Scientific Research, Writing, and Dissemination (Part 4/4):
Dissemination of Scholarly Publications

Diana Starovoytova
School of Engineering, Moi University P. O. Box 3900, Eldoret, Kenya

Abstract
Dissemination of research-findings, is usually seen as the culmination-stage of the entire research process, and, hence, this article closes the tetrology on Scientific Research, Writing, and Dissemination. The study was designed to survey and analyze dissemination awareness, patterns, and preferences, on scholarly-journal publications, by Engineering-faculty. The study utilized a survey, interviews, and a document-analysis. The major-study-findings exposed 82% of the respondents, who stated that: (1) they usually disseminate their research in Open-Access (OA) Journals, which are both print & e-format; (2) they usually publish in International Journals; and (3) OA can be beneficial, as it gives wider dissemination of research-works. 73% usually publish in specialty-journal(s), while 64% in publishing house(s) or platforms, with many journals. 55% and 36% of the respondents indicated that U.S.A. and UK is the most prestigious country, for them, to publish, respectively. 55% also stated, that works, in OA Journals, are not properly peer-reviewed. To give a broader perspective, the synopsis of the publishing process, alongside with the dissemination channels (Traditional print journals and ‘The Cost of Knowledge’ campaign; OA Journals, including Predatory journals; Institutional Repository (IR); Social-networks; and Conference-presentations) and other relevant issues, such as: Future prospects of the dissemination; Credibility and ranking, of scientific journals; Publication Ethics in scientific publishing; Choosing an appropriate journal; Submission of a manuscript, for review; and increasing citation rates of a publication, were presented. Moreover, constructive criticism, on the current practices, in the local context was articulated, next to relevant recommendations, to improve the situation (at the level of: government, university, school, and individual faculty). In addition, two areas for further research, were identified. This paper reflects the personal and independent opinions of the author and does not mirror the positions on the subject matter of the affiliated school, or university. The author trusts this publication is very tangible, as well as, timely; it is, therefore, expected to attract a great deal of attention, from different researchers, regardless of their discipline, stage of career development, experience in publishing, country, and type of their institution, among others.

Keywords: academic ranking of journals, questioner, citation, outlet, journal selection, journal publication, publishing, manuscript submission.

1. Introduction.
1.1. Scholarly publishing
Humanity has an access to works, of all great scientists, engineers, and inventors, because they did publish, their research-findings.

Scholarly publishing is a symbol, and a fundamental aspect, of knowledge generation and circulation (De Beer, 2005), as according to Miller & Legg (1993): ‘if it [research-finding] wasn’t published, it wasn’t done’. Besides, scholarly publishing is considered the norm, for disseminating and validating research results; it is also essential, for career advancement, in most academic and professional fields (Ondari-Okemwa, 2007).

Many contemporary commentators and analysts argue, that scientific research and publishing, in Africa, is now lagging far behind other regions, in the world, and in dire need of large investments, to catch-up with other-developing regions (World Bank, 2005; Sachs, 2005; Hassan, 2001). Many researchers suffer, from poor working environments, low pay, a lack of equipment, and career prospects, which are damaging morale, among African researchers, and forcing them, to migrate, to industrialized nations (Tijssena, 2007).

Besides, scholarly publishing, in south Saharan Africa, also faces numerous challenges, including: technological, socio-political, economic challenges, as well as, an environment, which does not support scholarly publishing. On the other hand, the scholars, of the region, probably lacking financial resources, research facilities, and the modern IT infrastructure, however, they do, best understand relevant dynamics, socio-political and economic issues, which need to be captured and recorded, by way of scholarly publishing.

1.2. Research purpose
The Kenya government is restructuring university education, in a view of the country’s economic blueprint, the Vision 2030, and the Kenya new constitution, 2010. This calls for universities, to be more innovative, research focused and publication productive. Universities that do not build, and strengthen their research capacity, will be severely restricted. Hence, an enormous pressure is put on academics, that they must publish more research. Moreover, research publications carry substantial weight, in the faculty selection, promotions,
and overall-professional-growth. Therefore, publishing is no-longer-optional, but absolutely-mandatory, to any-academician, who-wishes to-keep-their-employment and, moreover, be-promoted.

Publishing research-findings is a-fundamental-element, of the-professional-life of an-academician-researcher. Yet, for-many of us, academic-writing is not the-most-beloved-activity, and getting a-paper published can be a-very-tiresome, time-consuming, challenging and overall-repulsive-process (Derntl, 2014). Researches, of all-categories are under-increasing-pressure to-publish, for career-prospects and professional-recognition; this is particularly-true for those, in their-early-career-stages. Greenhorn- researchers, commonly-underestimate, the-value of their-work, and fail to-disseminate, the-outcomes of their-efforts, appropriately (Schober et al., 2009).

