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in coming forward to assist them. Mr.

Miller was much concerned about agricultural education, but he (the speaker) was more concerned about seeing 2 in. of rain The Government were doing a great deal in connection with agricultural education, and every year the number of teachers taking a practical interest in that work was increasing. Only the other day he had put by a certain sum out of a vote he had in his department to enable aim to supply seeds, &c., to teachers with which to experiment at our Public Schools. (Mr. Miller-"Without any qualification?") The teachers could use their eyes as well as the hon, member. He had seen exhibited hundreds of different varies ties of wheat, correctly named, which had been grown at our Public Schools, and knew that the boys were quick to learn when they had a practical demonstration of what was required. In addition to that the colony had a very excellent Agricultural School at the Old Exhibition Building, and he was sorry that one hon, member the other day treated this matter in rather a captious spirst. The world was not made in a day. The school started with 30 pupils and now there were over 80, who received a very valuable secondary education for Is. a week. Then there were agricultural classes under capable teachers conducted at three country centres, viz., Clare, Jamestown, and Narracoorte, and another would soon be essablished at Angaston. The Government had done something to increase educational advantages to people in the country. In this connection no was surprised to hear Mr. Tucker, whom he had always looked upon as an advagged Liberal, speak of the cost of education as he did on the previous day. His remarks were worthy of any prominent member of the National Defence League. His figures were grossly exaggarated, and his statement that free education was not as valuable to the farmers as to people in the city was an absolute mittake. The advantages of our national system of education were far greater to country people than to city people. (Mr. Tucker-"Will you say how?") It would be impossible under any scheme of rducation carried out by private enterprise to reach half the children in the country districts. The Government had started schools within three or four miles of each other right through the country. In the Encounter Bay district there were no less than twenty schools. (Mr. Tucker-"Not within three or four miles of each other.") The assistant teachers after passing the Training Collegeswere compelled to go into the country for two or three years before coming to the city at all. These men were not inferior teachers as Mr. Tucker had suggested, and many of them had risen to be the head masters of our city schools, receiving a sulary of £400 a year. The farmers got greater advantage from our educational system than people in the city, and it cost more than double as much to educate children in the country as it did those in the city.

(Mr. Tucker-"They do not get the standard of the city schools.") That was not so. Certain schools in the country got the fifth class a year ago, and there were hundreds of children in Encounter Bay who were now being educated up to the fifth class. It was unfair to raise the cry, which had been done for party purposes. The question had been raised that the farmers were bearing the burdens on account of the nation system of education, and he asked the Board of Inspectors to furnish him with some particulars on the point. They reported that there were about 10,000 children in the small country schools, and they cost a little over £5 a head to educate, while the children in the city schools cost a little under £2 per head, (Mr. Tucker-"That is an unfair comparison.") Did the hon, member say, then, that the farmers were not getting the advantages they should get? Wherever it was pos-

only the present Ministry, but other Governments had established them. (Mr. Tucker—"Some of the schools are not fit for the children to go into.") The hon, member on the previous day—

The SPEAKER—The Minister is not in order in referring to a speech made by the

sible to establish schools in the country not

hon, member on the previous day. The MINISTER of EDUCATION said the hon, member had referred to what he said was a fact, that they had spent three-quarters of a million of money in school buildinge in the colony, and he complained that the cost to the taxpayer was £25,000 a year. That day he complained that they had not spent enough on the schools in the country, and whichever way they took him they could not satisfy him. (Mr. Scherk-"That has nothing to do with the motion.") Would the hon, member be quiet? The total sum spent on buildings was £450.947, and the interest, instead of being £25,000, was £18,400. The cost of primary education was not £200,000, but £137,991. If they added that to the £18,000 they would see that the hon, member was about £39,000 out in his figures. In New South Wales the cost of education per head was £4 1s. 4d., in Victoria £3 14s. 3d., in South Australia £3 4s. 10d. The debate was in-terrupted by the Orders of the Day. Subsequently the Minister obtained leave to continue his remarks on Wednesday, October II.

## Register 7th Sept 1899

Entries for the practical examinations to be held in December next in convenion with Trinity College were receivable on Tuesday, and reached the large total of 229, being 194 in excess of last year's number, though the fees for the examination are comparatively high, and the entries have to be made fully three months before the date of the examination. It being impossible to properly tabulate the entries in time for to-day's mail to London, the local Secretary, Mr. H. E. Fuller, has decided to receive further entries until Saturday next.

# Register 8th Sept.

### SHOULD PROFESSORS USE SIMPLE LANGUAGE.

To the Editor. Sir-While thanking "Grapholite" for his friendly criticism of my letter, I would like to remark that the more exact the nomenciature the more correct will it be. It is only fair to assume that when I speak of uscanical terminology I mean such terminology as is unquestionable, and therefore free from error. I am no advocate for scholastic pedantry, but rather for eclecticism. Comparatively few teachers possess the faculty of literary expression, and the gift of graphic description. Although Professor liuxley was a past master in the art among scientists he had few compeers, Perhaps, among artists, the late Lord Leighton was equally facile in his ornice style of expression. If, then, "the task of putting the truths learned in the field, the laboratory, and the museum into language which, without basing a jot of scientific accuracy, shall be generally intelligible," was so great to that eminent scientist as to tax his scientific and literary faculty, how much greater must it be for the generality of teachers to-day? The students of Dr. Stirling's lectures on "Life" can scarcely be called a popular audience in the usual acceptation of the term, and what Hamlet said of a certain play, we may also say of those lectures-they are cavaire to the general.

STUDENT OF LITERATURE.

