

Discussion of an Experimental Program Proposal

UC San Diego

January 2011

Overview of this Report

The Commission adopted revised Experimental Program Standards at its March 2008 meeting, <http://www.ctc.ca.gov/commission/agendas/2008-03/2008-03-3A.pdf>. At the May 2008 COA meeting, staff presented information on the technical assistance meetings that were held focusing on Experimental Programs and procedures for programs to follow in proposing new Experimental Programs, <http://www.ctc.ca.gov/educator-prep/coa-agendas/2008-05/2008-05-item-17.pdf>. The procedures were detailed, including a possible timeline for the submission and approval process. This agenda item presents one concept for experimental programs being considered by a currently accredited institution for the COA's discussion.

Staff Recommendation

This is an information item only.

Background

The purpose of experimental programs is described in the Experimental Programs Handbook:

The experimental program option is designed to encourage innovations in educator preparation and investigation of those innovations, with the aim of increasing the professions understanding of professional learning and improving professional practice for the benefit of all students in California. Experimental programs were provided for in Education Code 44273(a) as a way for programs of “merit and the potential of improving the quality of service authorized by the credential” to be developed. In the past, few programs have been submitted under this option. The revised Experimental Program standards take into account this under-utilization and are designed to encourage innovation with accountability to the profession. (<http://www.ctc.ca.gov/educator-prep/standards/Experimental-Program.doc>)

The procedures the COA adopted to review and approve experimental programs are contained in the *Experimental Programs Handbook* and included in this item as Appendix B. In the spring of 2009, three institutions' concepts were presented to the COA. Two of those concepts were successfully expanded into proposals that were approved by the COA in May 2010. Appendix A of this agenda contains the concept paper from the University of California at San Diego that describes the Program in ASL-English Bilingual Education with an Emphasis on Visual Learning, Assessment and Technology that the institution proposes to develop as an experimental program.

After the COA's discussion of the experimental program concept, staff will utilize the committee's feedback to guide staff at the institution as they continue to develop their proposal. The full proposal will be reviewed by peer reviewers and when the reviewers find the proposal meets the Experimental Program standards, the prospective experimental program will be brought back to the COA for approval.

Appendix A

Proposal for an Experimental Program

In ASL-English Bilingual Education

with an

Emphasis on Visual Learning, Assessment and Technology

Leading to the

Multiple Subject (Bilingual Authorization)

&

Deaf and Hard of Hearing Specialist

Credentials

Education Studies

University of California, San Diego

September 2010

Abstract

The Education Studies Program at the University of California, San Diego (UCSD) proposes to expand on an experimental teacher-training curriculum to qualify teachers for the Education Specialist-- Deaf and Hard of Hearing (DHH) credential and the Multiple Subject Credential with a bilingual authorization in American Sign Language (ASL). This program will build on an experimental program at UCSD that just completed its 10-year term in 2008 (see report submitted to CTC in 2008). It will continue to provide bilingual (ASL and English) training for teachers who work with deaf and hard of hearing children. The new experimental program being proposed here, while continuing the bilingual training curriculum, brings a new and different emphasis.

We propose that a deeper understanding of the relationship among visual learning, technology, assessment, and literacy, which we actually began in our original experiment but which have now been reinforced by additional independent research, can be ramped up to add dimensions to the repertoire of knowledge and competencies that our teachers will bring away from our training curriculum. Therefore, we propose to add innovations in visual literacy development, educational technology and authentic assessment.

Need

In 1996, the Teacher Education Program (now Education Studies) at UCSD received approval to establish an experimental program of professional preparation for the combined Multiple Subject (BCLAD) in ASL and English) and Education Specialist: DHH credentials. The two-year program that resulted is integrated into a Master of Arts in Teaching and Learning degree program. The program enrolled its first students in 1998-99 and has trained 50+ teachers to date. The aim of the program is to educate teachers who are prepared to teach deaf and hard of hearing children who are interacting with two or more languages in the school and home. All experimental program candidates receive full Multiple Subject (BCLAD) and Education Specialist training. In our original 1996 Experimental Program proposal we stated the problem or need as:

“For some time now, it has been recognized that classrooms of deaf and hard of hearing children are linguistically and culturally diverse places because of the children’s backgrounds (Cohen, Fischgrund, & Redding, 1990). In these classrooms, particularly in urban settings, we frequently find deaf and hard of hearing children who are:

- fluent in ASL but not in English,
- fluent in English but not in ASL,
- fluent in neither ASL nor English nor any other language,
- fluent in the signed language of another country such Mexican Sign Language or Puerto Rican Sign Language but not fluent in ASL, English or Spanish,
- not fluent in ASL but are expressing some English fluency through a sign system based on English.

