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ABSTRACT

This paper discusses the Georgia Institute of Technology's Business German summer language course, an intensive 6-week course that utilizes classroom instruction, language labs, and computer labs. The course stresse vocabulary and discourse as commonly used in the professional context, as well as intercultural information. A major component of the course involves Quality Interactive Language Learning (QUILL), an interactive video program run on computer workstations that allows students to learn at their own pace in a highly stimulating environment. Students view a video segment on one part of the computer screen while completing exercises about the segment on another part. QUILL exercises include multiple choice, rank ordering, fill-in-the-blank, and composition activities. The videos are especially valuable in pointing out cultural idiosyncrasies. Future goals and improvements in the QUILL program are also discussed. (MDM)

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Interactive Video in Classes of German for Business and Technology

The Role of Modern Languages at Georgia Tech

In a time of increasing globalization of business and, correspondingly, curricula, colleges and universities frequently serve as catalysts to integrate and advance programs relating to international business, language training for technical purposes and international exchanges. Georgia Tech, renowned for its excellence in engineering and the sciences, has recently broadened its scope and created the Ivan Allen College which includes the School of Management, the School of International Affairs, the School of Economics, the School of Public Policy and the Department of Modern Languages.

Georgia Tech's present curriculum as well as vision for future expansion includes an increasing number of programs with an international component and frequently, either as integral or as optional part thereof, an overseas experience in a professional context, such as a seminar abroad, studies at a foreign university, or an internship or work experience with an international company. Georgia Tech has for example a satellite campus located in Metz, France, and is currently negotiating a second satellite campus in conjunction with a German university. In the near future, we will also begin teaching courses in Management and later engineering in a foreign language, making "languages across the curriculum" a reality at Tech.

Programs in the Department of Modern Languages

In short, proficiency in a foreign language has become a major focus. In response to this development, the Department of Modern Languages has developed courses on the second through fourth year

level addressing languages for special purposes. The detailed structure of Georgia Tech's language curriculum was the topic of Dr. Rockwood's presentation at this conference in 1992. I would like to highlight today only the intensive summer program entitled "Languages for Business and Technology" which was taught for the first time in 1991. It consists of a six week intensive course on campus, where students receive carefully calibrated instruction in the four skills. In addition to the classroom we make extensive use of training in the language and computer labs. The result: students entering typically with a novice to novice high proficiency level leave generally with an intermediate high or even advanced rating on the ACTFL scale.

In the area of Business German we concentrate on the "Berufssprache" (language as used in the profession) rather than "Fachsprache" (language as used in theoreticak research). [This distinction is made for instance by Ursula Frenser in "Landeskunde in Wirtschaftsdeutschlehrwerken," Information Deutsch als Fremdsprache 18, 2 (1991), 125-135.] We therefore stress vocabulary and discourse as commonly used in the professional context, as well as intercultural information. In addition to Business German we also include Technical German in our courses, i.e. topics of a technical nature such as alternative energy sources, automobile manufacture or computer terminology. We emphasize a functional, proficiency-based approach. Given these premises, you may readily understand that we had to develop much of our teaching materials ourselves, or adapt what is commercially available. In order to achieve our goals, especially in the summer intensive program, we select teaching materials proven to be especially effective, and those include authentic materials and especially videos.

Teaching Materials in Courses of German for Business and Technology

As every teacher knows, a video is extremely well-liked by students. Not only are they trained to the visual medium through long years of TV watching, but a video presents much more than the (authentic) foreign language: it presents the verbal cue within an specific context, adding gestures, facial expressions and general background as additional information. This is not only helpful in gathering the message in as real-life a situation as possible, but the picture also presents information and facilitates discussion relating to what has become known as "intercultural knowledge" or "intercultural

communication." This aspect is extremely important in the area of international business, and therefore, the "intercultural sensitizing" (the Germans call it "Sensibilisierung") should receive due attention in any program of languages for business.

When showing videos (or any visual sequence) in the classroom, it is important to do so in the appropriate pedagogical setting. Discussed by many specialists, such as Brigitta Ludgate or by... in Die Krönung der schönsten Stunden, one needs to carefully set the stage before viewing a video. Thus, one should select a short segment and set the students' expectation by specific listening, or viewing, exercises. By varying the level of difficulty of the task, one can use the same video segment for different levels of proficiency.

There are a number of videos on the market useful for classes of German for Business. Foremost, there are the excellent videos of the Goethe Institute presenting various case studies or business situations, which are available with exercise booklets. The same team also published a video sequence entitled Geschäftskontakte with the Langenscheidt Verlag, for a considerable higher sum than the materials available through the AATG and the Goethe Institute. There are also videos published under the trade name of "PICS." The State of Bavaria has developed a series of five videos entitled "Wirtschaftsland Bayern ," which present excellent raw material for Business German classes. Current news can be downloaded from the SCOLA channel and in most states Deutsche Welle can be received via satellite or cable. All these videos can be used effectively in the classroom with an instructor who carefully edits them as mentioned above.

