determine the effectiveness of this policy change. Program evaluation called *monitoring* should be conducted for all public policies to assure quality (Wholey, 1999; Schwartz & Mayne, 2005). Both public and private sector stakeholders have a right to know if the programs they are funding are actually producing the intended effect. Impacts of investments must be known.

Theoretical Framework

Foundational to this study is evaluation research, specifically program evaluation, drawing upon social science theories and methods to identify the extent to which programs reach their intended beneficiaries; how well the programs function; and the degree to which, and at what cost, a program achieves its intended goals. Posavac and Carey (2007) stated, "Program evaluation can contribute to the well-being of society only if evaluators successfully meet their obligation to help government agencies and private organizations focus on important needs, plan effectively, monitor carefully, assess quality accurately and justly, nurture improved practices, and detect unwanted side effects" (p. 7). Program evaluations are used: (a) for human service programs as feedback loops to assess needs, (b) to measure program implementation, (c) to evaluate achievement of goals and objectives, (d) to compare levels of outcome with similar programs, (e) to provide information for program improvements (Zammuto, 1982; Wholey, 1991; Weiss, 1998), (f) to make educated choices amongst other programs (Levin & McEwan, 2001), and (g) to identify and measure the level of unmet needs within an organization or community (Gaber, 2000).

Program evaluation serves the Legislature by providing useful, objective, and timely

information about the extent to which intended program outcomes are being achieved. Evaluation information facilitates legislative and executive actions to improve state government and should be used in the consideration of maintenance, expansion or policy alternatives to current programs (Hill, 2003).

Objective-based evaluations are the most prevalent model used for program evaluation (Stufflebeam, 2001). The examination of goals and objectives is an essential aspect (Posavac & Carey, 2007). Campbell and Stanley (1963) argued that the validity of outcome evaluations seeking to test causal hypotheses are increased by observing participants before and after the program, observing natural groups of people that have not experienced the programs. One such quasi-experimental approach is a time series design.

A common general research design used to assess change in public policy is interrupted time series design (ITSD) (Posavac & Carey, 2007). In a typical application of this design, multiple observations are made of a dependent variable over time. Observations are analyzed after a new law or policy goes into effect and then compared to a previous time period. ITSD is a viable strategy for assessing the impact of policy interventions where true experimentation is impractical (Cook & Campbell, 1979). Knapp (1979) explained that when using ITSD, "a single unit is defined, measurements are made over a number of time intervals that precede and follow some controlled or natural intervention" (p. 196). Regarding quasi-experimental design, the unit observed serves as its own control (Posavac & Carey, 2007).

Purpose of the Study

The purpose of this study was to examine the effectiveness of California's Higher Education Entitlement Grant Program enacted by the passing of Senate Bill 1644 (SB 1644) on September 11, 2000. This study compared pre-SB 1644 (1990-2000) and SB 1644 (2001-2009) to investigate whether SB 1644 legislative objectives were being met: (1) increase higher education opportunities and (2) lower student loan debt. Additionally, demographic characteristic differences of student populations seeking higher education opportunities between pre-SB 1644 and SB 1644 (20-year period) were identified, and factors influencing California policy to embrace entitlement grants (counter to the national trend of merit based grants) were explored.

Overarching Research Questions

Four research questions guided this study:

1. To what extent has SB 1644 increased higher education opportunities for student populations seeking higher education?
2. What are the demographic characteristic differences of student populations seeking higher education opportunities between pre-SB 1644 and SB 1644?
3. To what extent has SB 1644 lowered student loan debt?
4. What factors influenced California policy to embrace entitlement grants?

Methodology

A mixed methods approach was used combining both quantitative and qualitative research. The quantitative and primary methods approach was Interrupted Time-Series Design (ITSD), used to assess a policy change - enactment of SB 1644 (intervention) - and determine whether intended legislative objectives were being met. The explanatory qualitative research involved in-depth individual interviews to explore and identify the factors that influenced California policy to embrace entitlement grants. Huck (2008) would describe this study as big QUAN, little Qual, in which the quantitative component played a larger role, and the qualitative component was auxiliary.

Archival data from California Postsecondary Education Commission (CPEC, 2011), CPEC research reports, and in-depth individual semi-structured interviews were the instruments used. Two single units were measured over time, before and after the enactment of SB 1644, to answer the three research questions relative to: increasing higher education opportunities, the demographic characteristic differences of student populations seeking higher education opportunities between pre-SB 1644 and SB 1644, and lowering student loan debt.

