## Selected Student Feedback

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I would say that the new format of CA1 did help me to change my perspective of scientific paper. The questions and short CA duration 'forced' me to read more actively searching for answers, rather than passively. It made me understand the paper better and gave me more confidence in reading scientific papers.

But I feel that the readings students have to do can be made better, if you will prepare additional questions for them beforehand.

Thanks

KunSong

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i will like to express my appreciation as it is an indeed innovative way to conduct a test by using research article.

As a science student, i believe, it is not only important to have the basic knowledge in the various findings, theory in the course of study, it is more important to keep updated in the scientific development no matter in which area of science. To be able to know, to be able to apply, and to be able to link up different concepts from different area of science, as well as to have the determination and a curious mind, i believe, is the foundation of research and development, Regards,

Chng Adeline U 074133 J

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The format for CA1 was creative and putting our understanding of journal papers to the test which i felt was good and made us learn to scrutinize the journal papers. Although the content of the journal papers were related to what was being taught in the lectures but i felt this method will not reflect how much we understand our lectures and content being taught.

Overall, i think having a CA from a journal paper is novel and an interesting way to test our understanding with practical applications, but another component whereby the testing of our knowledge from the lectures should be included.

Thank you.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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Hi! I agree that the reading and comprehending of scientific papers is an integral component in getting close to research being carried out currently. In a field such as the life sciences, where research is perhaps the most important driving force, it is of course good to expose students to issues under investigation and debate. =)

In my opinion, basing CA1 on a scientific paper was not as disastrous as I initially thought it to be. The questions were reasonably posed, and understandable in relation to the paper. In essence, we were able to come up with answers even without completely understanding the scientific paper itself. To ask from us the complete comprehension of both scientific papers would perhaps be too much, but in the case of this CA where a general understanding established would suffice, the task of scoring did not seem as daunting. Of course after glancing through the uploaded answers to CA1, I can no longer confidently say my score will be a good one due to missing a point in part c and a nagging feeling that I may not have provided perfect answers to part a and b either. Nonetheless, education is a process of learning and it never ends especially in areas where

answers to an unknown brings about with it more unknowns. I am willing to learn from the mistakes I make, although it's regrettable when it may be at the expense of my CAP. =P Anyway, in short, it was a refreshing different style when compared to the CAs I am used to. Oh, I understand too that uploading it as a reference paper would mean many will not bother to read through, and I myself will be guilty of such an act I'm afraid. The need to incorporate it in the CA is thus justifiable. Thought of course till now, with the limited knowledge, understanding, and speciation in the life science field that I possess, I am still unable to fully comprehend the beauty behind both papers.

Regards,
Hanyou.

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I found CA1 very interesting and enriching. Usually, I would not be interested in reading science papers such as this, but because I was 'forced' to read it for the CA, I realized I could tackle the paper down and understand it eventually, despite feeling bewildered with the contents at the beginning. (Some of the scientific terms are hard to understand and it takes a few times of reading to get, which I think is what is good about making us read papers such as this.) It was very helpful to have made that an open book/paper test also; this reduced our stress by very much, but it also further emphasized to us that, we should learn to recognize the important points and note them down instead of blindly regurgitating facts.

However, I thought that it would be good to have a short discussion or sorts during or outside the lecture about the papers, so that the ideas from the papers could have been brought out more clearly, and also helped us link back to what we are learning during the various genetics lectures. Overall I thought it was a brilliant idea, to bring in more enrichment and knowledge to encourage students to be more inquisitive. Yet, I guess CAs couldn't all be done this way? It would bewilder us more when we try hard or fail to see the link between the papers and the lectures. I still think using a paper for a CA was a good idea, though!