On-the-other-hand, the-desperation and ever-increasing-pressure to-publish, might-have, direct and adverse-effects, on-quality of publications; temptation to-find-short-cuts, and easy-ways to-publish (by-plagiarizing), which in-turn, can-compromise the-very-essence of publication-ethics. In-addition, according to Teferra (2003) poor-dissemination-practices, also hold-back potential-developments, in-research. According to-report by Research-Information-Network (RIN, 2009):

Many-researchers are confused by the mixed messages they are receiving as to how best to communicate their findings. If they are to make optimal use of the various communications channels open to them, it is essential that researchers should receive more consistent and effective guidance on their use of different-channels.

Moreover, the-motivations leading researchers to-publish in-different-outlets, particularly in scholarly journals, differ significantly across-disciplines.

Numerous-studies, on the-issue of scholarly-publishing and dissemination, were conducted, by-authors, from different-countries, all-over-the-world; for-example, by Bartholomew (2011); Mutwiri (2014); Wasike (2013); European Commission (2012); Nariani & Fernandez (2012); Anuradha et al. (2011); Ware (2011); Creaser et al. (2010); Utulu & Bolarinwa (2009); Gideon (2008); and Van de Sompel et al. (2004), among-many-others.

One of the-things that stand-out, however, is that, none of these-studies has-been carried-out in-Kenya, and in-Engineering-School, in-particular. This-study, therefore, is-designed to-survey and to-analyze dissemination-patterns, barriers and preferences, by the-Engineering-faculty, at a-local-context.

In-addition, to-provide broad-coverage, on-the-subject-matter, main-dissemination-channels (Traditional print-journals and ‘The Cost of Knowledge’ campaign; OA-Journals (OAJs), including Predatory-journals; Institutional-Repository (IR); Social-networks; and Conference presentations), and other-relevant-issues, such-as: Future-prospects of the-dissemination; Credibility and ranking, of scientific journals; Publication Ethics in-scientific-publishing; Choosing an-appropriate-journal; Submission of a-manuscript, for-review; and Increasing citation-rates of a-publication, were-presented.

2.1. Focus and steps of the-study

The-focus of this-study, shown in Figure 1, is on Publishing & Dissemination, of research-findings, and on its-impact (citations).

![Figure 1: Focus of the-study (modified from Starovoytova 2017a).](image-url)
The study followed the steps, which shown in Figure 2.

![Figure 2: Sequential parts of the study (Starovoytova & Namango, 2016a).](image)

In addition, readers can refer to Starovoytova et al. (2015), to find useful summary, regarding Kenya and its educational system. Besides, study by Starovoytova & Cherotich (2016) provides valuable particulars, on the university and the school of Engineering, where the study was conducted.

2.2. Sample-size
To evaluate perceptions on dissemination of research findings, by the engineering faculty, a-designed confidential self-report questioner was used, as the main instrument, for this study, with the sample size of 15 subjects. The sample was selected from senior academic members; excluding positions of assistant lecturer, tutorial fellow, and graduate assistant. This choice was based on the assumption, that more junior members of academic staff, might not yet published, enough, to have some definite opinion regarding dissemination experiences.

2.3. Main instruments of the study.
This study applied a projective technique, by requesting questionnaire respondents questions, about their perceptions on dissemination of research findings. The respondents were guaranteed confidentiality, and the questionnaire was filled in anonymously, with no specific identification information, however the host department was indicated.

The designed self-report questionnaire was used in eliciting information, from the subject sample; it consisted of two sections, first section is the demographic characteristics of the subjects; second section, is the perceptions on dissemination of research findings, by the faculty.

In addition, phone interviews were also conducted, to get some additional information, not-covered, in the questionnaire. Moreover, comprehensive document analysis was done, to bridge the gaps of information.

2.4. Data Analysis
The questioner was pre-tested, to establish its validity and reliability, according to Hardy & Bryman (2004) and Kothari (2014). Cronbach’s alpha coefficient was calculated, as per Cortina (1993), using the Statistical Package for Social Sciences (SPSS-17, version 22)-computer software program. Descriptive statistics was used to analyze both; qualitative and quantitative data.