To the Editor. Sir-1 thank "Student of Literature" for his notice of my letter, though he has not convinced me. It is evident that he is within the charmed circle of University life, while the writer is confessedly outside. Now, this is just where all the difference lies, and the question narrows itself down to this issue—"Is the University to exist solely for the benefit of the few who have enjoyed the privilege of a classical education, as has heretotore been the case; or shall it henceforth be, in fact as well as in name, the Alma Mater for a much-wider circle?" If the subject be one that will not lend itself successfully to "extension" treatment, it had better not be selected. But I am strongly of opinion that all subjects can be handled in such a way as to be intelligible to "extension" audiences, which are mixed audiences, but only in a limited sense. "Student of Literature" says these lectures are intended to encourage persons to become students of scientific and philosophic subjects. Very good. But this desirable end is only attainable if the lecturer's effort be not too far over the heads of his audience in treatment as well as vocabulary. In this way many a person who is today an "outsider" may be induced to beor the greatest educators will be realized. Imparting knowledge does not diminish, but rather increases, learning's store. What higher ideal, what brighter spec-tacle, I ask, can be afforded one than to see that beautiful University library filled with professional and commercial-all intellectual-people, gathered there after the day spent in more or less sordid avocations, to hear through our Professors something of what is being done in the grand fields of science, art, and literature? It is, indeed, "a consum-mation devoutly to be wished," and I look forward hopefully, in the coming winters, to an expansion of the system of University extension lectures. I am genteful to "Grapholite" for quoting such high authority as Professor Huxley in endorsement of my opinion. I am, Sir, &c., PROGRESSIVE.

### Advertiser 9th Sept 1899.

The list of University extension lectures for this year includes a course of three lectures on "Wireless telegraphy," to be given by Professor Bragg. The subject is one which has attracted a great deal of interest all over the world. It is a most interesting development of a line of research which scientific men have been following for many years past. In this colony Sir Charles Todd and Professor Bragg have succeeded in sending excellent space signals between Adelaide and Henley Beach, using Marconi's arrangement of high poles at each station. The lectures begin on Wednesday next, and full details are given in our advertising columns.

Register 9th Sept. 1899.

One of the most startling achievements [ of the present century is that of Signor Marconi, who discovered hear to telegraph without wires. For many years scientific men have been experimenting with a view to solving the problem, but it has been left to our own time to see it practically speressful. Professor Bragg has, since his return from England, taken great interest in the subject, and has been successful in cotablishing communication between the city and Henley Beach, a distance of five miles, so, that after several months of investigation he should be in a position to speak with a certain amount of authority on the probable practical adaptation of wireless telegraphy to everday requirements. He will deliver a course of the lectures on wireless telegraphy at the University during the current month. The first will be given on Wednesday afternoon next, and tickets for the course may be obtained from the Re-Blatrar.

"Standard" 10

#### THE MUSICAL PITCH.

TO THE EDITOR OF THE STANDARD.

Sir,—In regard to the subject of Musical Pitch, I have no hesitation in saying that I am entirely in favour of International uniformity, and that I heartily advocate the proposed adoption of the "dispason normal" as the standard musical pitch for pianes.

I am, Sir, your obedient servant,
ADELINA PATTI (Baroness Cederström).
Craig-y-nos Castle, Ystradgynlais, R.S.O.,
Breconshire, South Wales, August 5th.

advertiser 14 12 Sept. 1899.

### PRELIMINARY ARITHMETIC.

At importer toys 1,250 yards of cloth in England at 2,6 per yard. Preight and duty cost him altogether £28 10/. He sells the cloth at 4) per yard, with the exception of 100 yards, which, being damaged, he sells at 1/1 per yard. Find his gain per cent,

Sir-The above question, which was set at the preliminary examination this morning, admits of two different answers (viz., 27.424, or 32.374), according as the cost of freight and duty is included with the original cost of the cloth, or reckened among the subsequent operations of the importer. I suppose a business man would know at once on which basis to v water his profit, but the arithmetical a guity is unnecessarily confusing for boy and girl candidates of the "preliminary" standard. This indistinctness in percentage problems is said to be a besetting sin with examiners all over the world (vide the paper on mathematics in Barnett's "Teaching and Organisation"), and I shall be glad if you will let me draw attention to its latest, and local, instance, even though it be the only fault in an otherwise excel-

Gawler Grammar School, September 12, 1899.

advertiser 14th Lept.

### WIRELESS TELEGRAPHY.

A large audience was attracted to the lecture given in the University library on Wednesday evening by Professor Bragg on "Wireless telegraphy," and the discourse was intensely interesting. The lecturer said that wireless telegraphy depended upon ether and wave motion. Ether was an important thing in nature, filling all space and permeating all bodies. By it light, heat, and energy came from the sun, and without it this world would be a dead globe. Since it was the carrier of light it was our usual means of inter-communication, and therefore it was no surprise that in wireless telegraphy it should be made use of. Professor Bragg explained the different properties of wave motion, illustrating his remarks by means of a ripple tank and a torsion model. Light waves were very short, whereas waves used in wireless telegraphy were long. Light waves being short, moved forward in straight lines, and could hardly bend around obstacles, but the long waves used by Marconi could easily swing around great obstacles, so that, for example, it was possible to sigwere incapable of going through metal or any conductor of electricity, so that none could penetrate a sheet of metal, though they might go around it. The lecturer indiscuss the way in which large ether waves were produced, and how they were detected, while in the last lecture be would show how signalling without wires could be accomplished.

Register 12 K Sept 1899.

The next examinations in practice of music of the Adelaide University will be conducted as in the past two years, in conjunction with the Associated Board of the Royal Academy and Royal College of the Royal Academy and Royal College of Music, London, Mr. Graham P. Moore, who is now examining in the colonics, is who is now examining in the colonics, is