Thank you for your interest in finding out what us, as students think. Thank you, also for spending your time on reading this! I hope my comments are useful! Yours Sincerely,

Lim Yu Lin

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I am very sure that our CA1 will forever be a memorable event in my life. I was at first awed by the mode of the examination because it used to be unprecedented that a test is given from an academic paper. It was not an easy experience ploughing through the academic jargons. However, the experience was exciting. It is a challenge that attracts the brave and determined. I loved it and still love it and believe I will enjoy this mode of examination in the future. Perhaps it will be better if the examiner can acquaint the students with the context of the papers in advance to the test. This may be a directed facility that makes the students' learning more fruitful.

Thank you for your attention here! Sincerely yours, Jin Xiao

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My opinion about CA1 is that it is good to carry out such test using scientific papers as it enables us to apply our knowledge based on what we learn and allow us to think critically to answer such questions.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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Hi, Professor Wu. I must say that I enjoy a new style of CA which was based not entirely on textbook. CA1 tested for our analytical skills, where we had to analyze critically a scientific paper which we were not familiar with. I personally think that this is a much needed skill in future if we were to pursue our job in research in science. Even if we won't, a good analytical skill is still very important in the working society. Working doesn't test for regurgitation of facts from the text books. Therefore, I highly compliment the way Professor Wu conducted CA1. I think it should be carried on for future batch of students.

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I feel that the scientific papers for reading are a little too difficult for us to understand, especially when most of us are not used to this style of reading as yet. Instead of giving us one whole scientific paper to read, perhaps you could just set the questions based on a few paragraphs; meaning that we read and do the questions on the spot. That may be better.

I can understand the answers that you've put up but the papers are a little too difficult for my comprehension.

Jasmine

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I was quite worried about CA1 when we are suppose to read the science journals.. It was really difficult and i could not understand most of it.

However, it turned out that the questions are not as tough as i expected it to be.. It was a good start to read science journal articles as i have no prior encounter with them.

Perhaps we can start with easier and more understandable/readable articles instead.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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Good day Sir. This is really honest feedback so please give it some consideration. I think that what you did for the first genetics test was very good although of course we might not have fully understood the articles. It was a good method because it did not encourage memorization but instead encouraged application which should be the whole point of education in tertiary studies in my opinion. I think even the final exam should be made open-book because I find genetics very technical and missing out a single detail in a biological process may be disastrous to the sequence and order of the process. Making tests open-book need not be a bonus to us as lecturers may think because it means we have to learn to answer higher order thinking questions instead of blurting what we memorized from our textbooks and notes. That is not learning, is it, if we just memorize and reiterate what the textbooks and notes say? For an open-book test, we must have read up on the curriculum and cannot escape if we think we don't need to study just because the exam is of an open-book format. Thank you for allowing me to express my honest opinion. Best regards.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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Sorry for the late reply. Generally, I feel that your move to use a scientific paper for CA1 was a rather great and interesting idea. Like what you have mentioned in the earlier email message, the high importance and usefulness of reading recently published papers in enriching our learning journey is indeed deniable. Yet, I must admit, committing to it is often a difficult task. Therefore, using the scientific paper for CA1 is definitely an action worth mentioning, and should be greatly

appreciated. By 'forcing' us to read it, you have indirectly done us favour, helping us to realize issues related to the module but outside the textbook.

Yet, I must admit that I had faced some initial difficulties in understanding the papers provided, some due to the presence of unfamiliar scientific terms. However, this did not prove to be a problem too worrying after some brief discussions with friends and re-reading. Instead, some fresh knowledge was gained.

Nonetheless, I feel that perhaps some in-lecture discussions about the papers may be useful in helping us to see their relevance to our module studies and content? Overall, I thought the idea was good.

Also, thank you very much for making an effort in seeking our comments.

Yours Sincerely,

Yu Su

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Im in full support for your test method in using real life scientific papers, that have positive impact on the syllabus which LSM1102 is based upon. It allows the students to have an early start to understand how scientists/researchers actually write their findings and report to their counterparts in the world. I'm grateful for that.

However, i find that as our foundation in understanding the contents of the papers is quite weak, its difficult to identify answers within the paper itself. Maybe there can be ways where we can learn to read and fully comprehend the contents of the papers before going for the test.

