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SIGNIFICANCE OF JOURNAL PAPER PUBLICATION AND GUIDELINE IN POSTGRADUATE STUDY

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ABSTRACT

In a recent change of policy reviewed by University of Malaya (UM) postgraduate students are required to publish journal paper before they are awarded their degrees. In a new curriculum effective from 18 December 2008, postgraduate students by research mode are required to publish minimum of one Institutes of Scientific Information (ISI) journal paper for Master degree and two ISI journal papers for Doctor of Philosophy (Ph.D.) degree. Public universities are fervent for paper publication as it has an impact on university world ranking so the requirement is designed to boost the number of journal paper publication of the university and a good opportunity of the student's future career. The paper publication increases critical thinking, data analysis skill of the student and many other obvious advantages. University of Malaya has global recognition with state of the art research facility and provides student with fellowship and research assistantship for financial aid so that student can accomplish the desired goal. Students can apply for short term Research and Development (R&D) grant named as postgraduate research fund for the expenditure of their research purposes. This paper discusses the significance of publishing journal paper by postgraduate student to fulfill University requirement and their future career development. The mutual benefit between student and university for publishing journal was also highlighted.

Keywords: Publications, Postgraduate, Research Fund, Fellowship.

INTRODUCTION

As part of Malaysia's effort to maintain its current competitiveness and to be the hub of education in the global technology marketplace, the university has identified a strategic need for the research and innovation in postgraduate study. It is essential that graduate students be capable of engaging in critical appraisal and logical, reasoned analysis of the state of the art in their chosen discipline [1]. Recent amendment of policy by University of Malaya required that postgraduate student by research mode are mandatory to publish minimum of one ISI journal paper for Master degree and two ISI journal papers for Doctor of Philosophy (Ph.D.) degree. The outcome of research is shown in Figure 1.

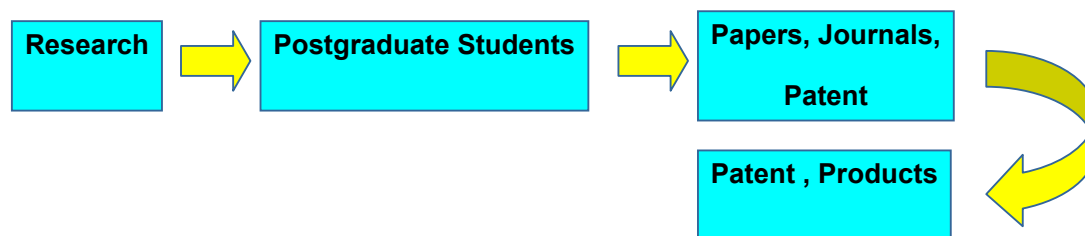


Figure 1: Research outcomes

The progress of a nation depends on its research achievement. The relation between the research and its benefit is shown in Figure 2.

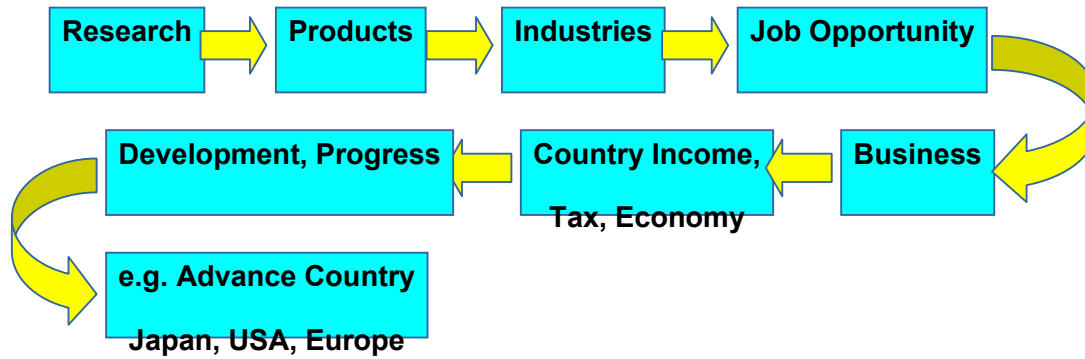


Figure 2: Benefit of research

In recent years the distribution of government money for higher education has increasingly been linked to the perceived quality of teaching and research [2]. Universities are fervent for publication as it has impact on their ranking on the world University ranking. Publication also creates recognition of the university among world community. Publication increases critical thinking capability of the student and enhance data analysis skill of the student.