3. Results and analysis.
3.1. Validation of the questioner
The questionnaire was found adequate; the length of the entire instrument established was suitable; the text was logically organized. It was considered as acceptable, with some minor editing. The responses were coded, entered into SPSS, and checked for errors. Data were analyzed, list-wise, in SPSS, so that the missing values were ignored. Cronbach’s alpha test of internal consistency was performed, for perceptions and self-reports, on dissemination of research results, and established good inter item consistency (Cronbach’s $\alpha > 0.8$), according to guideline, for interpreting correlation coefficients by George & Mallery (2003), ‘$>0.9$ - Excellent, $>0.8$ - Good, $>0.7$ - Acceptable, $>0.6$ - Questionable, $>0.5$ - Poor and $<0.5$ - Unacceptable’.
3.2. Analysis of the questionnaire.

Total of 15-questioners were administered, out of which, 11 were submitted-back, giving a response-rate of 73%.

3.2.1. Analysis of part 1: Demographic-Characteristics

Figure 3 shows the demographics of respondents.

Figure 3: Demographic-characteristics of the respondents (Starovoytova, 2017a)

For additional information on the gender-imbalance and the ageing-faculty, at the school, readers can refer to Starovoytova (2017a).

3.2.2. Analysis of the responses, to-the-questioner.

The questions 1, 3, 4, and 5, were multivariate, in nature, thus participants indicated more-than one-preference.

Q1. Mainstream of the respondents (82%), disseminate their research-findings in OAJs, which are both; print & e-format; 55% -- in print-journals, with commercial-publishers; 27% -- in Institutional-Repositories (IRs); and 18% equally, in both; OAJs (e-format only) and self-archiving.

The reasons for print-publications, from consumer-point of view, are: (1) Many-institutional-libraries require hard-copies; (2) Hard-copies are mandatory, in some-universities, for promotion, of academic-staff; (3) To ensure that the publications are accessible, to-areas without Internet-facilities; (4) Many-scholars still prefer to-read articles, in-tangible (print) form; and (5) Persistent-perception, in-academia, that printed journals are more-prestigious, than online-journals.

On the other hand, the survey by Nariani & Fernandez (2012) showed increased-author-publishing, in OAJs. Utulu & Bolarinwa (2009) studied the awareness and use of OA-outlets, among Nigerian-academics. Regarding use, 30% of the respondents had deposited, their scholarly-works, as post-prints, while 35% used OAJs, in disseminating, their research works. Wasike (2013) also examined the status of 4 public-universities, in the implementation of OA, in Kenya, and found, that Kenya was still, at the intermediate-stage, of embracing OA, and that university-libraries were helping, in the adoption of OA-outlets. On the other hand, Mutwiri (2014) in her PhD-dissertation, conducted on 19 Kenyan-universities, concluded, that academics preferred traditional-publishing-outlets for dissemination, but they were associated with problems of accessibility, cost, and delays, in-publishing, while OA-outlets were allied with low-quality.

Q2. Majority (82%), usually publish, in International-Journals; 9% prefer to-publish, in both; African-journals and Local-journals.

This finding is in-accord with Alema et al. (2001), pointing out that scientists, in developing countries, often, do not publish in journals, from their own countries. This leads to a cycle of low visibility and low-submission, for indigenous journals.

Furthermore, in 2013, a research study on 330 African-based Journal editors and publishers, was done, by
African Journals OnLine (AJOL) and Clobridge Consulting (Murray, 2014). They summarized the majorcharacteristics of a ‘typical’ African-based journal: (1) over 60% of all journals, are from a university or scholarly/professional associations; (2) Most African-published scientific journals still feel the need, to offer printed versions, despite it being the biggest expense item, for the majority of such journals; Most journals (91%) are available in both; print and online; (3) Vast majority of the journals (91%) published in English; 4% in French; 1.3% in Portuguese; 0.95% in Afrikaans; and the remaining are in other languages, such as: German; Dutch; any of the official South African languages; Xhosa; Amharic; Kinyarwanda; and Yoruba. Surprisingly, no African journal is published in Kiswahili, according to Nairaland (2017), and yet, Kiswahili is the mostwidely spoken African language. It is spoken in the following countries: Tanzania 99%, Kenya 87%, Uganda 85%, Burundi 55%, Democratic Republic of Congo 48%, and Rwanda 28%. Kiswahili is also spoken in southern Somalia, Ethiopia, Sudan, northern Mozambique, and the Comoros Islands. It has more than 11 million native speakers (speak Swahili as first language) and more than 120 million secondary speakers. Although many of the non-English language journals indicate minimal coverage, in abstracting and indexing databases, this situation is changing rapidly, and most of these journals now provide English abstracts; an important firststep, in reaching an international audience; (4) For majority of journals, frequency of publication is only 1-2 issues, per year; (5) The largest share (32%) of African scientific journals are published in S.A.; Nigeria 30%; and the remaining 38% of journals, are published within the rest of Africa; and in addition (6) Nearly one-third of their respondents indicated, that their journal operates in a cashless environment, with no income or revenue, instead relying on volunteers time of peer reviewers, the Editor-in-Chief, and editors; and in kind support, from institutions, in the form of: provision of office space, office equipment, and the internet access. Their study also pointed out, that to publish high quality, contextually relevant, and development oriented research, there is a pressing need, for further professional development, and capacity building, particularly related to the technical aspects of supporting journals, moving journals online, working with online submission systems, XML markup, and other ICT related skills.