This is just some of the language variation present in many urban classrooms today. Along with this linguistic variation comes cultural variation. These deaf and hard of hearing children are often exposed to several cultures. In many classrooms, particularly in California, there are deaf and hard of hearing children whose cultural

heritage is of American, Mexican, Vietnamese, Cambodian, Hmong, Native American, and Russian origin (Schildroth & Hotto 1994). These cultures are by no means a complete list of the cultural variation among deaf and hard of hearing children in our schools. Enculturation ranges from little to total. In addition, enculturation into the Deaf culture of the United States or into another Deaf culture such as the Mexican Deaf culture also widely varies as many of these children have had little contact with any Deaf community. The recent standards prepared by the California Commission on Teacher Credentialing, as well as the national standards set by the Council on Education of the Deaf, recognize quite clearly the importance of training teachers who are prepared to teach deaf and hard of hearing children who have a wider variety of cultural and language backgrounds.

Questions that have occupied a prominent place in the discourse on the education of deaf and hard of hearing children include: Are the principles and practices of bilingual, multicultural education applicable and pedagogically effective for deaf and hard of hearing children? What does this mean in real practice? How should these teachers be prepared?

We also seek answers to these questions. Our approach to understanding how these questions might be answered begins with the hypothesis that bilingual ASL-English fluency and cross training in bilingual education and deaf education is essential. This foundation will provide teachers with a greatly improved ability to communicate with their students, to design and implement assessment and learning strategies for diverse populations of deaf and hard of hearing students, and, finally, to bring indigenous practices from the community into the school to aid learning and development.”

Today, in 2010, this original need and the same issues still exist in the field of deaf education. Deaf and hard of hearing children are increasingly diverse and linguistic diversity is, if anything, more prevalent among these children and their families. However, new research has made it clear that more and broader emphasis must be placed on the advantages that visual learning offers deaf and hard of hearing children. The new challenge is to preserve an older emphasis in teacher preparation that recognized the importance of ASL in students’ learning while adding preparation that allows teachers to assess and plan instruction that is more than just visual language oriented but is visual learning oriented as well. It is not enough to just introduce ASL more centrally into the curriculum. Visual culture and visual technology needs to be introduced as well.

Newer research in literacy assessment and visual suggest to us that the ability of teachers in any classroom to perform expert assessment of children from varying language backgrounds and to master the use of complex educational technology should interact. New research, some of which is explained below, in visual learning have reinforced and added to our theoretical basis for this approach and has suggested the critical importance of visual learning and visual language for deaf and hard of hearing children. Teachers need to develop competence in designing visual environments to meet this need.

Our proposal

Since we believe teachers need to have full competency in both a bilingual pedagogy and specialist training that incorporates the visual orientation, we are proposing an altered experimental program. We are proposing the following new emphasis in our training:

1. the development of teacher competence in applying important new research in visual learning to classroom practice,
2. the use of innovative technology, to aid teachers in planning these visual learning environments for deaf and hard of hearing students,
3. teachers' ability to use assessment instruments and procedures that address deaf and hard of hearing students' ASL *and* English literacy development and learning needs.

We believe that we can address these needs with a highly integrated bilingual training curriculum. Planning for literacy development is dependent on the teacher having the clearest possible picture of each of their students' emerging skills in reading, writing, and communicating and using this information to plan effective teaching and learning activities. Digital technology, when integrated with the assessment process and literacy planning, can be a very powerful resource for both the teacher and the student. Combining and integrating these areas of training with our already existing emphasis in bilingual practices and best practices in deaf education creates a powerful nexus. The emphasis on technology and assessment will prepare teachers for undertaking the development of innovative assessment and literacy tools and practices that integrate technology and help fill a demand in the field for new methods and strategies. However, it is in the area of visual learning that innovation is needed and that teachers from this proposed program will play an important role in not only bringing a new set of skills to their classrooms but will also help to create a new set of practices and curriculum applications that are based in visual language and visual learning.

