Making mistakes in judgment, but we are more likely to make errors when we are weak or in pain. Omitting from consideration the suffering, pain, and distress, the money loss alone from ill health in the United States is estimated a billion, five hundred million dollars annually, a drain upon our resources that we should endeavor to eliminate.

The education of a patriot also teaches him to maintain a cheerful spirit and an optimistic outlook upon life and its problems. The scriptures tell us that as a man thinketh in his heart so is he. And Milton says, “The mind is in its own place and can make a heaven of hell or a hell of heaven.” If this be true, then the obligation rests upon us to so order our minds that we shall contribute to man’s happiness as well as his progress.

That our country has passed through four years of the worst economic depression in history without a violent revolution is primarily due to the fact that for several decades the citizens of our country have in our public schools been given the fundamentals of the education of a patriot. The general, all-round, comprehensive training given in the elementary and secondary schools of this nation should be and in most cases is the best possible education to create a nation of patriots.

Our democratic system of government cannot long endure unless we see to it that at no matter what cost each child is given this education in patriotism. False economy here will undermine the foundation on which our national government is built and wreck our whole social system. A better system may emerge from the ruin, but the risk is too great for sensible men to take. I am sure Wilbur Nesbit had this in mind when he wrote:

What makes a nation? Is it ships or states or flags or guns? Or is it that great common heart which beats in all our sons—
That deeper faith, that truer faith, the trust in one for all

Which sets the goal for every soul that hears his country’s call?
This makes a nation great and strong and certain to endure.
This subtle inner voice that thrills a man and makes him sure;
Which makes him know there is no north or south or east or west,
But that his land must ever stand the bravest and the best.

Joseph H. Saunders

Facilitating the Study of German for Chemists

This is a short account of the work being done at the Virginia Military Institute in the Department of German with the cooperation of the Department of Chemistry in facilitating the study of German for those students taking chemistry. The features of the plan are: (1) practical elimination of literary German and the beginning of reading in science as soon as possible, (2) close cooperation throughout the course with the Department of Chemistry, (3) selection of material (after the first stages) which will be of interest and which will provide either a review of what has already been studied in chemistry, or additional instructional matter in this subject, or material which will be of permanent value in the library, and (4) simulation in the class room of the conditions under which German will be used in research or in industry.

In some colleges, more fortunate in this respect than ours, students of chemistry are segregated from other science students for the study of German. At V. M. I., however, we find in the sophomore class of German every year students who intend following pre-medicine, electrical engineering, civil engineering, and chemistry. At this stage of the game, of course, they have all completed one full year of grammar and have finished the reading of from 300 to 400 pages of elementary German. The method of handling such a group must, therefore, differ somewhat from that employed where all members of the class are taking exactly the same course.

The question then arises as to how a mixed group of this kind is to be handled. The procedure in most departments, I believe, is to start the class, irrespective of the fields represented, in a German science
reader. On the shelves of the German departmental library are science readers published in this country and in England. With a few exceptions they are all about alike in that they offer readings in a number of fields. One selected at random from the shelves has chapters on Anthropology, Astronomy, Biology, Botany, Chemistry, Geology, Meteorology, and Physics. It contains a vocabulary of 6,300 words! The vocabularies of several other such readers run from 4,300 to 5,200 words. Not only does reading of such scope fail—as far as the chemist is concerned—on account of lack of interest in the subject matter, which is one of the prime considerations, but even more surely because the vocabulary load is beyond all reason. In chemistry, for instance, 2,000 words is an ample vocabulary with which to read the standard reference works as well as the general literature.

For the two basic sciences, chemistry and physics, probably 3000 words would suffice. In other words the science reader employing a 6300-word vocabulary would, from the standpoint of the student of chemistry or physics at least, contain 3300 words which are, for all practical purposes, very nearly worthless. They would be worse than worthless because the vocabulary load involved in their mastery at this stage of the game would seriously interfere with more important work in the field. The same thing holds true of most of the other science readers.

