

The California Teacher Shortage and the California Teacher Recruitment Centers

Final Group Project

**SBSC 327 – Introduction to GIS
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Tomorrow's Future

Introduction:

The topic of this research paper is on the California teacher shortage, and the California Teacher Recruitment Centers. We will employ GIS (Geographic Information Systems) to study, analyze and prepare a GIS map database of the recruitment centers.

What is GIS? GIS stands for geographic information systems. There is no agreed definition. A GIS is a computer-based system that provides a powerful set of tools to handle georeferencing data; 1) capture and input; 2) storage and retrieval; 3) manipulation and analysis; 4) display and output. GIS stores information about the world as a collection of thematic layers that can be

linked together by geography. GIS links locational (spatial) and database (tabular) information and enables one to visualize patterns, relationships and trends. GIS is an organized collection of computer hardware, software, geographic data, and personnel designed to efficiently capture, store, update, manipulate, analyze, and display all forms of geographically referenced information. A GIS map is made up of layers, or collections of geographic objects that are alike.

Currently, the State of California is facing a drastic teacher shortage. A variety of reports and studies reveal that within the next ten years, California will need 200,000 to 300,000 new teachers. The population of school age children has and will continue to drastically escalate in the State and the nation. However, the career choice to become a teacher has decreased. This teacher shortage directly will impact the future of our children and the well being of our society. The shortage of teachers is particularly high in areas and communities that serve the low-income, low-performing, minority and immigrant students.

Current Literature And Studies:

Realizing this problem, based on case studies and statistical data governmental officials have established incentive programs and financial aid programs to encourage and assist prospective educators. The Governor and the State Legislature has attempted to assist the state in finding ways to encourage students into teaching careers and to promote the teaching career to more ethnic diverse groups and to encourage them to teach within their own communities.

According to both qualitative and quantitative data, the California teacher shortage is hardest on the poor. "California's teacher shortage strikes hardest in cities that serve mostly poor and minority children. California's poorest children are nearly four times as likely as the most affluent kids to have uncredentialed instructors" Education News, March 2001, p.12

According to a commentary in the Orange County Register, "A new study by EdSource found that 'approximately twenty percent of teachers in grades 9-12 did not have a subject authorization for the core subject they taught in the fall of 1997' the most recent year studied...for some disciplines that are most critical include 16 percent in English, 18 percent in math and 15 percent in science... Senate bill A.B. 2575 is an important reform to help solve a clear shortage of qualified teachers. It's currently in the Assembly Appropriations Committee. (May 2, 2002)"

In an effort to increase teacher recruitment, the school districts are making it as attractive as possible for many of these experts to come and share their experience in the classroom. There are now various options and alternatives to obtain the single subject credential.

According to California State Assemblyman, Fred Keeley , "In the past ten years, the population of the state of California has increased by seven million people" (SBS 350 Class Lecture, Guest Speaker, October 23, 2002).

Due to the sharp rise in globalization and immigration, the need for teacher with a foreign language is in high demand. "Schools with large Hispanic populations are hit hardest by teacher shortages...Overall, there are about 3

million teachers in more than 88,000 public schools. The Education Department, looking at the age of the teacher population and expected retirement rates,

estimated between 2.2 million to 2.7 million new public school teachers will be needed between 1998 and 2009” (Henry, USA Today, April 25, 2002).

The objective to new techniques of teacher recruitment is to identify various avenues and resources that will assist and encourage young adults, as well as high school students, to become interested and pursue career in the teaching profession. With each new generation, more and more educators will become needed. Therefore, it would not be too early to introduce the teaching career choice to elementary and secondary students. This can be achieved through computer technology. Access and resources can key factors. All communities and ethnicities must be able to obtain the information and receive the recruitment services that are available.

Theory , Data And Methodology:

There are several theories that could explain the cause of the California Teacher Shortage. Capitalism is a prevalent theory, which explains many social injustices of this society today. Many private interest groups have focused their attention upon the capitalist gains of globalization and immigration. Yet, they have failed to use any foresight beyond their monetary gain. The United States has recruited, solicited and approved the heavy influx of foreigners into the borders of this country. In doing so, a new market of cheap laborers was

obtained. Those laborers also brought with them their families and children, with a foreign tongue and culture.