New research in visual learning

From data collected in naturalistic contexts, deaf signing teachers and caregivers actively engage, manage and direct the visual attention of deaf children. (Crume & Singleton, 2008; Lieberman, 2008). These studies, among others, show that, by the age of 4, ASL signing deaf children are able to self-regulate attention to a visual language. Their self-regulation is achieved by careful and constant orchestration of visual gaze and engagement on the part of the adult, especially in contexts involving competing visual input such as book sharing. Among the deaf toddlers studied by Lieberman (2008), she found a strong correlation ($r=.75$) for the number of appropriate and successful visual bids for communicative attention and the child's score on an ASL vocabulary inventory (Anderson & Reilly, 2002). While skill in visual attention among deaf children learning sign language may not be a surprising result, it dovetails with recent work showing a significant role of visual gaze and attention in hearing children's development of spoken language processing skills. Fernald and her colleagues (2008) find that early visual skills, particularly the ability to quickly find a picture in an array, predict later reading performance. Fernald argues that rapid visual response is an early indicator of the child's ability to make predictions about language input which aids in comprehension skills needed for reading. The early appearance of visual attention along with timely visual language input (ASL) in deaf children likewise contributes to their reading and written

language development. This connection between ASL and English literacy development was the basis for our original experimental training curriculum but while we emphasized visual language, it has not always been clear why fluency in ASL is correlated to English literacy. It appears that visual learning, which develops along with visual language, is crucial in this co-relation.

In a meta-analysis study of research examining phonological coding abilities in deaf students educated in a variety of communication modes, Mayberry and her colleagues found that fewer than 50% of these studies (58 met the criteria for a meta-analysis) found evidence of phonological coding in deaf students (Mayberry, del Giudice, & Lieberman, Under Review). Within this set of studies, only 25 measured reading ability directly and Mayberry et al.'s analysis demonstrated that phonological coding only predicts about 10% of reading outcome. Language proficiency on the other hand, correlated most highly with reading achievement. They found two factors correlated with reading achievement, ASL fluency and exposure to print. The exposure to print correlation to literacy, however, only holds when in the presence of ASL fluency. Hence, an emphasis on visual language development activities as a path to successful reading acquisition may serve as a better model for these students.

Early visual language socialization of deaf children results in unique adaptation of, and possibly accelerated, visual and joint attention capacities. Unlike hearing children, object exploration and receiving caregiver linguistic input in deaf children requires *sequential* or *alternation* of gaze, which it can be hypothesized is a more demanding type of visual attention. These demands may also lead to accelerated development of executive functioning and language development. Teachers must be able to take advantage of this facility in deaf children and to help them develop it if development is not emergent. Lieberman & Mayberry investigated deaf mothers' behaviors that elicited and sustained their toddler's visual attention, as well as the child's developing repertoire of self-regulatory attention strategies, especially in the context of book-sharing. The child's ability to alternate gaze between pictures and language input during joint storybook reading sets the basis for the acquisition of literacy skills. Managing divided visual attention between signed language input and English print on the page has long been thought to be a particularly effective bilingual strategy of deaf signing mothers with their deaf babies. Teachers need to understand how ASL-fluent parents structure and support, visually and linguistically, their children's language development during storybook reading. Deaf mothers mediate between ASL and English print when reading books with their children and deaf mothers accommodate their use of language to their child's developing signing skills. In short, teachers need to be able to apply these same kinds of indigenous practices to their work with deaf and hard of hearing children in the classroom.

Preliminary findings from studies by Bavelier and her colleagues (Hirshorn, Dye, Hauser, & Bavelier, 2008) suggest that working memory plays a more significant role in deaf students' processing of written words compared to hearing readers. It appears that deaf readers need to actively recall the semantics of specific visual orthographies in the absence of a phonological encoding mechanism. In a study of free recall abilities which is generally not predictive of reading ability in hearing readers, Hirshorn, et al, find that, surprisingly, it predicts deaf college students' reading abilities, accounting for nearly 50% of the variance on their reading scores but not any of the variance of hearing readers. Hauser & Bavelier are investigating more deeply the role of executive functioning in the development of both ASL and written English skills. The executive functions, specifically working memory, is defined as the ability to control, direct, and sustain attention and to self-regulate cognitive behaviors, appear to be necessary for successful language development. It can be hypothesized that deaf bilinguals' adaptations to the demands of visually

attending to multiple linguistic sources and codes requires more attention or executive control compared to other populations. We wish to be out front of this research by orienting and preparing teachers to the nature of visual learning and by preparing them to innovate into the future.

