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History: Food Banks usage increases as my 2007-2011 NSF ITEST Project starts

I observe my food bank approach succeed in high school teaching

STUDENTS WHO LEARNED TO PROGRAM

SOME PARENTS

SOME WHO PRESENTED

ENJOYING LUNCH WITH STUDENTS

MORE HAPPY PARENTS

University of Central Florida

Engaging the SAMARITAN instinct in Teaching Computer Software Concepts
UCF Department of Electrical Engineering and Computer Science

I teach software's complexities and (tedious) details through applications that tap into what I call the Samaritan Instinct (the instinct to help the needy) in students. These applications include Food Bank Management, Federal Disaster Management, and Habitat For Humanity Homebuilder Solar Electrification Management projects.

My premise is that there are students who are naturally drawn to such undertakings and then there are those who do not dare stay uninterested in these discussions for fear of social censure. Due to these two responses, a great majority of otherwise uninterested students attend to and engage in the elaboration of how a computer system must track detail.

Program Sample: Lots of uninteresting detail, but easier when students are motivated by the application

```c
#include<stdio.h>
#include<stdlib.h>
int main()
{
    int Quantity[100];
    int Howmany, i;
    printf("Enter the Number of Donations: ");
    scanf("%d",&Howmany);
    for( i = 0; i < Howmany; i++)
     {
         printf("Enter the Quantity of the Donation: ");
         scanf("%d",&Quantity[i]);
     }
    printf("\nREPORT\n");
    for( i = 0; i < Howmany; i++)
     {
         printf("Quantity of the Donation: %d\n",Quantity[i]);
     }
    system("pause");
}
```

Can examine all the necessary quantitative aspects of a problem when the students believe their efforts are relevant

Developed teaching material that uses Federal Disaster Management issues to motivate thinking about distribution of resources, and verification of volunteer personnel efforts.

Habitat For Humanity Homebuilder Solar Electrification Management

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Software issues: how to regulate energy consumption based on configuration of panels

Need to identify additional Samaritan projects that lend themselves to software concerns.

I also plan to further employ the Samaritan software approach in high schools, particularly targeted at underrepresented groups.

Additionally, I wish to study how strong the Samaritan Instinct is in youth, and how to harness it to alter learning of challenging software engineering topics in younger teenage years.