To educate these new found Americans, the classroom are overcrowded. The majority English-speaking teacher population is not equipped to teach and communicate with the heavy ethnic diversity of their classrooms. In addition, English textbook must be produced in other languages. The entire educational process is now must become a multi-lingual system.

Another possible theory for the cause of the California teacher shortage is the critical race theory.

“What is critical race theory? The critical race theory (CRT) movement is a collection of activist and scholars interested in studying and transforming the relationship among race, racism and power. The movement considers many of the same issues that conventional civil rights and ethnic studies discourses take up, but places them in a broader perspective that includes economics, history, context, group- and self-interest, and even feelings and the unconscious...critical race theory questions the very foundation of the liberal order...Critical race theory not only dares to treat race as central to the law and policy of the United States, it dares to look beyond belief that getting rid of racism means simply getting rid of ignorance, or encouraging everyone to ‘get along’” (Delgado & Stefancic, 2001).

A classic example of the result of the critical race theory politic exist here locally. In the affluent community of Carmel, California, the Carmel School District has enough private community-based funds in their city school budget to continue functioning at a steady level regardless of state budget allotments or cutbacks. Yet, in spite of the Carmel School District’s private revenues, their schools’ treasury still receives the same amount of state funding as received by

The school districts in low-income and over populated school districts, which do not receive any private or local funding.

“California’s existing shortage of trained teachers is likely to worsen, according to a December report from the Center for the Future of Teaching and Learning, a Santa-Cruz based nonprofit organization, estimates range between 200,000 and 300,000 teachers needed over the next decade...”If you believe *a mind is a terrible thing to waste* and can give 110 percent of yourself everyday to every student, there may be a classroom with your name on it. Planey, 2002)”

The data on this topic are very reliable. The State government requires an accurate accounting of the expenditures of the California Department of Education. The growth in the population of the state and the daily attendance records of each and every school are both major factors in the allocations of the budget. According to Assemblyman Fred Keeley, “California has a \$100 Billion budget. The number one chunk of this \$100 Billion is the Department of Education K-12; the second largest portion is higher education, the third largest is the Department of Corrections; the fourth is the Department of Transportation and then local government.

The methodology of the data used in this research project is a combination of both quantitative data, with numbers and percentages, and qualitative data, with categories and issues. The teacher shortage data and reports are overwhelming. There may be a shortage of teachers, but there is no shortage of reports, data, statistics, case studies and editorials on this topic. The

statistics of the State California Department of Education and the data from the U.S. Census on the population growth in California is very convincing. The Teacher/ student ratio in the classroom is a very obvious issue. The average age of the current teacher population all formulate and confirm that the teacher shortage in California, and across the nation, is becoming a crisis.

Discussions and Discoveries

Upon analyzing the statistics, data, and reports, the problem of teacher shortage is far greater than the unsuspecting public have been lead to believe. There are general two types of market plans in the economy. There is a short-term market and a long-term market. The long-term market is when a situation occurs and there is time to study and observe the pattern of development or changes. Then there is a short-term market. In this situation, the need must be meet today. The problem has to be resolved immediately. To reiterate the article in USA today, "2.2 million to 2.7 million new public school teachers will be needed between 1998 and 2009". This is 2002 and there has been no significant increase in the teacher population. In fact, the need is becoming greater and greater on a daily basis.

The salary of a teacher is on the average, \$34,000 annual. Garbage collectors and prison guards, just two other professions with far less educational requirements, which receive a larger salary than teachers. The teaching profession in today's society is not as highly respected and glorified as it was

several decades ago. Many college students believe that the pay scale in the teaching profession is too low and the demands of the job are too great. These Demands include the high student/teacher ratio, limited budget, obsolete textbooks, supply shortage, classroom cultural diversity, language barriers, etc.