Another reason, why the respondents preferred International journals, could be, that many ‘Northern’ International journals, are capable to offer waiver or reduction, for publishing fees, to authors, from various developing countries, meeting certain criteria; and the situation is less, if at all, applicable, for African based journals. The waiver is of particular importance, in common case of self sponsored publishing, in many African universities. Moreover, Murray (2014), pointed out on ‘Impact Factor Fundamentalism’, within the scientific publishing industry, resulting in frustrations, surrounding Impact Factor, in that African researchers are forced to publish, in overseas journals, as African based journals, are yet, to become comparable.

Q3. Greater part of the subject sample (73%) usually published in specialty journal(s), and 64% in publishing house(s) or platforms, with many journals.

Most established academic fields have their own scientific journals, and other outlets, for publication, though many academic journals are rather interdisciplinary, and publish work, from several distinct fields, or sub fields. From the faculty interviews, it also transpired, that publishing in specialty journals, considered more prestigious, although really competitive.

Q4. 55% of the respondents indicated that U.S.A. is the most prestigious country for them, to publish with; 36% indicated UK; 27% Netherlands, and the equal share stated, that it does not matter to them, as they just looking for a reputable journal; and 18% equally stated that South Africa and Germany are the most prestigious country, for them, to publish.

The preferences (for U.S.A. and UK), made by the respondents, are rather logical, as Kenya is an English speaking country. Besides, according to STM (2015), there were about 28,100 active scholarly peer reviewed English language journals, in late 2014. Furthermore, recent study by Starovoytova (2017c), also pointed out, that ‘currently English has become de facto the language of science. To write and publish in other languages, restricts an author’s potential visibility to a small fraction, in comparison of that, when the article is written in English’.

Q5. Majority (82%), indicated that OA can be beneficial, as it improves, or gives wider and quicker dissemination, of research works; 36% stated reduced cost; while 9% pointed out, that it increases visibility of academic staff.

Indeed, researchers, generally are overjoyed, in seeing their articles benefit from the widest and fastest diffusion possible, offered by OA. OA offers the immediacy, of being able to, publish a new idea, and have it promoted, much faster, in comparison with some print outlets. In addition, McGrath (2016), pointed out, that ‘Disseminating to a wide audience increases the impact of your research a thousand fold’.

Many studies such as: Xia & Nakanishi (2012); Gargouri et. al. (2010); Norris et. al. (2008); Perkel (2006); Eysenbach (2006); Antelman (2004); and Harnad & Brody (2004) favoring similar OA advantages.

Q6. Regarding limitations of OA; 55% declared that works, in OAJ, are not properly peer reviewed; 18% stated, that quality of articles, published, in OAJ, is lower, than that of articles, published in printed journals; while equal share (9%) pointed out, that OA gives more opportunities that one work to be copied, and also that
self-archiving is time-consuming.

Similar-limitations were also-found, in-several-previous-studies; for-example: Moed (2010); Davis & Fromerth (2007); and Kurtz et.al. (2005), among-others. Besides, Creaser et al. (2010) conducted a-large-scale-study, in-Europe looking-into the-awareness, of scholarly-authors, toward OA. These-authors reported concerns over copyright-infringement, unwillingness to-place-outputs, and that the-content had not been properly-peer reviewed.

Phone-Interviews were also-conducted, to-get some-additional-information or clarifications, not covered, in-the-responses to-the-questionnaire. For-logical-flow of information, these-findings will-be analyzed, in later-sections, of this-work.

4. Discussion.

4.1. Research and publication processes.

From interviews of-the-faculty, several-more-junior-respondents have-indicated, that, at-times, they-are-puzzled and, even, confused, about publishing-process, in-itself, and also, they do not know, exactly, how to-become a-successful-scientific-writer, and a-well-published-author. The-following-account, hence, will-bring some-light, on the-subject-matters.