RESEARCH – A PERSONAL EXPERIENCE

A researcher must have clear vision & mission to accomplish research work successfully. Funding is also vital for research work because it facilitate the expenditure and appointment of research assistant. Money from the fund received can be used to renovate and improve the research facilities and bear the expenditure to attend seminar/workshop/conferences. Research assistant is necessary to accomplish the research work. Research assistant must be qualified, dedicated for research work and if necessary he/she must be trained. Forming a research group including senior and junior staff also produce good output. If a junior staff wanted to apply a grant and become a project leader, make sure there is a professor in the group as in this case the funding agency will be more confident. Building networking among researchers from well-known universities through JSPS, JICA, EU, DANIDA, CICHE and others is also important. Networking with the world class universities facilitates the acquaintance of the latest technological research.

WHY STUDENT MUST PUBLISH

Publication is the way of evaluating ones performance in academics and research. It is also an indication of a country's progress in the field of science and technology. Publication also enhances the chance of getting fund scholarship etc. In many universities in Japan publication is a requirement of certain academic standard to graduate. Sometimes publication can be turned into a patent-product. In academic career publication is one of the key factors for advancement-promotion. In a broad sense publication is media for dissemination and propagation of knowledge. Publication is a way of benchmarking one's work and give professional satisfaction. Through publication new original ideas are generated. Publication also enhances the teaching quality of faculty member. International connection/recognition is established by publication.

HOW TO PUBLISH SUCCESSFULLY

For publication one must have vision (mindset to publish). Then he/she should apply for research grant at national/international level. A competent researcher is also vital for successful research work. Researcher should be trained properly and introduce him/her to current tools of publication such as Science Direct, Ingenta, Scopus, Engineering Village & the grade of paper through factor (Science Citation Index). Before submitting the paper the researcher should study the paper published by other researcher and identify the content and compare with his/her work. Special attention should be made on English language and spelling, grammar etc. Supervisor should check the whole manuscript before submission. The paper should be submitted to the best journal and if it is rejected then it can be sent to the next journal by considering the editors respond/comments.

BENEFIT OF PUBLICATIONS

The benefits of publication are manifold. Publication increases the recognition of institution in the world in certain areas of research. Publication contributes to the knowledge in that particular area. Publication enhances critical thinking, data analysis capabilities and interpretation. Publication gives chance to be offered as invited panel reviewer. Publication disseminates the knowledge technology and idea among peoples. New product and idea emerge from the research and publication.

CHALLENGES IN PUBLISHING

- If you are successful in publishing a lot, your colleagues will appreciate you.
- Learn from your experience and become motivated.
- People will despise you because they feel threaten.
- People will make remarks as recycled paper, re-hatch paper, renamed title but with the same content.

HOW TO HANDLE EDITOR'S COMMENT

The author must follow or comply with the comment. If the editor comments that data is not enough it is wise to rerun the experiment. If it deems that the author is correct then rebuts the comment with explanation and argument. If the paper is totally rejected, do not despair; take it as a challenge and lesson for further improvement. If accepted as it is, the publisher will send an uncorrected proof paper. For the case of minor correction: the paper will be corrected by journal secretariat, authors must indicate interests, 1-3 months. If there are major correction: collect additional data, conduct additional experiment, reorganize paper and do as instructed by editor / reviewer. If rejected: send to another journal, conference. If published, consider it as lower stair to go to the next.

Publication Ethics

If it is a group research, all researchers, supervisors name should be included and the contribution of technicians should be acknowledged. The author should acknowledge the contribution of the funding agent. Never attempt to plagiarize if needed to quote give reference in reference section.

UNIVERSITY OF MALAYA ENCOURAGES STUDENT TO PUBLISH

The University of Malaya encourages student to publish journal paper by providing financial support and research facilities. The following section describe in details.