The Use of Interactive Video

Of course, with one video / VCR in the classroom, the set of activities and the pace are obviously one and the same for the entire class. Georgia Tech's concept of **QUILL** changes that. QUILL stands for "Quality Interactive Language Learning." At Georgia Tech, we have developed a concept of interactive video where the students work at their individual computer workstations. In a lab of fourty stations, students can work either by themselves or in groups of two (for a variation of the exercise) with the given video sequence, choosing their own pace, viewing the video sequence as often as they need, hearing the same question as many times as they want to and being

able to review their answers without exposing their weaknesses to the entire class or the teacher. The students see on their screen a (smaller) version of the video segment on the left side (let's say), and on the right hand side they have exercises with instructions. The instructions are presented in writing, but there are verbal pre-recorded responses to the student's choice of answer, ranging from "Das war leider nicht richtig. Versuchen Sie es noch einmal!" to "Ausgezeichnet! Eine gute Leistung."

The QUILL activities are presented to the students via Macintosh computer. What many studies have pointed out [see for instance Marianne Phinney, "Computer-Assisted Writing and Writing Apprehension in ESL Students"] is validated by our own experience at Tech: students enjoy working with the computer. They want to stay longer and do more exercises - a phenomenon unknown to conventional drills in the classroom setting. At present, Quill supports four basic types of activities: multiple choice, ordering (words; sentences; video sequences), fill-in the blank and composition. The predominant skill practiced in this setting is obviously the student's listening skill. Students have to understand certain isolated words or concepts, or the gist of an entire sequence and react accordingly. However, one can also include grammar exercises or exercises on vocabulary building, using the video as a point of departure and audio help. The composition exercises seem especially useful as post-activities. They are written on the screen and saved, but there is no immediate pre-programmed response. The instructor has to read them at a later point in time. Whereas the computerized exercises lend themselves very nicely to self-study, one can also use them during a regular class and have the instructor (or a native-speaker assistant, for example) present during the QUILL session for immediate feed-back; this provides an immediate back-up for students who have difficulties.

The videos are especially valuable to point out cultural idiosyncrasies and to have students compare and contrast anything from clothing styles, to table manners, to business behavior in a board meeting. When this kind of intercultural characteristics are the focus of attention, it is often useful to play the video without sound. One can then not only point out the visually obvious objects or gestures etc in question, but also let students speculate about the verbal content in this sequence.

As is obvious from the foregoing remarks, interactive video , or QUILL, is not a completely new way of language learning that magically increases the student's ability to acquire a foreign language faster or better than would be the case by conventional methods. The computer does, however, present a fun way of learning, and a positive mindset (especially when it comes to grammar drills) can significantly enhance the learning process; secondly, it enables the student to learn at his own pace and in relative privacy and still not completely forego the help of a teacher (here, the computer). The new feature of QUILL is to combine the visual attraction of a video with the "teaching qualities" of the computer.

The Quill Environment

The overall goal of QUILL, then is to deliver quality interactive activities to complement classroom work. To accomplish this, QUILL is charged with incorporating new methods and new technology into the program on a fast track.

The approach has been to provide flexible, easy-to-use software tools for preparing and using interactive activities. With the authoring tools, faculty members can quickly present learners with video of current events in easily manageable segments. With the instructor tools, faculty and student assistants can grade learner activities and give feedback. The QUILL design attempts to address several major challenges in learning language with the help of computers; creating a meaningful context, using practical short answer activities to stimulate original use of the language, and providing useful responses to the learners' written and spoken language.

QUILL tool kits support four groups of QUILL participants: Learner, Instructor, Author, and Designer:

A **learner** is challenged to handle selected tasks (e.g., asking directions) through multiple modes of language use (e.g., listening, writing, speaking). During a session, a learner navigates through a series of activities, controlling the presentation and responding to questions and prompts. Presentations within the activities include video images, still images, recorded voice, and text. Learners' responses, which are saved on a classroom file server, involve typing, clicking on images, selecting among choices, placing phrases in order, and speaking.

An instructor assists the learners while they work to complete the interactive activities. Later, an instructor checks the learner's progress by reviewing completed activities and playing learner's spoken responses. He provides comments and guidance with typed or verbal feedback.