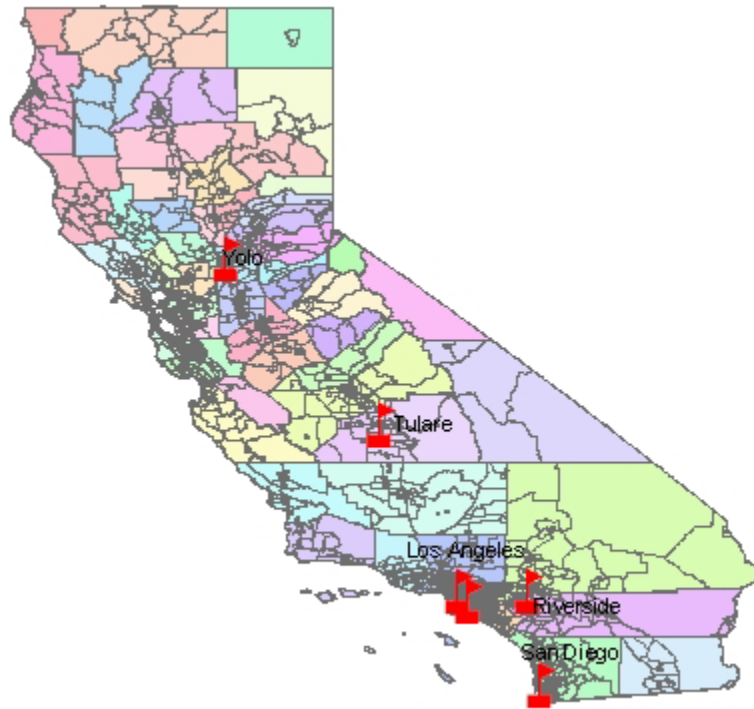
To help alleviate the California teacher shortage, GIS is strongly recommended to recruit, inform and employ future teaching professionals. Through computer usage, this information can be accessed easily by all. The information can be provided in a variety of language through the computer. With impressive audio and visual PowerPoint presentations, the attention of many perspective teachers can be captured. Geographic Information systems (GIS) is a fantastic technological tool. According to a scholarly case study on applying GIS for social science, by Dr. Yong Lao and the Monterey County Social Service,

“GIS helps to reveal the dynamics that underlie the demand and supply, and use of services across space at regional, local and neighborhood scales. The accurate, timely, relevant and clear demographics and social science information have become a powerful tool that enables decision makers to do monitoring planning, and evaluation more rationally and effectively” (p.1).

With GIS and other sophisticated computer technological advances, teacher candidates, regardless of gender, age; ethnicity or location can obtain information in seconds. This could prove to increase the numbers of teacher candidates. The computer technology of GIS can be employed to simplify the process for interested individuals and distribute information on a larger scale. This will also reduce the advertisement, printing, and paper costs.

In an effort to help increase the number of teachers for the present and future need, the Legislature established six California Teacher Recruitment Centers. These centers provide assistance to school districts and teacher preparation agencies in supporting potential new teachers. These six centers are located in Northern, Central, and Southern California. The website for these centers is located on the CalTeach website, which has a map of California identifying each of the six centers.

The GIS (Geographic Information System) Map Of The Six California Teacher Recruitment Centers



The map above reflects the State of California, with the 58 counties of California in various colors. The red flags represents the six Teacher Recruitment Centers for the entire State. The blue dots in the center of the flags indicate that those locations have been hyperlinked with additional information and websites on each recruitment center. The gray shading indicated the population density.