Measured over 20 years (1990-2009), the first unit of measure was college-going rates of public high school graduates entering public college institutions, first time freshman. Measured over 10 years (1995-2004), average debt level of California graduates entering repayment was the second unit measured. California does not maintain an adequate debt-tracking system; therefore, debt level could not be measured over 20 years.

SPSS was used to run a series of ITSD tests (full and restricted regression models) on higher education opportunities and student debt. Additionally, three individual interviews were conducted with national experts to address the research question relative to the factors that influenced California policy to embrace entitlement grants.

Aggregated student data were used to investigate higher education opportunities. The years 1990 through 2009 were selected due to consistent information with the grant system prior to SB 1644 (1990-2000), specifically, public high school graduates available from CPEC. Freshman enrollment data obtained from CPEC included all students from public high schools: full-time, part-time, credit, and non-credit. College-going rate data consisted of percentages by ethnicity (Asian/Pacific Islander, Black, Filipino, Latino, Native American, and White) and gender. All categories of public high schools were represented: comprehensive, continuation, and other.

Graduate average debt level entering repayment (1995 to 2004) was used to investigate student loan debt. CPEC June 2006 report made available by CSAC was the source of information.

Three experts were selected for individual interviews. Dr. Donald Heller was selected due to national expertise and work in higher education access and student aid. Most recent literature in the field of higher education student access has one common thread, Dr. Heller's name in the bibliography. Ms. Deborah Cochrane was selected for expertise both in national and California state educational policy on higher education student access and debt. Ms. Diana Fuentes-Michel was selected for two reasons: (a) served as a team member who helped write SB 1644 and (b) served as Director of California's Student Aid Commission since 2003.

Summary of Findings/Results

Interrupted Time-Series Design Results for Models

A series of full and restricted regression models were conducted to determine the impact of SB 1644 relative to increasing higher education opportunities and the demographic characteristic differences of student populations seeking higher education opportunities between pre-SB 1644 and SB 1644. Full model includes slopes before and after intervention, and the restrictive model forced slopes to equal each other before and after intervention. A model testing for the change between the two models (full and restricted) for each demographic category is presented in Table 1. The *F*-test for the change model is the test of equality of slope before and after intervention and is the *test of interest*. Significance is determined at 0.001 (*p)*. A change model that is significant indicates slopes before and after interventions that are not equal. This analysis procedure was conducted for a 20-year period, the years 1990-2009, for the demographic categories of:

- All Cal Grant New Award Recipients A & B
- All first-time freshmen
- All first-time freshmen by gender
- All first-time freshmen by ethnicity
- All first-time freshmen by ethnicity and gender

Table 1 depicts for each category the *F*-test, degrees of freedom (*df*), probability (*p*), and R^2 values for the change model

Table 1.
Change Model Results (change between full and restricted models) for Demographic Categories

Demographic Categories	*F*	*Df*	*p*	R^2
All Cal Grant New Award Recipients* A & B, 1990-2009	58.811	1, 17	**<0.001**	0.125
All First-Time Freshmen, 1990-2009*	26.799	1, 17	**<0.001**	0.133
All First-Time Freshmen Male*	16.362	1, 17	**0.001**	0.113
All First-Time Freshmen Females*	36.314	1, 17	**<0.001**	0.149
All First-Time Freshman Asian*	35.936	1, 17	**<0.001**	0.179
All First-Time Freshmen Black	2.887	1, 17	0.108	0.060
All First-Time Freshman Filipino	11.114	1, 17	0.004	0.123
All First-Time Freshmen Latino*	126.463	1, 17	**<0.001**	0.234
All First-Time Freshmen Native American	1.342	1, 17	0.263	0.054
All First-Time Freshmen White	5.288	1, 17	0.034	0.222

All First-Time Freshmen Asian Males*	28.013	1, 17	**<0.001**	0.160
All First-Time Freshmen Asian Females*	39.634	1, 17	**<0.001**	0.195
All First-Time Freshmen Black Males	2.105	1, 17	0.165	0.048
All First-Time Freshmen Black Females	3.543	1, 17	0.077	0.070
All First-Time Freshmen Filipino Males	9.604	1, 17	0.007	0.118
All First-Time Freshmen Filipino Females	10.799	1, 17	0.004	0.122
All First-Time Freshmen Latino Males*	70.638	1, 17	**<0.001**	0.223
All First-Time Freshmen Latino Females*	203.073	1, 17	**<0.001**	0.241
All First-Time Freshmen Native American Males	3.168	1, 17	0.093	0.105
All First-Time Freshmen Native American Females	0.188	1, 17	0.677	0.009
All First-Time Freshmen White Males	5.548	1, 17	0.032	0.221
All First-Time Freshmen White Females	4.664	1, 17	0.045	0.207

Note. Significant Change Model = Category with * and ***p*** *value* underlined and bolded.