Scientific-research is one of the-obligatory-functions, of any-university. It-is-known to-be as a-process consuming time, resources, and efforts; and overall, is largely considered as, not-at-all, a-straightforward-process. Scientific-research has several-stages (Begovic, 2014; Masic et al., 2012): (1) Determining research-topic(s); (2) Choosing scientific-methods, of research; (3) Identifying study-design and data-collection-approaches; (4) Data-processing, analysis and interpretation; and (5) Writing and publishing a-scientific-article.

In-particular, every-scientific-research, from an-idea, to a-written-scientific-article, should-go through certain-phases: (1) the-review, of the-relevant-literature, on the-topic of research; (2) defining the-objectives and hypotheses of research; (3) sample-selection, for the-study; (4) implementation of research, based on-scientific-methodological-principles; (5) statistical-analysis; comparing the-obtained own-results with results of other-authors, published, in-scientific-publications; and (6) conclusions and specific-recommendations, for any-specific-applications. Most-complex and demanding-parts, such-as an-experimental-design, and a-project-outline, are, usually, conducted by-more-experienced-researchers.

After the-manuscript is complete, it-usually follows all-the-necessary-steps and actions, in-order-to-publish the-findings. Figure 3 shows the-manuscript-review, publication, and further dissemination-process, including its-main-players. The-process of academic-publishing, which begins, when authors submit a-manuscript, to a-publisher; is divided into-two-distinct-phases: peer-review and production. For-the-most-part, scholarly-journals use a-system of peer-reviewing or editorial-refereeing, to-select manuscripts for publication. Peer-review is a-fundamental-function of an-academic and scientific-publishing; as other-scholars (experts), in a-field, must find a-submission of satisfactory-quality and, therefore, acceptable to-be-published. Besides, the-degree of originality, of the-research, is one of the-major-criteria, for articles to-be-published, in-scientific-journals, usually-established, by-means of peer-review (Callaham et al., 2002). Peer-reviewed-publications also perceived, by-many, as a-guarantee, of the-independent, and official-recognition, of quality, alongside with long-term-conservation, of researchers’ results and efforts.

Another-benefit of the-process is an-indirect-safeguard, against-plagiarism, since reviewers are typically-familiar, with the-sources, referred, by-the-author(s); Lenin’s-doctrine applies once-again: ‘trust is good, control is better’.

Figure 3: Publication and dissemination (STM, 2015).
Peer-review involves editors and reviewers, who assess such matters as: the originality, significance, and validity of research findings, as well as, the fit of the work, with the scope and approach of the conference, journal, or publication series (The Research Information Network, 2010).

The detail of the process varies, among different publications, but in broad outline, there are three main approaches, to the peer-review of publications (The Research Information Network, 2010): (1) Double-blind review: where the identities of the reviewers and those, whose submission is being reviewed, are hidden, from each other; (2) Single-blind review: where the identities of those who have submitted the proposal or draft publication, are revealed to the reviewers, but not vice versa; and (3) Open review: which may cover at least three different kinds of arrangement, with increasing levels of transparency (the identities of reviewers and submitters are revealed to each other; the signed reviews themselves are passed, in full, to the applicants (and perhaps made available openly to anyone, who reads the publication; authors’ draft publications are made available on publishers’ websites, and reviews and comments are invited from anyone, who wishes to submit one).

Whatever the procedure, the final result is a decision, on whether: (1) to accept, outright; (2) accept, with minor revisions; (3) accept, with major revisions (where the author(s) should address all substantive comments, by the reviewers, before re-submitting); and (4) reject. In the case of 2nd and 3rd decisions, a necessary process of improvement, is considered to be one of the greatest strengths, of a peer-review process (Schneider & Whitehead, 2012; The British Academy, 2007).

Besides, a final verdict, to accept or to reject a manuscript, has been rather mysterious; most journals have carefully preserved the mystery, within the ‘black-box’ of editorial decision making (Knight & Steinbach, 2008). Even so, according to Babor (2004), the main factors, affecting the decision making are: (1) Scientific considerations (the importance of the findings; the originality of presented ideas; the sophistication of the research methodology; the appropriateness of the data analysis; and the potential implications or applications, of the reported results); (2) Stylistic factors (the quality of the writing; well organized structure; the clarity, of data presentation); and (3) Administrative factors (the length of the article, the amount of revision, required; and the appropriateness of the topic, to the journal’s coverage).