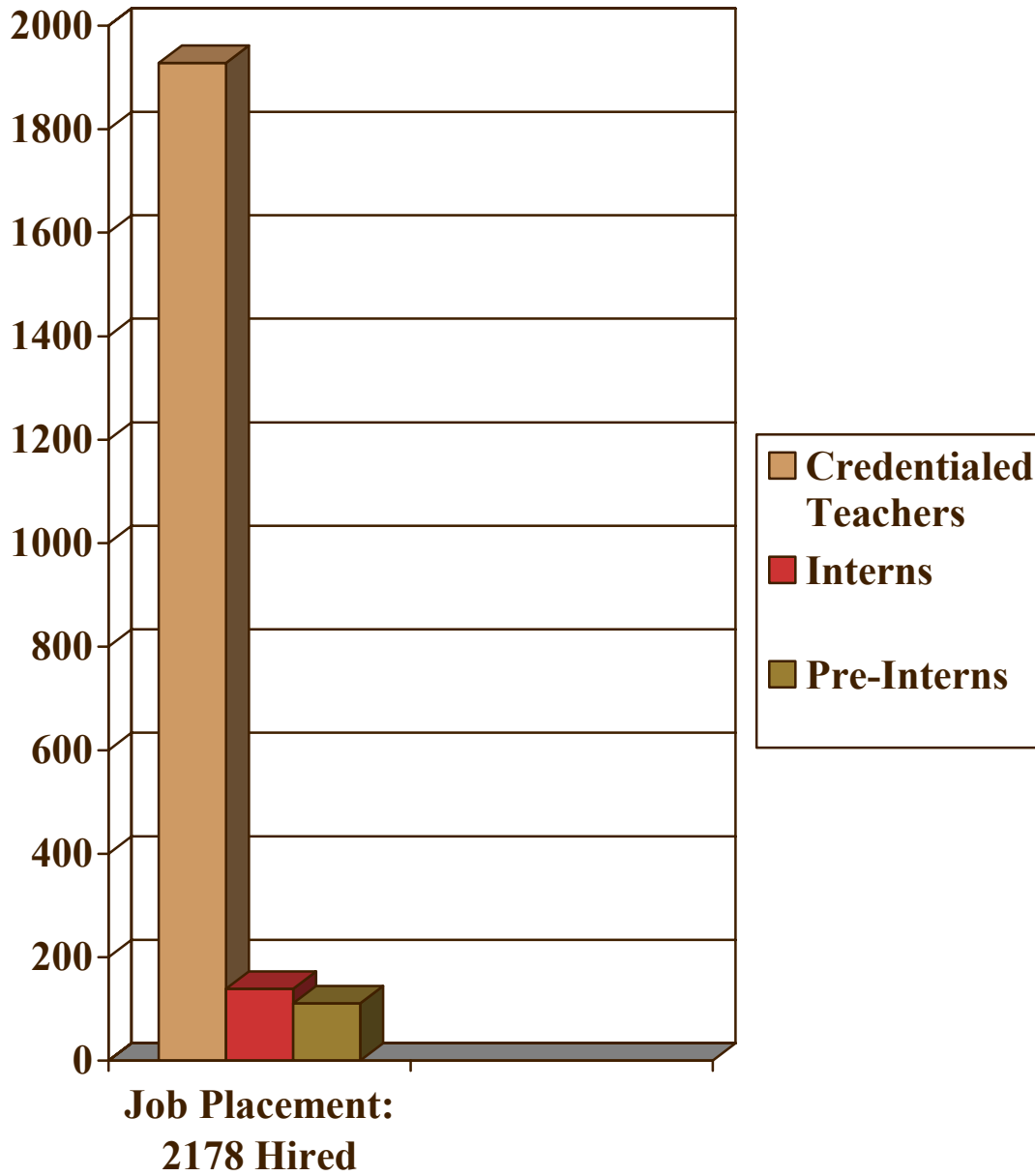
One means of achieving an increase in teacher recruitment is through the usage of computer technology, like the development of CalTeach website, and its six Recruitment center, which are strategically located through the State of California. The Recruitment Centers are located in Colton, Downey, Los Angeles, Sacramento, San Diego, and Visalia.

There are some technological improvements that could be made to the CalTeach website. The CalTeach website does provide the names of the contacts of those directing centers. However, much more information and data can be added. For example, the new requirements and alternative to obtain single subject teaching credentials could be posted. Another suggestion for improvement of the existing CalTeach website is to use GIS computer technology to link interested persons to the school districts nearest the recruitment center in their area. In addition, links could be established to access information such as employment and more demographic data. There are many different languages spoken in the huge Los Angeles Unified School District. The CalTeach website should also be able to provide the information in a variety of languages to encourage ethnic diverse groups to research and pursue a teaching career. Another suggestion to increase teacher recruitment is to establish a GIS map for each school districts linked to their website. Each school in that particular district could identify the demographics of their school and their needs. A good GIS map with adequate links is invaluable. This could answer many questions that interested parties have at the click of a button. The existing

