Memorandum

To: Joe Benge – Instructor, English Department

CC: Debbie Hlady – Chair, English Department

From: Pavel A. Bolokhov

Re: PLA Assignment (English 170)

Date: October 5, 2014

Summary

Hi Joe. My English language proficiency, in regards to writing and communication skills, comes from a variety of sources. They include doing postdoctoral research at North American universities, reporting at conferences and teaching at Canadian institutions. I believe that based on these skills I qualify for an exemption from English 170 course at Camosun College.

Introduction

The dominant part of my English writing and communication experience comes from the Academia. I also had a non-academic commercial affiliation where I gained experience in workplace communication in English. I assess that all this experience enables me to qualify for an exemption from English 170 course.

Where reasonable, this Memorandum includes detailed and illustrative examples of work or research that I performed in the past. I am open to any questions, remarks or notes concerning this Memo.

English Courses

In my academic career the only English courses I have taken were those offered in the Bachelor and Master programs at the St.Petersburg State University. I have not taken any English courses in North American institutions.

The Bachelor program at the Physics Department at St.Petersburg State University offers a course officially named "Foreign Language (English)", and taught in the duration of the whole four-year program, totaling to 374 hours. The course ends with a final exam. I took this course during 1995–1999.

The Master program offers a similar, slightly advanced, course called English in Professional Communications", totaling to 250 hours of class, and ending with a final exam. I took this course during 2000–2002.

Both courses are taught in a tutoring style, meaning that they are not comprised by a series of lectures. Instead, submission of information to students alternates with frequent "polling" of the audience, assigning quick tasks such as reading, spelling and talking, as well as general discussion. In this sense, the courses are highly interactive and dynamical. Both courses are directed mainly towards training the students to understand scientific literature. An adequate level of grammar is provided. The Master program course includes elements of verbal communication and written communication to some (quite

minimal) extent. Although at the present time the contents and level of those courses may have changed, I do not find the level of the courses adequate for a person to be able to perform scientific work in a modern English-speaking environment.

I finished both courses with the "excellent" grade.

Published Papers

Research publications in my scientific background might seem very similar one to another for a scientist who is not directly involved into the corresponding area of research. This is quite common for the area of theoretical physics. Also quite common is the fact that papers are written in collaboration with other scientists. That means that part of the text is not authored by me. Certainly, I have read the contributions of the other co-authors, and even made language corrections in places where I found it necessary. I need to express that in my case, the majority of the papers were written in collaboration with *russian*-speaking co-authors. I put this in favour of the fact that a significant share of writing, structure, textual and graphical design was my responsibility.

I will provide examples of my two recent publications.

- "*Twisted-Mass Potential on the Non-Abelian String World Sheet Induced by Bulk Masses*", P.A.Bolokhov, M.Shifman and A.Yung, arXiv:1308.4494, Phys.Rev.D88 085016 (2013)

  This is a relatively short paper describing "incremental" progress in our current field of research. For that matter, it does not contain any special features such as figures, graphs, charts, or even tables. Nevertheless, it presents results which had not been known by the moment of publication to the relevant scientific community. Such results perform the role of a connector between our current problems and the problems projected into the nearest future.

- "*Large-N Solution of the Heterotic CP(N-1) Model with Twisted Masses*", P.A.Bolokhov,M.Shifman and A.Yung, arXiv:1001.1757, Phys.Rev.D82 025011 (2010)

  This is an example of a longer work, performed over a period of a year. As the text spans some sixty pages, a table of contents is provided. The text is very structured, including an introductory review of the subject (*besides* the customary "Introduction" section), the bulk of work and results being presented, and a number of appendices. In contrast to the previous example, this paper includes various graphical illustrations, such as figures and plots. A table is used in an appendix for the sake of clarification of certain ambiguous notations.

Teaching Materials

Below I give a brief description of two courses, one of which I taught at the University of Victoria, and the other at Simon Fraser University. In my opinion they both represent an unambiguous amount of composing, writing, structuring, presenting and organizing work, performed in different settings and at different institutions.

- Thermodynamics P317, University of Victoria, Summer 2010

  This is an undergraduate course, the contents of which, although flexible, had been stuck to a series of notes used by previous instructor. It was noticeable that each new instructor introduced certain sections according to his or her taste or field of interest. I received a suggestion from the department to enhance the theoretical fundamentals of the class material. In accord to this, I took a job of re-writing the material in such a way that it would extensively rely on and be in

agreement with my newly introduced enhancements on math and general theory. As a benefit, this produced a series of hand-written lecture notes. These notes were subsequently made available to students at the end of the lectures as an aid to preparation to the final.