Thank you very much.

Best Regards,

Jian Zhong

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I think CA based on scientific paper is very good, because as a science student we should know how to read such papers, but actually not many of us will do this except in preparation for a CA.

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I think the most difficult part of it was trying to match what was in the notes/txtbk to that in the notes. It took quite a while, at least for me personally, because the paper was relatively deep and to understand the paper on a broader level, i had to go to the internet to do research on certain points in the scientific papers which i didn't understand. But all in all, i thought it was a good learning experience and i guess it's all part of university life.

Rgds

Aldrich

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A fresh and innovative test, drawing the relevance between the current world and what we are studying, also helps to introduce the next few chapters that are going to be taught.

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I like the idea of using scientific papers as CA materials. I believe that science is not just what is found in the text book, but more importantly we need to know what is going on in the world of research. If it weren't f, or the CA, I admit that I would not have read the whole of the papers as I find it a bit tough to comprehend.

I also like the fact that it was an open book CA. =) (Any chance that the final exam will also be open book??)

Regards,

Pei Yi

As for the passed CA1, though I might not get a good result, I like this style.

Learning is not just about scoring high, but more importantly, to get a broadened horizon and to apply what we know to solve those we don't know. I think life sciences undergraduate students especially need to get more in touch with the forefront research around the world so as to get well prepared for our future career.

I really hope this innovative way of teaching and assessing us is remained for our module. Thank you and best regards,

Sun Ye

i think it was good that the test was conducted in that manner with the papers, as it helped to show us that what we were learning is relevant to research that is going on. yay! This email was sent by the IVLE Anonymous Feedback feature for your module.

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I am a student in LSM1102 this semester. I am not a life science student. In fact, I major in Computing.

That's why I am not so confident in this module. When reviewing for CA1, I read the paper, but paid much more attention to the textbook.

I was surprised to find out that the CA is soo paper-oriented.

However, I love it.

It gives me the courage that in this university, we can still study smart, not just study hard. It gives me the courage that in order to score well in Science modules, I don't only have to memorize, but also use my reasoning skills. Last but not least, I begin to love reading papers. Thank you Sir. I wish to have more CA like this in NUS.

Thanks and Regards,

Phong.

For the CA1, I had learnt to think critically and analyze what I have read for the published scientific article. It also helped me to know what the current fields of studies are and it definitely spurred me to pursue this for my future graduate studies. Thanks Dr. Wu, for the unique teaching method and test method. However, I would like to input a suggestion or two. Perhaps for the CA1 portion, besides just reading the publication, you could also include an independent field trip regarding the article for the undergraduates to visit so that they could have a greater insight and better exposure to what the scientists are doing nowadays. I hope this could be implemented for the future undergraduates and they would benefit the most out of it. Once again, thank you for your great lectures and special time taken off from you for the Chinese New Year eve lecture. Regards,

Ivan Yow

I find this new open-book format of read-the-article-then-digest-it-and-apply-it very innovative and challenging. It's a gauge of one's understanding of the topics involved, though causing a lot of brain cells were inadvertently massacred in the process of trying to digest the ideas presented or conceptualized by the article... because it's a challenge dissecting such scientific articles and retrieving the relevant details for the CA. Well, it's much better than just memory work and the resultant vomiting/diahorrea of facts.

Such interesting format could become a trendsetter for CAs in the future.

Jake			

I think the readings for CA1 were a good way to help us understand the concepts learnt better and to let us have a broader picture of what we are actually studying about. Thanks. This email was sent by the IVLE Anonymous Feedback feature for your module.

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I'm not sure if this came too late but anyway, my view is that the idea of reading a paper for a CA was a good idea as it helps to further understand the knowledge that we've gained and understand its applications and on-going research.

Regards,

Emily

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You are awesome for thinking about this feedback thing! ! It's truly a great idea. Anyway, I have some opinions about our CA1.