Table 2 presents the average indebtedness of California graduates entering repayment (1995-2004).

Table 2.
Average Indebtedness of CA Graduates Entering Repayment, 1995-2004

Years	UC's	CSU's	Private	Voc/Prop	All
1995-96	$19,803	$13,073	$25,917	$25,581	$22,090
1996-97	$19,317	$15,568	$28,287	$32,946	$23,173
1997-98	$22,699	$14,934	$30,282	$38,221	$25,667
1998-99	$24,815	$17,231	$31,967	$46,311	$28,369
1999-00	$28,514	$18,424	$34,535	$46,321	$31,145
2000-01	$30,740	$19,532	$36,700	$45,575	$33,393
2001-02	$32,859	$21,200	$38,109	$44,217	$34,732

2002-03	$32,520	$20,963	$37,139	$37,790	$33,971
2003-04	$34,284	$21,634	$36,670	$38,227	$33,886

Note. CPEC (2006) Average debt values represent subsidized and unsubsidized federally guaranteed loans only.

Table 3 presents the *F*-test, degrees of freedom (*df*), probability (*p*), and R^2 values for the restricted, full, and change models for average student debt level of California graduates entering repayment. The *change model* is *significant*.

Table 3.
Average Debt Level of CA Graduates Entering Repayment, 1995-2004

Model	*F*	*Df*	*p*	R^2
Restricted	6.624	1, 7	0.037	0.486
Full	35.335	2, 6	<0.001	0.922
Change	33.394	1, 6	**0.001**	0.436

Table 4 reports slopes before (1990-2000) and after (2001-2009) SB 1644 intervention, except for All Avg Debt Level (1995-2004). The results include slope values (pre-SB 1644 and SB 1644), all years, slope relationship (positive or negative), and slope steepness (pre-SB 1644 or SB 1644). Of the 24 demographic categories reported, 10 categories reported positive relationships and steeper slopes after SB 1644, while three categories were negative and steeper. In the Relation column, a positive relationship indicates line slope is increasing, whereas a negative relationship indicates decreasing line slope. The Steeper column indicates whether the positive or negative line slope relationship was steeper before or after SB 1644. For SB 1644 to be considered effective, the following results should be attained:

1. All Cal Grant Award; positive relationship and steeper SB 1644
2. All Avg Debt Level; negative relationship and steeper pre-SB 1644
3. Gender; positive relationship and steeper SB 1644
4. Ethnicity; positive relationship and steeper SB 1644
5. Gender and Ethnicity; positive relationship and steeper SB 1644

Table 4.
Slope Values pre-SB 1644, SB 1644, and All Years, 1990-2009

Category	Slopes			Relation	Steeper
	Pre-SB 1644	SB 1644	All Years		
All High School Grads	7073.45	6709.17	7886.20	Pos.	Pre
All Cal Grant Award*	3336.84	4226.18	5036.86	**Pos.**	**SB 1644**
Awards					
All Avg Debt Level*	2375.23	-423.00	1712.20	**Neg.**	**Pre**
All Freshmen*	2153.03	2475.52	2974.07	**Pos.**	**SB 1644**
Gender					
Male*	724.30	1356.23	1319.39	**Pos.**	**SB 1644**
Female	1428.73	1119.28	1654.67	Pos.	Pre
Ethnicity					
Asian	638.83	365.22	617.24	Pos.	Pre
Black*	66.53	219.48	193.78	**Pos.**	**SB 1644**
Filipino	127.07	93.28	145.86	Pos.	Pre
Latino*	1649.25	2624.48	2045.30	**Pos.**	**SB 1644**
Native American	-22.11	-1.95	-18.23	Neg.	Pre
White	-303.55	-825.00	-9.83	Neg.	SB 1644
Ethnicity Male					
Asian	265.00	214.17	294.53	Pos.	Pre
Black*	20.80	99.72	84.43	**Pos.**	**SB 1644**
Filipino*	50.84	65.30	72.25	**Pos.**	**SB 1644**
Latino*	614.91	1259.02	874.63	**Pos.**	**SB 1644**
Native American	-18.40	-0.70	-12.49	Neg.	Pre
White	-208.85	-281.27	6.04	Neg.	SB 1644
Ethnicity Female					
Asian	373.83	151.05	322.71	Pos.	Pre
Black*	45.73	119.77	109.30	**Pos.**	**SB 1644**
Filipino	73.24	27.98	73.61	Pos.	Pre
Latino*	1034.35	1365.47	1170.67	**Pos.**	**SB 1644**
Native American	-3.71	-1.25	-5.75	Neg.	Pre
White	-74.70	-543.73	-15.86	Neg.	SB 1644

Note: Results considered Effective = * Category with **Relation** & **Steeper** bolded & underlined.