We have therefore long since discarded the idea of requiring science students in German to read in five or six fields other than his own and have concentrated during the first term of the sophomore class on reading in the basic sciences, chemistry and physics. Following out our plan of eliminating as far as possible all literary German after the elementary texts of the freshman class, we begin immediately with First German Course for Science Students, Fielder and Sandbach, (Oxford), a well-graded elementary text with readings in chemistry and physics. We follow the translation method supplemented by thorough discussions of the various types of the participial constructions and of the subjunctives common to science reading. Practically every compound word used in the text is picked to pieces and analyzed. When the text proper is completed, six recitations or more are devoted to a logical summary of the principles of word formation, and the effect of prefixes and suffixes in the formation of verbs, adjectives, and nouns.

This elementary text is then followed by class reading of the chapters on chemistry and physics in German Science Reader, Wright, (Holt) and Technical and Scientific German, Greenfield, (Heath), in which the procedure outlined above is continued in less detail.

As collateral reading during this term we cover selected passages from German Science Reader, Gore, (Heath) and Einführung in die Chemie für humanistische Gymnasien, Weber, (Verlag R. Oldenbourg). The latter text has no notes and no vocabulary. It is therefore necessary to learn how to use a dictionary in order to read it. We use German-English Dictionary for Chemists, Patterson, (Wiley).

The regular classroom work and the collateral reading is thoroughly checked by heavily-weighted tests all of which, as well as the mid-year and final examinations, consist of sight reading from standard works.
in the two fields covered. Neither on tests nor on examinations do we ever give any material which has been read in class. In this way cramming and memorizing of passages are eliminated. Almost daily we emphasize the fact that all of the reading in class and all of the collateral reading has one object only: to prepare the student to read at sight with a reasonable use of the dictionary standard works in chemistry and physics with a minimum speed of about 300 to 350 words per hour.

At the end of the term, therefore, the student should be fairly proficient in handling sight reading in these two fields. He should be familiar with the principal constructions common to scientific literature. Through daily analyses of compound words he should have become "word conscious." He should not have been unduly burdened by his vocabulary load and he should be encouraged by the fact that practically all of the words he has learned in the first term he will use in the second, and in all of his subsequent reading in German.

The method of procedure during the first term is fairly simple since all students are reading the same material. During the second term, however, the situation becomes much more complicated, attempting as we do to read in electrical engineering, civil engineering, chemistry, and medicine. This term's work, however, is simplified to some extent because classes are divided into sections which rarely exceed 15 students each, or on an average four students to a group.

During this term we follow the highly unorthodox plan of doing away entirely with all formal recitations. The recitation hour is turned into what is practically a reading hour. The point of view is taken from now on to the end of the year that the instructor has taught the student all of the German he can teach him, and that from now on he is there not to cram information into the student's head, not to act as a referee between the student and the textbook, but to direct the reading and to assist him with the more difficult parts. It is now up to the student to sink or swim. The psychological effect of this attitude of the instructor, now that each man is reading in his own field material which, generally speaking, he has already studied in the other departments, is to throw the student at once upon his own resources and to arouse his interest.

The general procedure is as follows:

At the beginning of each hour the instructor notes on a card the page and line of the text to which the student has read since the last recitation so that he knows each morning exactly how far each student has progressed. This has a very salutary effect, as few students care to report that they have read nothing or very little. Whatever they report as having read they are responsible for. On the basis of the previous day's report the instructor has made up his assignments for the day which are always found on a board in the front of the room.

The Assignment Board for the day might run as follows:

<table>
<thead>
<tr>
<th>ASSIGNMENT BOARD</th>
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<tbody>
<tr>
<td><strong>1. Pre-medical Group</strong></td>
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<tr>
<td>Readings in Medical German, Burkhardt, page 177, line 10—</td>
</tr>
<tr>
<td><strong>2. E. E. Group</strong></td>
</tr>
<tr>
<td>Elektrizitätslehre, Pohl, page 78, line 6—</td>
</tr>
<tr>
<td><strong>3. C. E. Group</strong></td>
</tr>
<tr>
<td>Reading Hour</td>
</tr>
<tr>
<td><strong>4. Chemical Group</strong></td>
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<tr>
<td>Oral</td>
</tr>
</tbody>
</table>

