UNIVERSITY VOLUNTEER TUTOR PROGRAMS AND SECONDARY SCHOOL CLASSROOMS: OUTLINE FOCUSED ON KEY QUESTIONS AND CONCERNS

"There are literally hundreds of grassroots tutoring programs that have been developed and are being used in schools. There is great variation among these programs. Some have very well developed training programs for tutors; others do not. … Also, since many of these programs were developed to fulfill a specific need in a particular school, little attention has been paid to evaluating or disseminating the programs. What has occurred is that many programs are being implemented across school districts with little evidence of their effectiveness."

Wasik (1997).

The following outline is designed as a starting point for examining university volunteer tutor programs in junior high and high school classrooms. The outline is organized to address the following key questions and concerns surrounding such programs:

- What ideas provide a rationale for school-tutoring?
- How could classrooms improve as a result of having volunteers present? What results can be expected?
- What are the challenges to implementing university volunteer tutor programs?
- What features have been proposed for effective classroom tutoring?
- What is proposed for training and preparation of tutors and school staff with respect to establishing and maintaining effective volunteer programs?

The data and content notes included are meant to assist in pursuing research and preparing presentations on the topic. The resources from which the content was drawn are cited in the reference list.

*The information presented here was culled from the literature and drafted by Chi Tran as part of her work with the national Center for Mental Health in Schools at UCLA.

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I. What ideas provide a rationale for school tutoring?

Besides resource and economic considerations, the general rationale for tutoring encompasses such ideas as:

>tutoring creates an environment where students can set and carry out goals, as well as reason and work through problematic situations in a non-threatening manner;

>learners have an easier time approaching their tutors than their teachers because teachers often seem too busy;

>when classroom instruction is weak, tutoring makes the class more attractive in students' eyes;

>tutoring can break through the isolation that often typifies classroom work and rid the learning process of mystery (Feiman-Nemser, 2001; Powell, 1997).

In terms of formal theories, Powell (1997) suggests the following examples:

A. Role Theory:

Emphasizes that specific expectations are associated with particular positions in the social structure. Students view tutors as occupying roles closer to them than their teachers and thus are more readily able to approach them for help.

B. Behaviorist Theory:

Emphasizes reinforcement contingencies (e.g., associating rewards with correct answers) to facilitate learning. Tutors are able to reinforce student learning and behavior in a much more immediate and frequent way than classroom teachers. Reciprocally, tutors' efforts often are more immediately reinforced than teachers as students become more proficient.

Note: >It should be stressed, however, that intrinsic motivation theorists caution that overreliance on rewards can work against development of intrinsic motivation for what is being taught (Deci, Koestner, & Ryan, 2001; Center for Mental Health in Schools, 2011)

C. Gestalt Theory:

Emphasizes that the benefits are not only for students. As tutors work to make subject material meaningful to students, tutors are forced to reflect on their own learning process and benefit a great deal from the experience. This process of relating their knowledge to a larger context results in further learning and deepened understanding of subject matter on the tutor's part.

II. *How could classrooms improve as a result of having volunteers present? What results can be expected?*

Evaluations have taken the form of observations, surveys, and interview data. Facts and individual experiences and narratives are garnered from these. Common experiences are examined, general concepts are formed, and themes are identified (Fresko & Wertheim, 2001).

A. Affective Change

Feiman-Nemser (2001) suggests the following:

- When surveyed, parents reported immediate impact on learners' attitude toward school.
- Observable changes in students' self-perception: increased self-esteem and self-confidence.
- Shifts in perception of school and subject matter are related to enhanced motivation, attitudes toward education, improved attendance, social integration among peers, and a reduced number of disciplinary referrals.

B. Cognitive Change

- Academic tutoring is effective for the improvement of academic achievement (Feiman-Nemser, 2001). Cognitive change can eventually be seen in the improvement of test scores, GPAs, and course pass rates. However, the absence of these does not necessarily indicate the absence of cognitive change. It is often the case that there is a delay in its materialization in test scores and academic grades (Eisenberg, Fresko, & Carmeli, 1981).

III. What are the challenges to implementing university volunteer tutor programs?

A. Conflict between teachers and tutors:

Note: >Teachers report that tutors' presence is disruptive when they work with students in a way not directly related to classroom instruction. Researchers conclude that teachers need to develop specific strategies for tutors to implement if they want them to advance classroom material (Powell, 1997).

B. Limited evaluation

Note: >There are wide variations in the type and quality of data regarding tutoring effectiveness. The variations stem from methodological deficits related to measurement and variables that were hard to control and/or isolate and limited project implementation (Eisenberg, Fresko, & Carmeli, 1981), sparse funding, looseness of program goals, and insufficient organizational infrastructure (Reisner, Petry, & Armitage, 1989).

IV. What features have been proposed for effective classroom tutoring?

A. Screening of tutors

Note: >Screening focuses on recruiting tutors who are capable and eager to serve. The process ranges from a simple application form to extensive interview sessions, essay assessments, and reference checks (Reisner, Petry, & Armitage, 1989).