On the other hand, this supposedly objective system, for assessing the quality of articles, in reality, rather resembles a random process, for many authors (Osterloh & Frey, 2008). A critical investigation reveals a number of facts, that fundamentally question the peer-review process, as a quality assurance instrument (Starbuck, 2013; Osterloh & Frey 2008; Atkinson, 2001). Moreover, the traditional publishing process, presented above, has been criticized; the major critiques are: (1) low, or, even, no scientific value, of the mainstream, of presently published papers, and (2) very shallow (if any) peer review process; jointly pointing out that there could be a lack of efficient scientific exchange, and quality assurance, in today’s exceedingly diverse world of science, and unstoppable flood, of scholarly publications. Furthermore, editorial refereeing, although practiced, has been criticized, for its lack of transparency and objectivity, giving a potential freedom, of using editor(s’) prerogative of preferential treatment, for selected, known, to the editor(s), authors. Peer review, also attracts criticism, on the grounds that: (1) it brings delay; (2) it is not always effective, in detecting misconduct and malpractice; (3) the selection of reviewers may introduce bias into the system; (4) the judgments made are, sometimes, subjective and inconsistent; (5) it tends toward conservatism and suppresses innovation; and (6) it disadvantages interdisciplinary research (The Research Information Network, 2010).

To overcome some of the limitations, some authors, propose different approaches, to improve the quality, of the future publications. Poschel (2004), for example, advocates for a promising way, to improve matters, in a two stage (or multi stage) publication processes, with interactive peer review and public discussion, in new and traditional scientific journals (see Figure 4).
Keys: bold-arrows--basic-processes; dashed-arrows--optional-processes.

Figure 4: Two-stage-publication with interactive-peer-review and public-discussion, practiced in the-interactive scientific-journal Atmospheric Chemistry and Physics (ACP) and its-discussion-forum ACPD (Pöschl, 2004).

The other-issue, of a-real-concern, is Publication-Ethics. In-recent-study by Starovoytova & Namango (2017), the-authors concluded that:

To ensure quality and integrity of scientific and academic-publications, there should be a-collective, as-well-as, an-individual-responsibility and united, rigorous and dedicated-efforts by all-the-parties, involved, such-as: authors, particularly a-corresponding (first) author; reviewers, and editors.

After producing an-ethical and well-written-manuscript (as discussed, for-example, in recent-study by, Starovoytova (2017c)), it-should-be disseminated, through some-form of a-media. One-such-form is a-scientific-journal.

4.2. Journals

The-purpose, of any-research, should-be, to-extend human-knowledge, beyond what is-already-known. To-achieve this-purpose, the-research-findings, ought-to-be-shared, with scholarly-community, for ‘cross-fertilization’ of ideas; which is the-essence, of true-scholarship. According to European-Commission (2012) dissemination helps to-accelerate-innovation, avoid-duplication of effort, build-on-previous-research, as-well-as, involve citizens and society; it-is absolutely-necessary, in-order, for research-cycle, in-different fields, to-continue. Journal-articles are a-essential and broad-based research-dissemination-tool (Wyatt et al., 2013), as-such, they-form a-central-part, of the-process, of scholarly-communication and are, furthermore, a-vital-part of scientific-research, itself. The primary-purpose of peer-reviewed-journals is to-publish: original, accurate, reliable, and relevant-information; on which researchers, scientific-community, or the-larger-public, can-rely and build-upon.

A-journal, typically, accountable for 5-main-functions: (1) Registration: establishing the-author’s precedence; (2) Dissemination: communicating the-findings, to its-intended-audience; (3) Peer review: ensuring quality-control; (4) Archival-record: preserving a-fixed-version, of the-paper, for future-reference, and citation; and (5) Navigation, that is, providing filters and signposts, to-relevant-work, among the-huge volume, of published-material.

On-the-other-hand, some-local-journals, like for-example the-scientific-journal of the-school of Engineering, did not go-beyond, the-first-few-issues, before they collapsed, either, because of poor subscription and funding, or because of their-internal-contradictions. Regarding the-latter, once the-editors, and their-friends, had-published, themselves, and their-friends, and achieved their-immediate-objective, they lost-interest, in the-further-publishing.

Sir Robert Hutchison wrote, in-1939, that: ‘The amount of writings of a profession is a measure of its vitality and activity, whilst their quality is a rough indication of its intellectual state’. Besides, according to AANA (2007), it-is a-lost-opportunity, if the-profession does-not-publish. Therefore, it is only, logical, for the-school, to make-every-effort, to-revive the-school’s journal.