Linking visual learning, technology, and assessment

As mentioned earlier in the technology section, advanced media technology offers a great new set of tools for teaching and learning in ASL. In the past teachers have traditionally made limited use of video techniques for purposes of assessment of ASL and other language development, perhaps because older video technologies required more time and labor than teachers could afford. But digital video editing capabilities make a lot more sense for today's classroom teachers. We wish to prepare teachers who are skilled enough in the use of digital technology in classrooms of deaf and hard of hearing children to see it as a natural component of their teaching repertoire.

Specifically, we want to give teachers a tool for making ASL literacy more real and transparent to students. Literacy tasks such as the composition and editing of ASL narratives, science presentations in ASL, reports in ASL, and many other typical classroom activities are best done using digital cameras and recorders. And crucially, we plan to prepare teachers to make optimal use of these new visual media in the documentation of language and literacy development, and especially the evaluation of student progress from emergent ASL competency to ASL fluency. UCSD is a "licensed school site" that allows us to not only document and collect data via the web but also to moderate Learning Records from long distances. Aside from the usefulness of electronic assessment instruments and databases, the process of gathering developmental evidence for individual deaf and hard of hearing students is made easier with the use of digital recording technology. Teachers skilled in accessing, preparing, and generating documentation and evidence of language and literacy development can make far better decisions about "next steps."

Competency and practice in the use of new educational technologies crosses all aspects of teaching today. Equally, language and literacy assessment is more important than ever in classrooms where language and cultural diversity is increasingly more complex. We propose this new experimental training curriculum for teachers of deaf and hard of hearing children on the belief that assessment is greatly enhanced by technological innovation and the smart use of visual media technologies in particular. And with the belief that this emphasis in our curriculum will allow us to provide the state of California and the nation with teachers who are truly of the 21st century.

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Appendix B

(Excerpt from the *Experimental Program Standards Handbook*)

Procedures for Submitting an Experimental Program for Commission Approval

An experimental program can be developed and submitted at any time in the seven year accreditation cycle. Once approved, the program is incorporated into the institution/program sponsor's accreditation cohort activities.

- Institution or program sponsor identifies an issue, question, or problem that can be addressed through a preparation program that varies from the Commission's adopted program standards.
- Institution or program sponsor submits a 3-5 page paper describing the issue, question, or problem to the Commission.
- Staff reviews the proposal brief and provides technical assistance to the institution or program sponsor in developing the full program proposal. Staff reports to the Committee information regarding possible proposals.
- Institution or program sponsor submits the full proposal, addressing the Preconditions, Common Standards, and Standards for Experimental Programs.
- Program proposal is reviewed by a panel of educators (peer review). Reviewers may ask for additional information if the proposal does not initially meet the Experimental Program Standards.
- Program goes to the Committee on Accreditation for approval once the reviewers agree that the proposal meets the Experimental Program Standards.

Procedures for Implementing an Experimental Program

- Program begins implementation.
- Program participates in all accreditation activities in concert with the institution or program sponsors schedule.
- Program submits biennial reports focused on measures of candidate competence and an additional section focused on the evaluation, to date, of the experimental program.
- Program provides the Committee on Accreditation with a status report on the progress of the program half-way through the proposed timeline for the program.
- Program participates in Program Assessment according to the accreditation system.
- Candidates, graduates, faculty, and employers from the program participate in the site review activities as scheduled.
- Staff reviews biennial and evaluation reports. Recommendations for program continuance or interventions will be made to the Committee on Accreditation.
- Program submits a final evaluation of the program to the Committee on Accreditation, according to the approved Research Design, including next steps and plans for dissemination of program evaluation results to appropriate audiences (other California educator preparation programs, professional organization conferences, and journal articles, for example).