How To Study?

One of the most important questions is the question of "How to Study?" It is often the case that we study out a thing and we wonder how clear is the subject in our mind, or examination, but what about the disappointment—two days later we forget all about the subject and have to study all over again. I think this is the point where the student’s tragedy begins. Willing to study, he finds out that he cannot follow his desires; gradually he neglects his work; he finds more pleasure in some other way; the days go by and he seems to be afraid of the idea to study and finally he concludes that there is no use of wasting time, if he cannot remember and he slips away from his primary idea, to work and to get knowledge, and finds more satisfaction in amusements.

It is, however, a psychological fact, that we need a strong character in order to stick to the subject until we get it; but the so-called "STRONG CHARACTER" is not a power "given to the chosen ones," but it is the result of a steady, regular, uninterrupted devotion to a subject on which we concentrate all our mind and thoughts until finally we become so familiar with the subject, that it penetrates into our very inner life, into our personality and becomes a part of our "ego."

Psychology, which treats of our mental phenomena, teaches us the THEORY OF ASSOCIATION," which states briefly, that we memorize by the ability to associate things with others already known to us. So in memorizing a house, I unconsciously associate this house with one already familiar to me. Studying the properties of "H." I always associate it with the properties of oxygen with which I am already familiar. Memorizing, therefore, is a matter of association of thoughts which may be "formed" in three ways:

1. Finding similar points in objects.
2. Finding dissimilar points in objects.
3. Finding dissimilar and similar points in objects, carefully classifying them into their respective classes.

But bear in mind that the ability to associate is given to us in a very primitive form, and it is up to us, to bring it to a very high level.

The whole secret of studying is, therefore, a matter of developing the power of association. Some of us have the ability to associate things by finding properties by the method of similarity, others associate things by the method of dissimilarity, while still others have the

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Social by T. C. A.

There will be a social given by the Textile Christian Association on Wednesday, January 14, 1920, at 7:30, in the Assembly Hall. Musical Program—Eats. Everybody Welcome! Everybody Come!

Textile Lunch Now Under Student Management

The Textile Lunch which for the past few months has been run by a local man is now under student management. It is felt that by having the restaurant controlled by students that more will receive benefits from it than is only right as the students, faculty and instructors are the sole patrons. With the idea in view of establishing the lunch on a basis whereby worthy students will receive an opportunity to defray some of their expenses and to give to the patrons some good, wholesome, home-cooked food, the new management undertook its work.

To accomplish this the students must patronize the lunch. There should be very little reason why anyone should go down town for dinner if the lunch-room is open. If the students patronize the lunch-room the management will be able to make improvements, more students will be employed, and the lunch will become a added asset to the school.

The management will do its part. Will you do yours?

Freshman Smoker at Omicron Pi House

The Omicron Pi fraternity held their Freshman Smoker at their new chapter house on Wednesday evening, December 17th. Over fifty students were present to enjoy the activities of the evening. Paul Sayre "tickled the ivories" and provided considerable amusement. President Charles H. Barnes was present and spoke briefly to the crowd. Among the instructors in attendance were Mr. E. H. Barker, Mr. U. J. Lupien, Mr. A. K. Gyander, Mr. A. A. Stewart, Mr. C. L. Glenn, and Mr. W. B. Holt. Refreshments were served by the hosts during the evening and included sandwiches, ice cream and cake, home-made candies and pop-corn balls. Cigars and cigarettes were also in abundance, and the barrel of sweet cider was well patronized.

The following alumni were present during the evening: Mr. R. P. White, '04; A. A. Stewart, '06; E. B. Moore, '85; G. A. Messenger, '16; Osborn McArthur, '13; F. S. Gilley, '16; H. V. Farmsworth, '16; K. B. Park, '16; R. M. Folick, '16.

Textile Engineering Society

Holds First Meeting

Mr. Whalen Explains "Textile Research" and its Relation to the Textile Industry.