As the number of students was not big (fifteen students), I decided to make the final examination oral. That did not assume that the students were to make official reports or talks in front of a board of instructors. Instead, each student was questioned individually. An easy way to imagine this is to think that a student was given a "usual" written test, but had to provide answers orally to me and a professor who had been the instructor of this course in the previous year. A plenty of preparation time was given to each student. One of the benefits of such an approach was that each student was given a chance to "squeeze" from his- or herself as much of answer as possible, given enough time to remember facts that had not come up to them right away. The approach of a written test would typically limit students in time, without giving any chances for correcting a mistake

- Particle Physics 485/871, Simon Fraser University, Spring 2013

  This course is read to a combined audience of graduate and undergraduate students. The goal of the course is to provide an introduction to particle physics for willing physics students regardless of their degree program. The circumstance, however, significantly limits the mathematical techniques and physical background which can be exploited in the lectures. Nevertheless, as I found very interesting to myself, it is quite possible to present the subject of particle physics to students with little or no exposure to a very important pre-requisite subject of Quantum Field Theory.

  As I accepted the offer to teach this course on a very short notice, I essentially inherited the material from the previous instructor. However, I still took the job of enhancing certain theoretical features, and even introduced the whole new section on Cosmology. I felt it important to convey to students the idea that Cosmology is an important source of information for particle physics, and offered the section "for free" (*i.e.* it was not examinable). The idea of this new and exciting chapter was very welcome by the audience.

Conference Materials

Part of scientific research work is delivering and sharing your results with scientists from all over the world. Although typically one still publishes his or her work in recognized journals, there is no substitute for live communication with top scientists who can provide a better audit of the work than any journal referee. Conferences are also a place where you learn of ideas of others. However, participation in conferences always requires one to prepare the material in a presentable and attractive form, typically in some sort of slides. And in this sense there is no big difference between speaking at a conference or giving a seminar — the material can be the same.

I have given both types of talks — blackboard seminars, and reports at conferences. The most notable conferences (in terms of the size of the gathering) perhaps were "Continuous Advances in QCD" held at the University of Minnesota in 2011, and "International Symposium on Particles, Strings and Cosmology" held at the Perimeter Institute, Ontario in 2008. Please find below in Table 1 a more complete list of talks and reports that I made during the recent years.

Table 1: Talks at Seminars and Conferences

Date	Hosting Institution / Location
July 2005	Seminar, Perimeter Institute for Theoretical Physics, Ontario
August 2005	Canadian-American-Mexican Student Conference, San Diego
October 2005	The 17th International Conference on Particles and Nuclei, Santa Fe, NM
December 2006	Seminars at University of Toronto and McGill University
June 2008	International Symposium on Particles, Strings and Cosmology, Perimeter Institute
July 2009	Symposium on Theoretical and Mathematical Physics, St.Petersburg
May 2011	Continuous Advances in QCD, University of Minnesota
October 2012	Seminar at the University of Pennsylvania

PhD Thesis

A defence of the PhD thesis is a somewhat similar experience to reporting at conferences. The differences include the fact that the preparation is significantly longer — several years. The research material is then abstracted, put into a concise (but illustrative) form and turned into a thesis. After the approval of the thesis, the defence itself takes place. Another difference from a conference is that the defence has a force of an exam — the answers to the questions from both the Committee and the audience affect the final "mark". In my case, the basis for the thesis were a few articles that I had published by the time of the defence. They had to be re-arranged, compressed, sewed together and given the shape of a proper write-up. The defence "presentation" material, in its turn, is a very abbreviated version of the defence thesis. As customary, I prepared and presented it in the form of slides.

Communication in the Workplace

The most part of my work career was related to Academia, and I have already described a significant part of work and collaborative communication in that sphere.

There was, however, a period when I worked as a programmer at a commercial software company in St.Petersburg. The company was actively collaborating with their western partners — for the major part, a British company. There is no need to say that all of the software staff of our company had to have email conversations and consultations with our British counterparts. Although my English experience and skills were significantly less developed than they are presently, they were still "estimated" as being "above" the average. Very quickly I was assigned an unofficial "job" of being a reviewer of technical documentation that our company was producing, with the purpose of correcting written English. Even at that "early" time in the development of my English, I was finding that there were quite numerous things and places to correct, as my collaborators produced numerous mistakes which regular spell-checkers would not have caught. Due to copyright restrictions of the contract between the two companies, I have not been in possession of materials which would now enable me to illustrate in detail the type of work I was doing.

Conclusion

I have gained significant experience in written English during my research and studies at North American post-secondary institutions, as well as during my teaching terms in Canadian institutions. I suggest that this enables me to qualify for an exemption from English 170 course at Camosun College

Looking forward to hearing from you,

Pavel