B. Matching

Notes: >The relationship developed between tutors and students is central in shaping the program experience (Reisner, Petry, & Armitage, 1989). The relationship is influenced by the personality and skills of both the tutor and the student and by the nature of the work they are doing together (Fresko & Wertheim, 2001).

>Matches are usually made by program directors. For example, the City University of New York (CUNY) uses a mutual selection technique in pairing its university volunteers with students: the program starts by facilitating familiarization opportunities between the tutor group and the student group, then formally pairs tutors and students later on. Familiarization opportunities include interviews between tutors and students, self-profiles, and social activities (Reisner, Petry, & Armitage, 1989).

Data: >Factors often taken into consideration when making the matches include the following: ability of the pair to work together (taken into account by 86% of the projects examined), area of student need/ tutors who can match that need (79%), difficulty of the student's present situation and the level of the tutor's skill and confidence (67%), personal preferences (55%), similarity of cultural background (55%), similarity in language background (48%) (Powell, 1997).

C. Time

Reisner, Petry, & Armitage (1989) stress the following:

- Contracts are good for the incorporation of college and public school calendars so as to avoid schedule conflicts and vacation breaks that upset the program's continuity. These contracts are also helpful for clear communication of responsibilities, expectations, and goals.

- It is important to define commitment to tutors: scheduling conflicts and turnovers are minimized when the expectations for duration and conditions of tutoring sessions are laid out. Clearly articulated expectations are related to the recruitment of effective tutors.

- If scheduling inconsistencies cannot be avoided, communication between tutor and student should be maintained during that time (e.g., through emails, phone calls, etc.).

- The sessions and duration of the tutoring relationship should be long enough to provide consistent, continuous service.

Data: >On average, programs were found to go for about 7 months, during which time, 3 hours were allocated to the tutoring service each week. Programs were found to devote 59% of the time each week on basic skills remediation and 28% of the time on homework help. 87% of the total time was spent on academic activities.

D. Perception of the program by students and teachers

Note: >A major concern is that, too often, student inadequacies are overemphasized. Instead, tutors should be trained to establish reciprocal relationships so that the stigma against receiving help is reduced. It needs to be communicated to the students that being tutored is not an indication that they are "stupid" (Powell, 1997).

Data: >Teachers are found generally to be positive in their responses toward volunteer programs, but the teachers most involved in the program's design and implementation were most positive because they understood the program's design and objectives. Teachers were more likely to deem their own responsibilities in conjunction with the program as unnecessary and demanding if they did not fully understand the program (Powell, 1997).

V. *What is proposed for training and preparation of tutors and school staff with respect to establishing and maintaining effective volunteer programs?*

A. For tutors

van der Sandt & Nieuwoudt (2003) suggest the following:

- Make use of community resources by working with local colleges, universities, and professional organizations to bring in new ideas, research, and practices that can lend to innovative practices.

- Focus on strategies for instruction and problem-solving. While the university will have a wealth of subject-knowledge, volunteers from the university will most likely have been trained in courses designed for professional use in subject-related fields and not for teaching in lower-level education.

- True expertise in teaching any topic requires in-depth conceptual knowledge in addition to experience teaching it. Connections need to be made between subject knowledge, understanding of how students learn, and experience of teaching it.

- In-service training for volunteers would benefit from the integration of subject matter, methods of teaching, and psychology. Training programs should be designed so as to result in deeper understanding of subject matter and provide thorough knowledge of what is taught in the schools. Tutors should be taught in such a way that they will not only be proficient in the subject matter, but they will also know how to use and communicate their knowledge in different teaching contexts.

- Shift the tutor's focus from teaching to learning by providing training contexts in which those being trained would gain experience in assessing learners' mastery of subject material. In doing so, they learn to identify and analyze the constraints of teaching, as well as how to deal with those constraints. Offer tutors opportunities to reflect on the experience of being a learner in an environment similar to that in which they will be teaching. This allows them to apply instructional techniques to their knowledge.

B. For teachers:

Powell (1997) suggests:

- Explain project goals and the importance of cultivating and fully employing tutors' leadership skills.

- Teach the teachers how to develop tutors' skills, and move the teachers toward acting as coaches and mentors more so than as dispensers of knowledge; they should be facilitators of a classroom environment in which effective tutoring can take place.

Volunteers to Tutor in Middle and High School

In preparing the outline for the Center, student staff member Chi Tran reflected and commented on a range of matters that are best shared in essay form. We felt that readers might find the material from the essay useful. So, with some editorial additions, here it is:

Undoubtedly teeming with need, the classroom is constantly full of activity, personality, and, as a result, potential for chaos. Into these situations, the implementation of volunteer programs can be a valuable resource. On a one-to-one basis or in small groups, volunteers are helpful for enhancing students' motivation and skills, as well as for countering negative experiences that students may have had in school. The volunteer's presence in the classroom broadens students' experiences and enables teachers to personalize instruction, conference with students who need special assistance, and more adequately meet students' needs.

Given this: Why are volunteers used far less in secondary than in elementary school classrooms?