Besides financial-constrains, there-were also some-organizational-barriers, to-effective-dissemination, of research-findings. For-instance, all Theses and Dissertations, of MU, after defense, are deposited, in-print-format,
to-the MU’ library; however, they are only available, selectively, to-the-students and staff, who-wish to-consult the-documents, for their-study. In-addition, the-documents can-be viewed, only in the-library-premises. It-would be much-more-beneficial, to-upload all-published-outcomes (in e-format), on the-IR of MU, providing free-access, to-all-faculty-members, as-well-as, to-students.

Moreover, according to Association of African-Universities (2009), authors can-upload their-work, at-the Database of African Theses and Dissertations (DATAD). The-limitation, however, is that the-database contains only abstracts and citations; in-addition, accessibility, to its-contents, is limited to-institutions, that have-subscribed. Besides, the Electronic-Supply of Academic-Publications (eSAP) for-instance, set-up an-electronic document delivery-system, by-means of the-Internet, between-universities (Mutula & Odero-Musakali, 2007). In-Africa, the-universities involved in the-project were the-Sokoine-University, University of Dar-es-Salaam, and St. Augustine-University, while in-Kenya, the-University of Nairobi (UoN), Kenyatta-University (KU) and the-Catholic-University of East-Africa (CUE) were involved. In-addition, there is also an-International-Network, for the-Availability of Scientific-Publication (INASP), which is a-co-operative-network, whose-mission is to-enhance, the-flow of information, within and between-countries, and more-so, between-countries, with less-developed-systems of publication and dissemination, like Kenya. In-this regard, the-university should approach DATAD, eSAP, and INASP, to make-use of their-facilities.

Choosing an-appropriate-channel, for-dissemination, is a-crucial-step, in a-journey, to-successful publishing. The-next sections will-address the-issue.

4.3. Ways to disseminate research-findings

4.3.1. Major-dissemination-channels

Dissemination is a-term meaning communication, or a-flow of information, from a-source, to-the recipient(s). Besides, CFHI ( ), provided the-following-description:

Dissemination goes well beyond simply making research available through the traditional vehicles of journal publication and academic conference presentations. It involves a process of extracting the main messages or key implications derived from research results and communicating them to targeted groups of decision makers and other stakeholders in a way that encourages them to factor the research implications into their work.

Dissemination of research-findings involves making the-results of research, as-well-as, its-point of departure, questions, and perspectives, known both; to-experts, in the-field, and the-public, at-large. Thus, dissemination plays a-major-role, in the-dialogue, between research and the-society, of which, it-is a-part. On-the-other-hand, according to KULVER: ‘Dissemination has been seen traditionally as more or less separate from the research process – first conduct research and then disseminate, particularly its findings’. Dissemination, however, is an-integral-part of research, moreover, without research, there would-be no dissemination. Public-oriented-dissemination of research cannot, necessarily, be-separated, from dissemination, to the-research-community (scientific-publication). Both; entail the-way, in-which researchers communicate with-their-environment, albeit in-various-ways, and via different-genres. Whereas, the-one-type of dissemination, is specialized, often, written in-English, for specialists, the-other type is-more-general, in that it-contextualizes more and is written, in-more-colloquial-language, for a-wider, yet, increasingly-well-educated-public (KULVER).

Researchers should-consider how the-results will-be-disseminated, from the-beginning of the-research-project, by-developing a-dissemination-plan. The-plan, usually-includes: (1) Purpose; (2) Target-Groups; (3) Method(s); (4) Vehicle; (5) Timing; (6) Responsibility of; and (7) Cost. The-target groups (audience) can-be: external (other-experts and members of global-scientific-community; Local-community; Local and central-government; Industry (Industry-associations, Service-providers, Standards-organizations, Publishers, and Suppliers); Media, etc.) and internal (Internal-employees (Project-staff and/or Department-staff); Managers (Department-Heads and/or Senior-staff); and students). Diverse-audiences have different-demands. For-example, Practitioners need to-know, what a-researcher has discovered, so they can-use the-conclusions and recommendations, to-improve their-own-work. Funders of research want to-know what a-researcher has-learned, in-order to-know that their-money was-well-spent, and will-want-others, to-learn, from the-work-done. Policymakers can-use findings to-improve-services and create-better-communities. Other researchers need-to-know about the-results, so that they-can-build-on and further-develop the-findings, rather-than wasting-time, money and efforts, in-duplication (McGrath, 2016). Each of these-groups finds information, in-different-ways, so it-is-important, to-share the-findings, through many-channels and media, to-reach all-target-audiences.