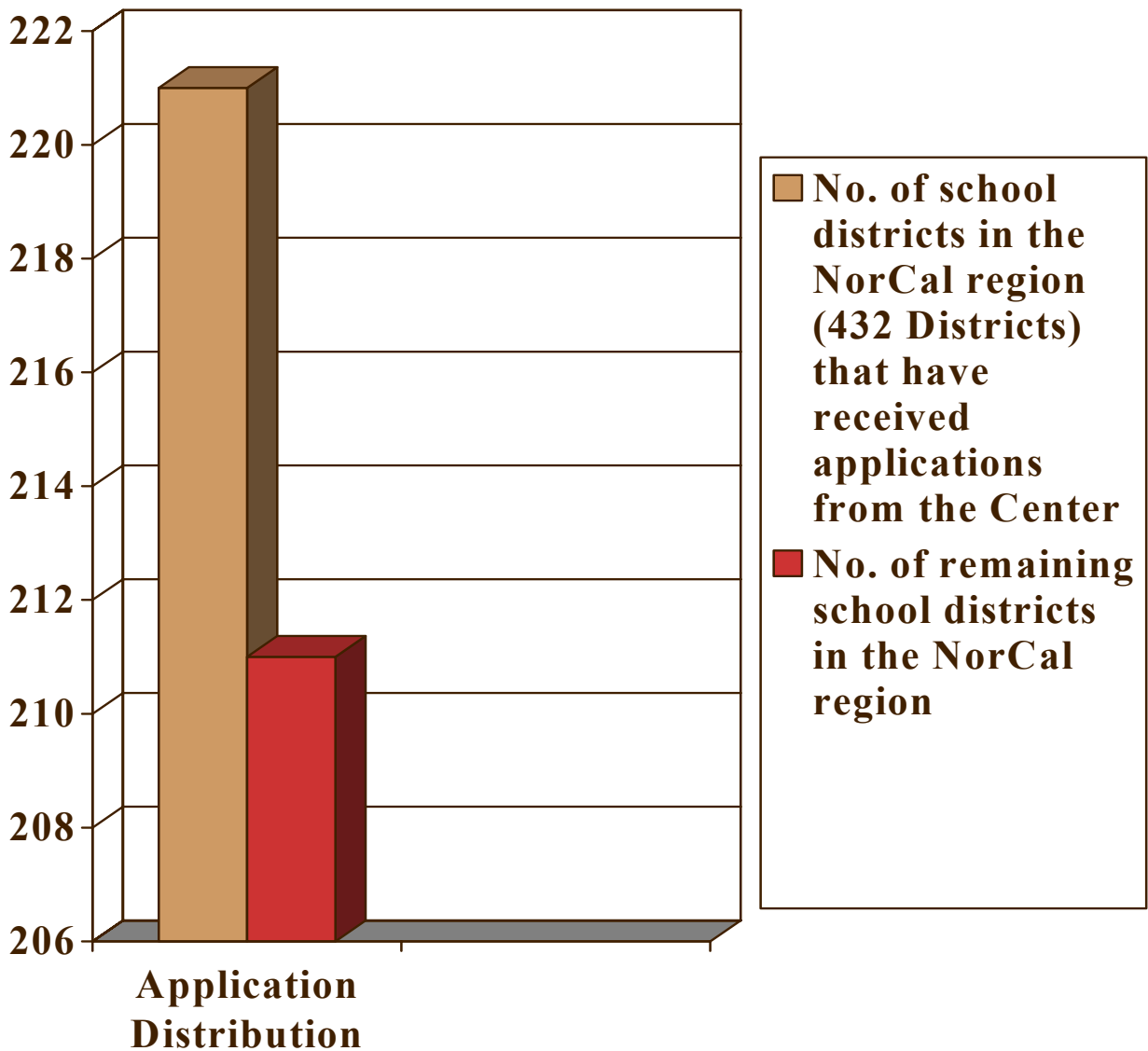
CalTeach website is a good model and a great start. However, more information, data, statistics and employment opportunities could be linked.

The following three statistical charts give reference to job placement, application distribution, and registration and referrals. The chart titled job replacement shows the number of people hired in three categories: credentialed teachers, interns, and pre-interns. The second chart titled application distribution reveals the number of students in the 432 districts of the Northern California region that have received applications. The third chart titled registration and referrals shows the number of credentialed teachers applications that have been screened and referred and the number of candidates who have registered with the recruitment center. These charts are great visuals to comprehend the actual statistical information about the recruitment centers and their success record.