First of all, I think it's a good idea for a CA to be tested on a scientific paper, since the only source of our student is always the textbook. We usually do not have much free time to read papers like that. So, it serves us a opportunity to actually read from a scientist not a book writer. And I gained a lot of knowledge from the reading process.

However, for the CA questions, I feel more like answering a reading comprehension test. I feel like anyone who has a good reading skill will be able to score. And I think we still should, maybe include a little bit textbook stuff into the CA, after all that's what we spend our whole 4 lectures with.

That's me idea about our first CA.

Cheers,

Gong Xiaofeng

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At first when you uploaded the papers I was a little scared as to how I would understand them. But after reading them - breaking them down into simpler parts, analyzing them, and adding my own critical opinions to the papers, I felt like I had learnt a lot more than I would have only from the lecture notes. The paper on Sleeping Beauty Transposase was very interesting, and according to me it was more directly related to our lectures than the other one. I think testing CA based on papers is a very good idea as it broadens our horizons and encourages us to think outside the borders of the ppt slides and text book.

Overall, it was a good experience reading a scientific paper and answering questions based on it. Regards,

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Dear Sir, I personally think that for many of us, we aren't very certain nor are we trained in reading journal papers analytically and critically back in our previous years of education. Having to be exposed to journal papers was thought to be something you'd probably face in year 2 or 3 onwards. Therefore I think having a CA based on a journal paper may not be that fair for some of us, who in the first place, are not trained in reading them, and therefore cannot understand them. I think exposing us on a journal paper is good, but as more of a discussion level rather than a test graded level. This can enable us to learn how to read and understand a journal paper. But I feel that for now, having a graded test based on it is not quite fair.

This is just my personal opinions. I hope you do understand.

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In my opinion, it is a good idea in theory to use current papers in the syllabus, so we know the relevance of what we are learning. However, most of us first-years do not yet understand the vocabulary used in the papers and many of the words are still jargon to us. After I read the answers to the test, given some time, I could pinpoint where in the journal papers the points appeared, but while reading the papers themselves, I hardly understood them, even after reading very, very slowly and taking 2 or 3 hours for the 6-page paper. Therefore, maybe such a method of CA could be more appropriate for 2nd- or 3rd- year modules?

Thank you very much.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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Regarding the CA 1 using scientific paper, I personally feel that it is tough for year 1 students understand the papers that were given. There are a lot of scientific terms and diagrams that are not included in lectures. I face problem in understanding reading the text as I have a lot of doubts and I don't have the motivation to finish reading the whole paper. Although the answer of CA question can be found from the scientific paper, but this is meaningless. We learn not because of CA or exam. What I actually does is try to understand the paper, but I fail to do so. I only understand about 30% of the paper. I learn not much from the scientific paper. Instead, I suggest that the CA should be based on lectures and probably open-discussion CA will be good as it allows student to discuss and learn more from what is learnt from the lectures. Thank You.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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The recent CA I had sat for was a very different one from the others I have done in NUS so far. I believe and subscribe to the notion that to be able to internalize what you have learnt, one has to be able to apply the said knowledge. While memorizing the various mechanisms and details pertaining to each topic will help an individual build up the basic principles with respect to each subject, it will not allow that individual to delve further into one subject. Instead, a dependence on the reference text will result.

Having a CA structured as per the one you administered, we will not only be required to know the basic principle covered in your lectures, but will also be able to apply what you have taught us in situations and scientific conundrums which are more relevant in today's context. Knowing how each concept ties in with the latest developments in the scientific arena will help us to develop a much deeper understanding of the topic at hand.

As such, I believe that the format of reading a reference paper and answering questions related to that paper is an innovative way to encourage the student to move on from the textbook to the more recent and relevant scientific papers. Doing so will serve every student well.