This would mean that the first two groups would write in their blue books, double spaced on one side of the sheet for convenience in correction, a translation beginning at the page and line indicated and continuing until the end of the hour. The C. E. Group would spend the hour reading. The chemical group would sit around the table in the back of the room where the instructor would explain any difficult constructions which might have occurred in the lesson and answer any questions asked. These assignments are so varied that no student knows when he will be called upon for a translation. He does know, however, that he is responsible for the entire book up to the page and line which he has reported as having read at the last recitation, a fact which prevents him from reporting as having read more than he has done thoroughly. One day he may be called upon to write an hour's translation, another day he may spend all or a part of the hour asking questions or listening to explanations of difficult passages, another day he may find "Read" on the board which indicates
It might be mentioned that in writing translations free use of the dictionary is permitted. The dictionary will always be used later if the language is employed for research. We therefore see no reason why is should not be used in the classroom. The requirement of 400 to 450 words per hour prevents a student from looking up too many words. If he thumbs the dictionary too much he cannot cover the assignment. The requirement is gradually increased until at the end of the year it amounts to 500 words which, for instance, is considerably in excess of the rate required in the Ph. D. examination in German at the University of Chicago. Many students translate more than this amount.

On the dictionary table we keep a number of reference works and dictionaries such as Meyers Lexikon (latest edition), German-English Dictionary for Chemist, Patterson (Wiley), Etymologisches Wörterbuch der Naturwissenschaften und Medicin, Schmidt, German-English Medical Dictionary, Lang, (Blakiston), Enzyklopädisches Wörterbuch, Muret-Saunders, German-English Technical and Scientific Dictionary, A. Webel (Dutton), Chemical German Vocabulary Part I, Fotos and Shreve, (which in addition to the vocabulary feature, contains a complete list of all chemical periodicals with their abbreviations), and Webster's New International Dictionary.

The reading requirements for the term are 350 to 400 pages. In chemistry we begin with Chemie, Anorganischer Teil, Klein, Sammlung Göschens, Nr. 37, a text of 150 standard pages, the material of which the students have already studied in the Department of Chemistry and with which they are therefore familiar.

The balance of the reading for the term that he may spend the entire hour reading in advance or asking individual questions when the instructor is not busy with other groups. It often happens that in one class we have only three and sometimes only two “groups” which further simplifies the problem of instruction.

...
rent or recent German periodicals such as the Berichte and Annalen, or from standard German reference texts, and are chosen so that the finished translations by several students will form a coherent discussion of one particular subject in chemistry. These translations are carefully checked, bound, and filed in duplicate in the chemistry and German departmental libraries, where they form a nucleus for subsequent bibliographical work on the same subjects. In some cases, one student (usually a senior) is given the assignment of working up a bibliography on a certain subject as a problem in connection with his organic chemistry course, and required to translate one or more of the articles as collateral reading in German.

One serious objection to such a plan is that where the translator is a sophomore his background in chemistry is not sufficient to enable him to glean much information from a research article. This, however, is offset by two factors: (1) Reading of journal articles gives the student an idea of the type of German he will actually be called upon to use as a tool in his subsequent work in his chosen field, and simulates the actual conditions under which he will do such reading, (2) The student is vitally interested on account of the highly practical nature of his reading. The making of translations which are considered by the instructors to be important enough to be bound and placed on the departmental shelves stimulates and keeps up his interest, in spite of the fact that he may not understand all the subject matter of the article which he is attempting to translate.

The objection may be made that no such highly unorthodox and haphazard method of teaching as is followed during the second term could give satisfactory results. The plan is, to be sure, in the experimental stages, but the fact of the matter is that it does produce the desired results; the better students do acquire a sound and usable reading knowledge of German as applied to chemistry. The better students not only learn to read German under this system of instruction, but, because they are entirely unhampered by the poor student, because they do not have to waste the class hour listening to slow, tedious translations of one or two pages, when by themselves they may read a number of pages during the hour, and finally because their interest is sustained throughout the course, they are able to cover much more ground than under the old translation method. The plan, we feel, has been proven successful beyond a doubt.

M. F. Edwards
N. B. Tucker

Worry is evidence of an ill-controlled brain; it is merely a stupid waste of time in unpleasantness. If men and women practiced mental calisthenics, as they do physical calisthenics, they would purge their brains of this foolishness.—Arnold Bennett.

“I have no expectation of making a hit every time I come to bat.”—Franklin D. Roosevelt.