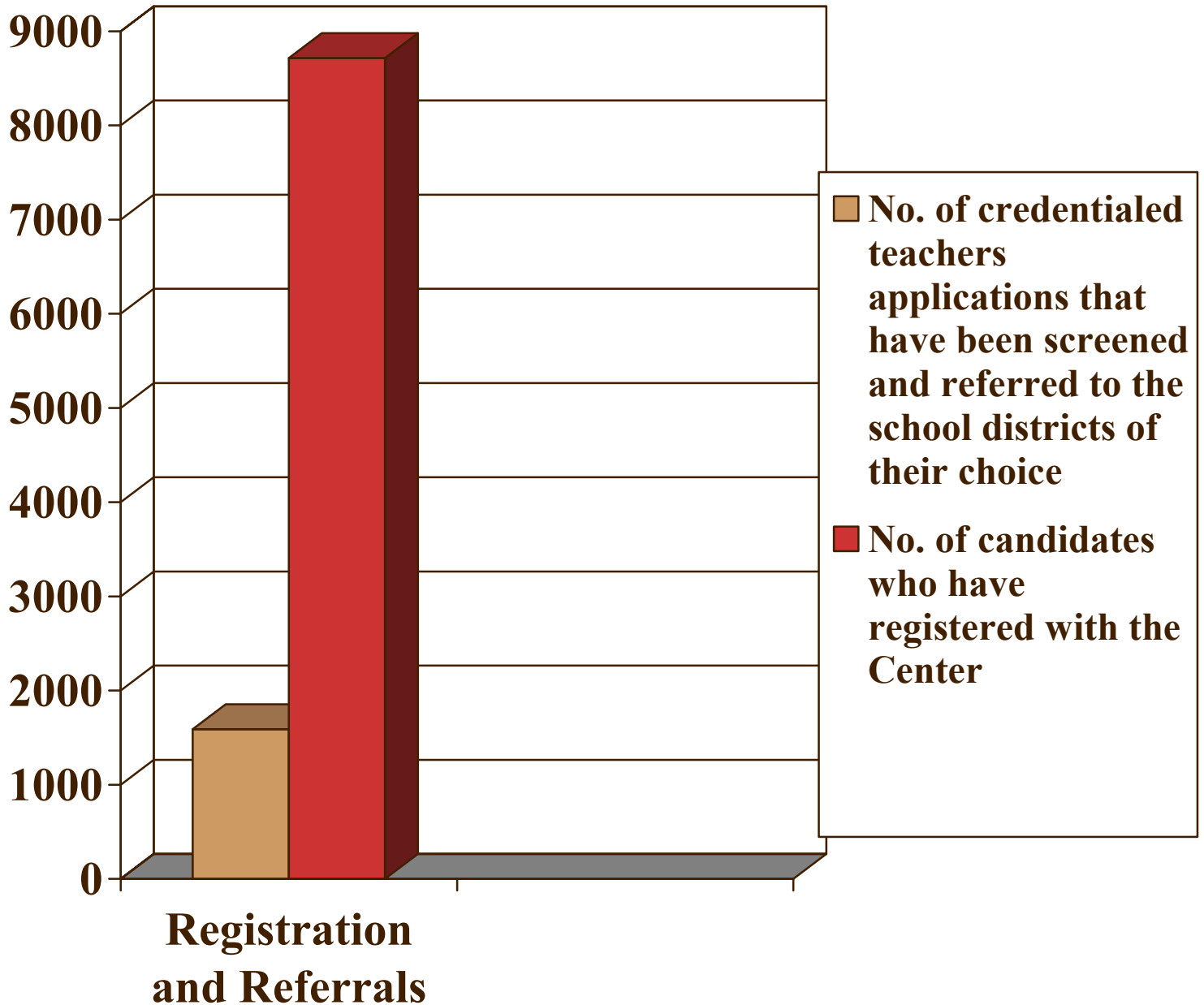
Current Statistics: JOB PLACEMENT



Current Statistics: APPLICATION DISTRIBUTION



Current Statistics: REGISTRATION & REFERRALS



Conclusion

Due to the steady population growth, the issue of sufficient qualified teachers will never be eradicated. To eliminate the California teacher shortage is a tremendous task. It may be a mission impossible with the computer technology of on-line learning, as early as grade schools. At this stage, the suggestion and recommendation is to escalate recruitment, by any means necessary. This could include salary increases for teachers or accelerated teaching credential programs. This is a task that can be accomplished by using Geographic Information Systems (GIS) applications. The problem of teacher shortage cannot be resolved solely by GIS applications. However, the utilization of georeferencing can make the problem, the statistics, and the departmental budget of the California Department of Education more visible and comprehensible to the average citizens, as well as elected governmental officials to implement changes and improvements. Billions of taxpayers' dollars are being spent, some wasted, on departments, programs and propositions that the average American is completely naïve or ill informed. In order to preserve the educational values that this nation once held so dear, effective changes must be implemented immediately.

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www.newteachercenter.org New Teacher Project at UC Santa Cruz