On December 17, the Engineering Society of L. T. S. was given a talk by Mr. Dean Whalen. Mr. Whalen is an L. T. S. man, class of 1914. During the war he held the important position of Chief of Textile Research, Bureau of Standards at Washington.

The freshmen were the guests of the engineers at this meeting. Mr. Whalen's subject was "Textile Research, opened upon entirely new line of thought." He said that there has been research work in great amount in the electrical and chemical industries, and that the textile industry was sadly in need of it.

Research, which means the finding of something new is divided into two parts, pure research and industrial research. In the former, the work starts with what he has and sees what he can get from it. It may lead away from the subject which is being studied, but the result is always based on some natural law.

"Industrial research means a systematic study with a definite purpose in view. It determines the result of a definite process, or the finding of the cause of something. Testing and analysis are not research. Investigation, may or may not be research. Investigation is using research in 'looking for trouble.'"

"A single test, as testing the strength of a yarn, is useless. Two or more tests, as for two or more yarns, are of use because of the comparisons, which may be drawn from them. Thus, conditions of manufacture being equal, one yarn should prove more satisfactory than the other, the research will show how to change the other."

"Pure research is carried on without contact with a manufacturing process in a plant. Industrial research is both carried on in, and applied to, large industrial enterprises. If in a large mill, the theory of the laboratory, where conditions are constantly ideal, does not agree with the practice, either the theory is wrong, or it is not put to practice correctly. Research finds which is right, and solves the problems of transmitting the ideas correctly to the manufacturing plant."

"Here is a concrete example of industrial research. In the beet-sugar industry, at first, the farmer grew the beets the way he desired to, and then shipped them to the refiners. Research showed better ways of growing."

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Water, Water Everywhere

But Not a Drop To Drink!

Because it is Carefully Enclosed in Strong Metal Pipes.

From a textbook used in one of the classes at this institution, the following paragraph is taken:—"WATER SUPPLY. It is important that ample drinking water be available, distributed to drinking fountains within easy reach of all employees. Some presumptuous student, with wasteful and extravagant ideas, suggested that the word "students" be substituted for "employees," and the statement applied to L. T. S. We propose to show why we do not agree with him in the application of this statement.

Now consider, first of all, the precept that has been established. This institution has existed for years with only one bubble, and no one has died of thirst. To install more drinking fountains, and spoil the beautiful tradition of the "one and only," would be more than the lovers of L. T. S. could bear.

Today we desire to be economical, to get the maximum production all along the line. Consider, then, the economies of having only one bubble. It is workable.

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Alumni News

Mr. Robert R. Sleeper, '08, the application department of the National Linoleum and Chemical Co. of Buffalo, N. Y., spent the Christmas holidays in Lowell. He spent a few hours at the school, and everyone was glad to see him. "Ike" inspired as to how the "Buffalo Black" eye, which was issued on one of the football players at a recent class game, was standing up.

Harold W. Steiger, '18, is enrolled at the Mass. Inst. of Technology as a special student in advanced Organic Chemistry.

Dimock, '19, has left school to accept a position with the Merrimack Chemical Co.

Mr. George A. Messenger, '14, is selling dyes, stuffs, and chemicals for Dunke & Perkins of Boston, Mass.

Mr. N. A. Manship, '10, of New York City, a salesman for the Locomobile Co. of America, and family spent the Christmas holidays with Dr. and Mrs. T. G. Walter of Lowell.

Mr. A. F. Hermon, '39, formerly connected with the National Linoleum & Chemical Co. of Boston, Mass., is now instructor of Textile Chemistry and Dyeing, L. T. S.
WATER, WATER EVERYWHERE, BUT NOT A DROP TO DRINK.

continued from page 1.

ing almost constantly; it is efficient to a high degree. Its output is equal to its input always (when measured in quantity of water), but of course its output is not equal to its input, when putting water into a student’s dry throat. A large portion of the water flows down the sink spout. Therefore, if one bubbler wastes considerable water, conceive, if you can, of the enormous waste of water if we had several drinking fountains.