Regards,

Ewen

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This is a feedback on CA1. I feel that I am not very used to the exam format and the ways that questions are asked link the lecture contents with daily report to a small extent, partly because it is still a bit hard for me to understand the scientific writing. I feel that a shorter or simpler paper would be better for these kinds of application questions. Thank you.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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pesonally, i think using scientific papers as one of the assessments is a good idea. This is so because reading and referring to scientific journals is a basic necessity in a career in Science. As such, using it as an assessment introduces the indepth of journal reading to us. In addition, it does not involve mere regurgitation of the information we learn during lectures which is the educational approach the ministry is encouraging.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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I feel that it is indeed a good idea to expose us to real life ongoing research out there by providing us with relevant research papers to read. However I'm sad to say that many of us (or maybe it's just me) do not actually have enough knowledge to truly understand the literature and the experiments discussed in the papers. Hence it may wise to let us start with simpler issues. Best Regards,

Cindy Seow

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Hi. I think the format of CA1 was fine. Reading and understanding the article was tough. However, I thought it was a good practice for us students. Moreover, the articles provided us with several interesting facts and the happenings in the life-science world. Thanks

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In my opinion, having one or two CA with scientific paper which talks about the topic related to what we are learning is very good. This is because we, as students, are in a learning progress, we have to learn not only the knowledge in text book but also have to get updated by latest scientific knowledge.

However, some CA have to be based on text book too because CA is a way for us to test ourselves and is a way for us to know how the questions will be designed by lecturers. After having CA, we will know our weak points on that particular chapter so that we can put more effort on it in Final Exam.

Therefore I think having CA with scientific paper is good but not for every CA. Some CA have to based on text book also. This is some of my opinion. Hope this will help you on making conclusion.

Thanks for your kind attention. Have a nice day.

Warmest regards,

Jia Yee

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I think that having CA with scientific paper(s) is a bit difficult. It's quite redundant to have a paper which I don't understand much for CA.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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Personally, I have only 1 concern. When we've tests on research papers, do we answer according to the definitions and reasoning provided by the papers or our textbooks? This wasn't very clear and many have tried answering according to the textbook instead of the papers.

I felt that this approach was pretty enriching and it certainly introduced timely knowledge to me. If not for this test, I don't think I will ever pick up a research paper to read. I think it is a approach but the parameters have to be refined.

Thanks and regards,

Alvin.

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regarding that of CA1 using that of a scientific paper, i feel that it is fine. we are sort of forced to try to understand the science going on behind that as written in the scientific paper and that of being taught to us. (:

however, i would hope that you go through with us the scientific papers and the test so that we know which concepts we had grasp wrongly when attempting the CA1. thanx! (:

This email was sent by the IVLE Anonymous Feedback feature for your module.

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I apologise for the late reply. Regarding your email about the CA, I feel that using the research paper was a good idea, as it made us look at how a research paper was written. Furthermore, this test also taught us how to pick out the crucial points instead of over-writing, which is good. However, I feel that this test may not have been a good gauge of how well the students knew the research paper, as students were given such a long time to complete this test. And with the given amount of time, I felt that students who had not read the papers would have had the time to read the paper, and be able to answer the questions posed too.

Regards, Alethea.

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First of all, I think the idea of putting our knowledge to practical use is very good. I am very impressed by such an innovation.

Reading the research papers was very challenging as the one on sleeping beauty transposase took me an entire afternoon.

However, I am not too sure if this method is effective in assessing how much a student knows, especially when the final paper for this module is not an open book exam, unlike other modules we know where the right information is.

But thanks for setting a relatively easy paper so that most of us could score.

Thanks for teaching us.

Yours sincerely,

Denise

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I am writing in regarding to the feedback on regards to the CA1, i apologize for being so late. Using current paper as a means to both test and teach is a very idea. But i think the questions need to be more analytical, otherwise it becomes more like an English paper where one do a summary. It would also be better if the announcement on not lifting was made before the CA1 and not halfway through.

Thank you

This email was sent by the IVLE Anonymous Feedback feature for your module.

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i thought using a reference paper was a good way to go. in a sense, it provides students with the exposure to the various areas of study and also test on how well the students know the topic. However, the papers may also prove to be a be a bit hard for the students to grasp the content and main ideas due to the limited knowledge of the students.