Factors Influencing Entitlement Grants

Two factors, values and resources, emerged from expert interviews regarding what influenced California legislators to embrace entitlement higher education grants. Of importance is a working definition of politics. Easton (1953) defined politics as the authoritative allocation of values and resources. Heller contends that change is driven by politics, and the Georgia Hope merit program set the standard influencing other states to embrace merit grant programs that funnel resources to upper middle and high socioeconomic populations. Politics come into play when legislators decide which values to authoritatively administrate through the policies they enact. The value influencing the enactment of either entitlement or merit grants is the question: Is higher education a right (entitlement) or privilege (merit)? Fuentes-Michel explained that Cal Grant B (entitlement) of SB 1644 was an outgrowth of the civil rights movement and an example of California legislators authoritatively administering the value that higher education is a right, not a privilege. Cochrane asserted that at the time SB 1644 was enacted, California's economy was flush with resources. With the Dot.com boom and growing state coffers, higher education was a great place to put those resources (Quinto, 2011).

Summary of Findings and Conclusions

SB 1644 has met its legislative objective to increase higher education opportunities, but has not kept pace with Tidal Wave II. Tidal Wave II is defined as a bulge moving through the public school system reflecting the baby boom, high birthrates, and immigration levels in California, specifically, growing number of high school graduates (Kissler & Switkes, 2006).

Figure 1 compares positive linear slope relationships of total public high school graduates. Slope equations depict that Cal Grant Awards A & B are increasing at a rate (4,226.2) lower than total public graduates during Tidal Wave II (6,709.2), and the *R2* value depicts the strength of the linear relationship (1.0 = perfect linear relationship).

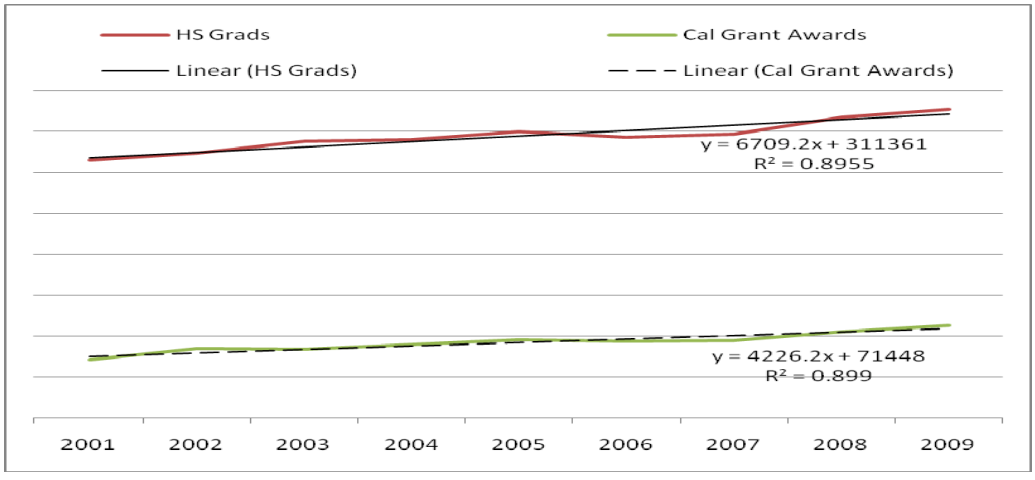

Figure 1. High School Graduates and All Cal Grant Awards A & B, Trend Line Comparisons, SB 1644 (2001-2009)

With the enactment of SB 1644, a notable distribution change of Cal Grants A & B occurred. SB 1644 resulted in more awards (3:1) going to students with grade point averages between 2.0 and 2.99 than 3.0 and 4.0 (628,672 awards, 204,537 awards, respectively), effectively increasing higher education opportunities and benefiting lower socioeconomic higher education seeking student populations. Hundreds of thousands of students seeking higher education opportunities would not have been afforded these opportunities if legislators had not enacted SB 1644.

Initial results show promise in meeting the second intended objective of lowering student loan debt and revealed that SB 1644 has had a dramatic impact on lowering federal student loan debt. Depicted in Figure 2, the slope for average student debt level of California graduates entering repayment decreased significantly after SB 1644, moving from a positive 2,153.03 to a negative 423.00.