Research assistantship/fellowship

University of Malaya provides research assistantship and fellowship to the student to support their financial need. Individual faculty member can appoint research assistant to carry out research work for the fund they received. The student can apply for fellowship in university. University offers fellowship each semester. Qualified student with good academic record are awarded this fellowship. Fellowship is awarded up to two years for Master degree and three years for Ph.D. candidate. The fellowship is managed centrally by the university authority.

Research facilities

The university has state of the art research facilities and experienced staffs. As an example Department of Mechanical Engineering has computerized engine test bed to carry out engine performance and characteristic, Horiba gas analyzer to analyze engine emission. The faculty has lube oil analysis laboratory. The lube oil analysis laboratory has comprehensive testing and evaluation facilities that provide condition monitoring for any closed loop lubricating system such as those in machines and engine system. The available facilities are Multi Oil Analyzer (MOA), Fourier Transfer-Infrared (FT-IR) Spectrometer, Automatic Viscometer, particle quantifier Titrator and Coulomatic Karl Fisher (KF). Apart from this, there are other equipments such as Scanning Electronic Microscope (SEM) X-ray Diffraction (XRD) and etc. Equipments are continuously upgraded to cope with the present demand. University provides financial support to purchase the equipments

and consumables to carry out the research. University also bears the expenditure to carry out experiment outside the university if necessary. The university has three research centers to do research work jointly such as Center of research in energy science in Mechanical Engineering Department, Centre of Research for Power Electronics, Drives, Automation and Controls (UMPEDAC) in Department of Electrical Engineering and Centre for Product Design and Manufacturing (CPDM) in Department of Engineering Design & Manufacture. The key objectives of the centre are to conduct research and consultancy on the areas such as alternative fuel, engine performance and emission monitoring, machine elements, energy conservation and emission mitigation, thermo fluids, solar energy, lube oil testing characteristic, metals corrosion and polymerization, power electronics and electrical machine[3-5].

The research center consists of more than 10 laboratories, equipment facilities worth more than Ringgit Malaysia (RM) 50 millions and research team with academic members and researchers. The research team members have substantial experiences on their respective research fields. The center is strongly committed to expand the whole infrastructure to fulfill the research objectives of the university as well as national demands [3-5].

The university has research network with government institutions such as Ministry of Science, Technology and Innovation, Ministry of Energy, Water and Communication, Malaysia Energy Centre, National Energy, National Energy Ltd. The university too has research network with industries such as PROTON Berhad, PETRONAS Berhad, Private sectors like Quantum & Amtec Lubricants Sdn.Bhd., Malaysian Palm Oil Board (MPOB). University of Malaya has also research network with foreign universities such as University of New South Wales, Australia, University of Glasgow, UK, KEIO University, Tokyo University, Japan, University Gajah Mada, Indonesia, Saga University, Fukuoka University, Kyoto University, Japan to name a few.

Publication facilities (internal or international journal publication)

University of Malaya engineering faculty has its own internal journal called International Journal of Mechanical and Materials engineering (IJMME), where student can submit their paper for publication. The university provides link to other journal where student can submit their paper online for publication. The Engineering Faculty has a library for engineering student and a central library where the student can borrow books for their study. The library provides online service for searching and renewing books. Student can also purchase desired books, thesis and journal paper through the library if relevant research materials are not available. Faculty of Engineering organizes conference named TECHPOST for the postgraduate student each year.

Journal data base/Internet facilities

The whole campus of the university is connected with optical fiber and wireless network. The university provides access to the journal data base such as Scencedirect, Scopus, Springer e-book, Taylor and Francis online journal and Wiley Interscience etc. Student can download journal paper from this Journal data base and be acquainted with the latest research on particular research area. Individual postgraduate student can apply for Internet Protocol (IP) address for their personal computer to browse internet. There are some WIFI zones called HOTSPOT where student can use wireless internet. Each student of this university enjoys the privilege of wireless internet connection.

Opportunities to present paper in international conference/seminar

There are opportunities for the postgraduate student to attend conference/seminar using the R & D grant. The university also provides financial support for student to present their paper in conference/seminar.

CONCLUSIONS

To be successful in publication student must work hard and never give up, be patient and persevere. The joy will come after making a breakthrough. Furthermore after publication the challenges, secret and art of publication will be known. Publication developed the quality to judge the results of research and determine that they are publishable.

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