This email was sent by the IVLE Anonymous Feedback feature for your module.

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The research papers have been a enjoyable and interesting read, thank you very much. However, i feel that the better way to learn is to have some Q and A session regarding the ideas discussed in the papers.

I reckon the CA1 was rather useless as it's merely rushing through another English comprehension paper.

I was dazed doing question 1.

I understand the general ideas put forward in each paragraph; if i were to provide the evidence (question 1) in a simple manner, the best way is to pick out the topic sentence and rephrase. this was what i did for my CA1.

After the topic sentences comes the detailed elaboration which would be rather meaningless to be included in the answers because it will become never-ending with so many technical terms. I had a headache trying to decide on the details.

In a nutshell, i don't know what the question wants, considering it to be a science test.

For starters, everyone would look for the topic sentences to answer the question.

I remembered it as an exciting English comprehension test rather than a challenging science test. How about some application questions next time, or explanation of some graphs/ analysis. Ask Why instead of what. I think the Qn is the main problem.

Usually "why" questions will make us ask even more questions and learn more. Cheers,

Hiu Fung

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I am supportive of the format of the CA you've set for us. Having to read research papers which are related to what I've been taught has helped me gained insight to what I've learnt and how the new information gained through lectures can be useful and also applicable in ongoing research. This also encourages self learning out of the textbook. However, due to the depth of the research papers, certain areas may not have been well understood or might have been misinterpreted, thus it could be useful if the research papers were explained to us after the CA to help us better understand what we've read.

Regards,

Bryan

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The CA1 was a very new concept. The article was difficult to understand due to the different terms used. However it allowed us to do analysis and think on our own. It was a good exercise but I cannot understand how one is graded on it? Maybe you can put up an answer scheme because it is pretty unless if you don't understand where u went wrong and how to improve. This email was sent by the IVLE Anonymous Feedback feature for your module.

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My name is Alvin and I am a student taking LSM1102 module currently. Sorry for the late feedback for I was quite busy for the past few days.

I would like to comment on the CA1 you had given to us. I agree that it is a good way to teach science, as a subject, by reading research papers. I too have read some research papers on my free will. However there are major problems encountered while reading these papers. Firstly, most of the terms are very unfamiliar. Being a recently published paper, these terms and their functions cannot be found easily in the web. Thus, I really had difficulty comprehending most of the terms used in the paper. Now relating back to the CA we had taken, the papers which you chosen for us are more comprehensive at our level; however the curve of learning and understanding the papers are steep and thus, although I understand most of the things written, there were some parts which I was unclear about and was unable to search for them online.

Secondly, the length of typical research papers is long. Typical research papers (like the one you have given to us) consist of 12 pages of words which include every single thing. I am sure that given the time to read these papers, our minds will be saturated with the information (and half of them not understood).

Thirdly, I just realized that I did not do so well in the CA test. Prior to entering the University I did not have biology background and thus I was struggling with the overwhelming terms used in the modules. I realized that my mistakes were not spotting the correct answers from the passage given, however I also did not know what were the correct answers (or rather if I answered them correctly). This might due to the answers are scattered around the passage and thus I was flipping through the whole passage looking for answers and thus missed something along the way. All in all I think the 3 points which I mentioned are linked together somehow or rather. However I must say that using a research paper as a CA do encourage me to read more in depth and to take note of the passages more than my usual routine of reading research papers.

That's all from me. I would like to thank you for reading my email.

Regards

Alvin

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Regarding the feedback for the test, it would be good (if time permits) if there is a short session on the skills to scientific paper reading as it might boost our understanding of the article. Overall I think that it is a good idea to expose us students to scientific papers early in our university life to give us a feel of what is like reading a paper, but it will be better if we get to do some practices before engaging them for the first time in CAs.

Thanks and have a great weekend!

This email was sent by the IVLE Anonymous Feedback feature for your module.

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