To create an interactive learning unit, **an author** reviews and selects video, graphic and audio sources. Current video materials can be quickly incorporated into new activities. For example, a recent news broadcast received by satellite adds immediacy and increases the learner's level of interest. A sequence of activities is selected, each activity indentified by the type of learner response, such as multiple choice, fill-in the blank, ordering, and composition. For each activity, a series of questions is then written and appropriate prompts and answers are added. Video, graphics and audio presentations are associated with each question. Finally, the unit is then reviewed and tested by an advanced language student.

The QUILL software is designed to be expanded modularly. **A designer**, working with authors, can create a new activity template. The designer, who has intermediate programming skills, builds the template to adhere to the QUILL activity standard.

Key to the success of QUILL is Apple's QuickTime technology which presents video on the Mac screen from the hard disk, eliminating the need for extra video equipment. This technology continues to advance and promises high-quality interactive video with reasonable production and delivery costs.

The QUILL lab currently has 6 workstations. Four are used by activity authors. Each includes a Macintosh IIci, a video display card, a computer-controlled VCR, and a CD-ROM drive. Two other workstations are used to produce the graphics, animation, and video which are the heart of the QUILL process. A Macintosh Quadra 950 provides the power necessary to capture and edit quality digital video. It is also used for basic conventional video editing. A Macintosh IIfx is used for scanning and graphic design, and serves as the file server for the lab and the classroom.

The language materials are delivered in Georgia Tech's Classroom 2000, which houses 40 Macintosh II computers.

Research Design

Conducting research in CALL is fraught with difficulties. First, there is the sheer number of factors involved. Then, theories in the field tend not to be very operationalized. The classroom as laboratory is very unstructured, even when using computer. Also, it is difficult to compare learners with varying experience. Garrett (1991) emphasizes the challenges: "what kind of software, integrated how into what kind of syllabus, at what level of language learning, for what kind of language learners, is likely to be effective for what specific learning purpose?" (p.75)

Chapelle (189, p. 48) frames the issue with these basic research questions:

- Do students who use CALL learn more efficiently than those who do not?
- What kind of learning takes place while students are using CALL?
- Are there particular lesson strategies that are better in general?
- Are there some lessons strategies that are better for particular learners?
- Do students like to use CALL?

The QUILL research approach recognizes these challenges and takes a pragmatic approach. Following Garrett's advice, we should "begin with small research steps by using software which is designed to support significant learning and investigating its efficacy in local and carefully specified contexts." (p. 75)

The first step is to operate test sites, trusting that we will know success as we see it. By maintaining focus on the research questions and conducting principled observations and soliciting evaluation by participants, we expect to build experience which can be used to improve the design. In this sense we approach it more as a design problem than as research. We must first build an adequate platform in order to conduct research.

Of course, the computers and network are powerful tools for collecting and presenting classroom information. We request that students complete questionnaires and they can always submit comments about the materials. Tallies from completed work help to identify common misunderstandings in the use of the software as well as language content which needs more explanation.

Developments and Goals

Ultimately, our vision of QUILL is to provide a technological foundation for an active language learning community. Even "regular" language students need to contribute to language learning by having the confidence and motivation to use their language skills. A multimedia technology matures, and the infrastructure for providing source materials is established, authoring will become a natural part of communicating. The distinction between author and the advancing learner will fade.

The goals of the QUILL project are to:
- Support excellence for the GT intensive summer language program
- Continue to incorporate new technology
- Contribute to language learning research
- Publish authoring tools and language learning products

Accordingly the following project efforts are underway:

QUILL provides a solid technology foundation for continuing development. A pedagogical model for the use of QUILL techniques serves as hypothesis for how QUILL improves language proficiency and will provide a structure for further developments. We plan research to study the effectiveness of the techniques which will involve collecting data on learner progress as well as experiments with new interactive techniques. We are preparing a preliminary authoring guide and standard for authoring. This will include a checklist of content features, measures of quality and fit to user needs, and a typical development cycle including testing.

Improvements to the system especially emphasize interactivity which encourages conversation with other learners and the instructor. Other developments include:
- New activity types including exploration and problem solving.
- New response types - positioning pictures, navigating maps, smart answer screening.
- Improved instructor review tools.
- Intercom capabilities.

As the QUILL technology matures, it will be packaged as a software product for use in academic and business settings. Significant issues of publishing, licensing, distribution, and management are involved. Whatever form the resulting product takes, we are determined that it will emerge from a collaboration of the best in language pedagogy and current multimedia technology.

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Note: The technical part of this paper starting with "The Quill Environment" was taken from a a paper written by Catherine Marin and Rick Thomas entitled "QUILL: Quality Interactive Langugae Learning at Georgia Tech." Dr. Marin is my colleague in the French section, Mr. Thomas our technical consultant.