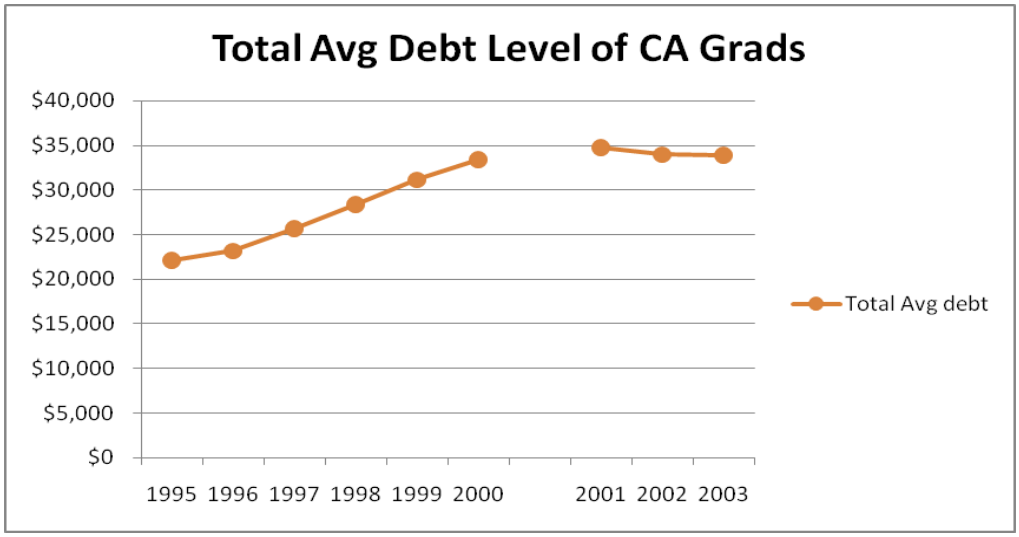

Figure 2. Total Average Student Debt Level of California Graduates Entering Repayment, 1995-2000 vs. 2001-2003/04

Discussion and Significance

During this challenging economic time, life-altering decisions are being made about the investment in future generations. The California legislature made a policy change with the enactment of SB 1644. Critical issue decisions such as this policy change can have profound impact not only on California, but nationally as well, with equity at its core. Lawmakers and educators have a responsibility to fully understand the benefits, liabilities and implications of policy decisions. This research equips leaders with vital information to drive responsible decisions. As states look across state lines to their neighbors regarding policy information, publishing results of California's enactment of SB 1644 legislation provides useful research for diffusion of innovation in public innovation.

The research is clear, entitlement grant programs are the most successful to promote higher education opportunities for student populations who have been historically under represented. From the perspective of state policy decision making, if a state's objective is to increase overall higher education attainment for lower socioeconomic populations, then higher

education grant programs and/or needs based grants provide the best vehicle to meet those ends.

Since change is driven through politics, and politics is the authoritative administration of values and resources, it is vital for legislators, constituents, and society to understand the value perpetuated by the national embracement of merit higher education grants; the value of higher education as a privilege. It is clear that the California legislative decision to enact SB 1644 was to promote the value of higher education as a right, not a privilege. As revealed through research, low education attainment correlates with poverty, higher education promotes democracy, and current merit based national and state policies perpetuate a polarizing society. Our legislators at both the state and national level must understand the impact of their decisions and take action to ensure that lower economic populations have higher education opportunities to overcome potential negative societal and economic consequences; arguably a national general welfare issue. Leslie and Brinkman (1988) and Leslie and Slaughter (1992) purported that for every $1 million dollars budgeted for public higher education, on average $1.5 to $1.8 million dollars in local business volume and 53 to 59 additional jobs were created. Higher education must not be viewed as an expense, but an invaluable investment. Orfield (2002) argued that genuine access to higher education for poor and minority students is as basic to civil rights today as access to high school was a half century ago. A prosperous future for this nation is dependent on an educated citizenry. National and state policy decisions that do not provide higher education opportunities for its citizenry would be injudicious; perpetuating the current national trend of a declining middle class with the rich getting richer and the poor getting poorer.

California is atypical for promoting the value of higher education as a right. As such, it is essential to evidence through program evaluation that California's Master Plan and other higher education policies are meeting their intended outcomes or fall prey to public scrutiny and face possible elimination. Periodic program monitoring is critical to ensure programs are fulfilling societal need. Lawmakers should require that program evaluation be written into legislative policies as well as use current research and evaluation results to fully comprehend the implications of policy decisions. Higher education has become a rights issue due to post 1980 national and state polices enacted by the diffusion of innovation in policy innovation. The basis of the constitutional issue before us, general welfare of its citizenry, and the political (value) question becomes, *Is higher education a privilege or a right*?

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