Erik Ericson's developmental theory stresses that family situations and dynamics play a large part in shaping early social learning and identification, and the formation of identity is limited by the situation in which the individual finds him/herself. Erikson suggests adolescents' attitudes toward parents and other adults shifts from the adoration often seen in young children to wariness. Moreover, as youngsters develop, it is necessary for parents to step back a bit so that individuality can form.

Parents often serve as volunteers in elementary classrooms, carrying out tasks such as grading papers, leading small groups, and helping out with special projects. As students move into secondary schools, there are fewer and fewer parent volunteers in classrooms. The appropriateness of this trend is supported by developmental theory. As parent-child relationships change in adolescence, a shift away from the use of parent volunteers probably is indicated. There is a distancing of sorts as the adolescent moves toward autonomy. Peer relationships start to play an increasingly formative role in shaping the individual's perspective, decisions, and actions. While parent role models should in no way be discarded, peers role models provide additional perspectives.

From another perspective, it is the case that the depth of subject material presented in secondary-level education calls for classroom volunteers who are more knowledgeable than is the case in elementary school. As specific skill sets become a requirement, the pool of volunteers to draw from becomes much smaller.

A special need for volunteers in secondary school classrooms

While the role of volunteers may change, the need for volunteers in secondary school classrooms remains. Volunteers can reduce a teacher's burden. Broadband lecturing is insufficient to engage the different interests, strengths, and needs of each individual student, and the presence of classroom volunteers makes it easier to address individual needs, provide more immediate feedback, and make the experience more rewarding.

Current pressure to strengthen science, technology, engineering, and math education (STEM) makes the need for help in the secondary school classrooms more crucial. As secondary schools pursue STEM curricula, the demand will grow for classroom volunteers who not only know the subject matter, but who are able to help motivate students and counter the crippling beliefs students often have about math and science.

What are the benefits of using university students as volunteers in secondary school education?

University students make good volunteer tutors. They bring knowledge and skills that make them well suited for tutoring middle and high school students. Relationally, they are able to be the peer role models needed in adolescent development. A multitude of benefits can be listed. Here are a few:

- With increasing emphasis on service learning, university students often are easy to recruit as volunteers for secondary school classrooms. The role is seen as mutually beneficial. This is particularly so for those who are pursuing teaching as a career. Volunteering in the classroom increases pedagogical knowledge and enables them to confront any naive ideas about teaching.
- University students also benefit from deepening their understanding of the subject material. Learning occurs as the tutors are pushed to place items of knowledge onto a larger intellectual structure or context.
- With the fields of science, technology, and engineering evolving rapidly, middle school and high school classrooms would benefit from the up-to-date, subject-specific material volunteers would be able to bring in from their universities.
- Because university-aged tutors are closer in age to secondary school students, they should be more credible than adult educators and students may feel closer to them than to some teachers. This could be influential in improving students' attitudes toward school.

What is needed to build good volunteer tutors?

Capacity-building: It is important to provide adequate training for both volunteers and teachers in how to productively work with one another and with the students in order to maximize the effectiveness of these volunteer programs. Classroom teachers should be trained in how to effectively use tutors and mentors in their classrooms, and they should be involved in the pre-service training of such volunteers.

Not all tutors are naturally endowed teachers and mentors. A training program is essential, but it needs to be geared to individual differences (e.g., recognizing the strengths and weaknesses of each). It would seem wise to start off with some classroom observation. Training should emphasize interpersonal and communication skills. It would be beneficial for volunteers to learn about the school curriculum and what resources and materials the school provides. Most volunteers will be aware that they are not well-trained to work with students; many will need a lot of positive feedback and a minimum of criticism.

Research: Not surprisingly, the topic of volunteer tutors requires a great deal more research. This includes a focus on clarifying the economic, cognitive, social, and emotional impact of such tutors, the impact on the tutors, the benefits for teachers and schools, and what it takes to establish an effective volunteer tutoring program.

Benefits of pairing girls with strong female STEM mentors

Negative stereotypes can interfere with the success of an endeavor, and when it comes to math and science, the stereotype is that girls who excel in these areas are unpopular with their peers. Such stereotypes are problematic because they are accompanied by anxiety and negative expectations. Studies have shown that calling attention to gender decreased the performance of 12-year old girls, where it didn't decrease the performance of I 0- and 1 1 - year old girls. As such, it seems that problems can start by middle school.

Negative gender stereotypes need to be invalidated, but it is a struggle to counteract them during school hours because a large number of math and science teachers in secondary schools are male. In some cases, the stereotype has been overcome by exposing girls to female role models who have been successful in math and science.

As adolescent girls work with female tutors who have done well in math and science, they learn that it is normal to struggle and that success comes gradually. Such a realization lessens anxiety and increases the motivation to take on challenging STEM-related work. Research shows that older students who overcame academic struggles and became high performers over time are very powerful role models.

Little rigorous research exists that assesses the effectiveness of tutoring on math and science achievement by itself, but there is promising research that suggests the pairing of girls with female college students in the math and sciences is helping to increase pursuance of advanced science, technology, engineering, and mathematics degrees.

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*Additional source references on this topic can be found by going to the Center's Online Clearinghouse Quick Finds on

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(12/10/12)