Again, if a student knows he must travel half a mile to get to a bubbler, he will decide to quench his thirst at a later date, forget finally that he was thirsty, and a great saving in water will result. Also if it takes one student two minutes to travel to our “one and only” bubbler, and imbile his twelve gulps, and assuming that 250 students miss at least one set of gulps per day, our “one and only” bubbler prevents a total waste of time equal to 8 hours and 20 minutes, or one whole 8 hour day. Bearing in mind the above facts, is not the present policy of the school a wise one? But consider further. (From now on, “one and only” refers to the “one and only” drinking fountain—sanitary, of course, that is in operation in this institution.)

There are many spots in the washroom, which are relics of the war. Some kind gentleman turned up one of them, so that it made a splendid “sanitary”? drinking fountain. Of course it had little green spots on it, and we did not object because we consumed our peck of dirt more quickly. Well, some one else turned the spout back to its original position, because it was taking business away from our “one and only.” Hence the students must feel that our traditional “one and only” should stand alone in its glory in usefulness.

Now consider the case from the instructors’ viewpoint. It is possible to obtain water at a sink in the Chem. Dept. We have observed a variety of utensils there during the past years. Some would hesitate to drink from such utensils, for fear they had been used for mixing a poisonous fluid of some kind. However, we have it from inside circles, that instructors used these dishes for soaking their forty gulps, and if one occasion we observed there a two quart receptacle. Evidently one with a real thirst had visited the source of Adam’s Ale. In the instructors’ lavatory hangs a beautiful drinking fount, emblem of the ages, but no instructor’s lips have been the worse for touching its germ-laden (?!) edge. Therefore the instructors have learned to use granite-ware, until it is dear to their kind old hearts. What instructor would not feel that the good old days at L. T. S. were passing, if he should discover a nice, new, modern, sanitary drinking fountain, and find the dear old granite-ware, the battered emblem of many a littl and a minus, quantity, dust to dust, it were?

Our readers must now be convinced that we are right. No further discussion is necessary. Hail to our “one and only” bubbler. Long may it stand in its beauty and glory. Emblem of usefulness, service, and tradition, may it continue unsullied by the competition of other unworthy builders.
What the Lowell Textile School Needs Most

There is hardly a man in the Lowell Textile School who is not familiar with incidents which could be cited, wherein some student, or group of students, has attempted, in various ways, to lead the instructor away from the work at hand, or to confuse him enough so that nothing is accomplished in the class. Then too, there is, in many classes, more or less fooling going on, kept in motion by some overtight, silly, thoughtless, or absolutely brainless person who thinks he’s “getting away with something” and is “putting something over” the instructor. There seems to be a spirit among a great many of the students which tends toward doing just enough to pass a course, and hindering progress as much as possible. Such a condition may be the result of thoughtlessness on the part of some, but be that as it may, the fact remains true.

The things to be considered here, then, are those which would perhaps better this condition to some extent, and remove its hurtful influence: also some of the results and advantages that would come from such improvement.

The possibility of the change rests primarily, with the men themselves. It is not necessary to point out the harm coming from this attitude taken by some of them. A prescription for the remedy is not difficult to make or to understand. If men want to fool and play let them go to a place for such things. They would undoubtedly derive much benefit from finding, if they can, some real reason for attending the school. If they have any seriousness of mind at all, let them learn and allow others to learn, and be sure, at least in classes.

It may be that the attitude of mind of some of the students could be changed for the better of conditions about the school were different. The establishment of dormitories and stricter disciplinary measures might help. I have never attended a college or university, so that what I know about college life has been told me by others. But, from these reports, I judge, and practically know, that men attending such schools have an attitude, or are compelled to take an attitude, which at least preserves law and order in classes.

What would be the benefits if the men settled down to work with a little more seriousness, and if measures were taken to bring about better conditions? In the first place the student himself would be benefited in two ways. He would get more out of the studies pursued and, on the other hand, he would gradually acquire the habit of working hard when work was in order and playing hard when he played, a condition of habit which is nearly always essential to success.

In the second place the advantages to the school would be great. More efficient men would graduate from the institution, which would tend to advance the reputation of the school on a commercial basis. (I know the reputation of the school is unequalled in its line, but there is always a chance for advance.) School spirit would be greater, which would improve the athletic standing. An understanding of the bettered condition would soon reach the public, the student bodies, and the faculties of other institutions. It is obvious that such two facts would bring to the school a higher inter-scholastic standing, and more and better students.

I am advancing the proposition that the thing which the Lowell Textile School most needs is an atmosphere about the school which will bring seriousness of purpose and co-operation on the part of every student attending the school. Students at “L. T. S.” have privileges which the college man never dreamed of, and it’s “up to them” to respect this freedom if they wish to keep it.

NEW BEDFORD BOY CHOSEN BOWDEN FOOTBALL CAPTAIN

Harold A. Dodgeon of New Bedford, Mass., has been elected captain of the Bowdoin College football team for the season of 1920. Capt. Dodgeon played center on the 1921 class eleven in the annual contest with the sophomores and became a substitute player in the varsity squad. His sophomore year was largely spent in the military service of the United States. He returned to college in time to regain his class standing and this past season played regularly at guard. He is a member of the Delta Upsilon Fraternity.

The above should prove of interest to members of the S. A. T. C.

T. E. S. NOTES

Collectors of dies for the year have been appointed. Dies should be paid as soon as possible, in order that plans for speakers, entertainments, and smokers may be made for the rest of the year.

The collectors are: Senior Class, Brandt; Junior Class, Brown; Sophomore Class, Gillie, Marble, and Brackett. A contest, open to all students, to procure an appropriate seal for the society will soon be in order. Watch for our notice on the bulletin board and “cop” one of those prizes.

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it showed that if certain conditions were followed the sugar would be better and in larger quantity. Now the whole industry, including the growing of the beets and so forth, is controlled and directed by the engineer.

"There is an immense field for similar action in the cotton industry. Spinning is the mechanical arrangement of the fibers. The ideal conditions for growth of cotton are not yet proven because research has not as yet found the ideal spinning qualities."

"The use of research is shown in one of the many problems of the war. A textile fabric used for structural purposes, is as much a structure as a member in a bridge, it is subject to stresses and so on. In the manufacture of airplane wings, the distribution of stresses was considered. By research was constructed a theoretical fabric, which would stand these stresses in the correct way. This fabric was manufactured. It proved to be correct in every way. Thus a new idea, the application of the principles of mechanics to a textile material.

"In the many processes of manufacture, industrial research has brought a light to many interesting and important conclusions. A large percentage of cards break the long fibre. Research has shown that a shorter staple can be used in such cases, with equally good results. Finishing is usually considered a chemical process to bring about a certain appearance. The appearance is the effect on the eye. Changes in appearance are caused by changes in the position or color of the individual fiber. Research shows how to get a desired appearance, or it shows how to change the appearance of a fabric.

"Every engineering problem has a counterpart in textile work. Research in textile manufacturing is to be carried on by the textile engineer, who must know both engineering and fiber, and their relations to each other.

"So far, there have been no really great attempts at research work. The most done along these lines is in England, where there has been organized a research association. Each mill pays according to its spindle. It is subsidized by the government. Every mill belonging to this association benefits thus the finding of better conditions, or new processes and so forth. In this country research work is carried on by the concerns themselves.

"Research is going to be the backbone of the textile industry in the years that are coming. The textile engineer who can apply the principles of engineering to the fiber is going to be the successful man. If new processes better methods of manufacture, or revolutionary changes of principles are to be found, they will be found by the textile engineer in textile research."