Besides, different-people, look-for and use, different-types of information. By-tailoring the-research output, to-the-way, the-target-audience finds and absorbs information, a-researcher can-make sure that they learn, about the-work and use-it, effectively. Funders find research-reports, especially ones with clear, brief-summaries, most-useful. Researchers look for research-reports, journal-articles, book-chapters, and conference-papers, especially if these-are, available electronically, and free of charge. Practitioners and policymakers find brief-

The-identification, of-the-audience, will-drive the-dissemination-plan, and determine the-appropriate-communication-methods. For-example, if the-project is a-pure-research, then the-audience, will-likely-be, the-scientific and/or academic-community. Therefore, science-journals, book-chapters, and conference-presentations, may-be appropriate. If, however, the-research is more-community-based, the-researcher(s) would be, more-likely, to-use social-media, flyers, blogs, or YouTube-videos.

On-the-other-hand, various-dissemination-channels are-available, such-as: Book or book-chapter; Peer-reviewed journal-articles; Policy-briefs; Press-releases; Institutional-newsletter; Video-clips; Brochures; Facebook Twitter/Google+; Podcasts; YouTube; slide-shares; Blogging, and Online-Reference- Managers, among-others. According to Ellinger (2011), the-last two-channels enable the-author to: (1) create-awareness and gain exposure; (2) find-collaborators and build-networks; (3) increase article-readership; and (4) increase number of citations. All-these-channels, however, should-be considered, less, as-individual-pieces, and, more, as-parts of a-dissemination-system.

Figure 6 shows the-major-ways of dissemination, of research-findings, while the-subsequent-sections provide relevant-details, on the-same.

![DISSEMINATION OF FINDINGS](image)

**Figure 6: Major-dissemination-channels.**

4.3.1.1. Traditional-print-journals and ‘The Cost of Knowledge’ campaign

Academic-publishing, has been, the-fastest-growing media-sub-industry, in-the-last-decade. Owing to-the ‘publish or perish’ mentality, the-number, of published-articles, and academic-journals, keeps-on climbing. Traditional-print-journals, are produced, either, by-scholarly-societies; by-publishing-companies, publishing-houses, or by scientific-journals. Although, there-are over 2,000 publishers, as of 2013, five-for-profit companies (Reed Elsevier, Springer Science+Business Media, Wiley-Blackwell, Taylor & Francis, and Sage) accounted for 50% of articles, published (Since 2013, Springer Science+Business Media, has-undergone a-merger, to-form, an-even bigger-company, named Springer Nature)(Larivière, 2015; McGuigan & Russell, 2008). For-example, in 2011, the-four-most-important-publishers (Elsevier, Springer, Wiley, and Informa) shared almost 50% of the-market, publishing 20,000 - 25,000 scholarly peer-reviewed journals (http://www.oft.gov.uk/news-and-updates/press/2002/).

On-the-other-hand, according to Bartholomew (2011), the-emphasis by universities is, that academic-staff use renowned-journals, such-as: Science, Nature, British Medical Journal, The Royal Society Journal of Medicine, Current Science, and many-more-others, so-called-reputable-journals, to-publish-with, their-research-findings. For-example, two of the-oldest, multidisciplinary and most-reputable-Journals, are: (1) Nature (established in-1869; Impact Factor (2014) - 41.456 (the-highest, of ever-published-journals); with no OA offered), and (2) Science (established in-1880, Impact Factor (2014) – 33.611; with no OA, as-well).

Up-until 1945, scholarly-publishing was supported, almost-entirely, by-scholarly-societies. Recently, the-commercial-sector has dramatically-increased its-share, of scholarly-publishing. Alexandrov (2006), and Guedon (2001), pointed-out on a-general-consensus, in the-academic-world, that the-publishing-process will-incur some-costs, and these-costs, will-have to-be-met; hence, the-reader pays, for publishing-costs. On-the-other-hand, over the-past-decades, prices have skyrocketed, with average-spending on journals rising by 302% from 1986 to 2004; and individual-titles, in-particular, are extremely-expensive. According to Johns-Hopkins-University (2013) annual-subscriptions, for some-academic-journals, exceed £20,000, in 2012. The-average 2013 price (per-title), for online-journals in the-Web of Science index, for-example, for Engineering-journals, is USD 1,942 (Bosch &
but it is done, in an ethical and transparent manner, without compromising the very essence of publication—popular, in many countries. As Byrne (2005) rightly observed, alternative outlets of dissemination, such as the processing-fee, reviewing-fee, and open-access charge) as a prerequisite of publication. However, the time from publishers break the tyranny of the luxury journals’. Moreover, Harvard University says, it can publicly-funded research, publications, that keep articles behind ‘pay-walls’. A memo, from Harvard prize. But no longer, he writes. ‘Just as Wall Street needs to break the hold of bonus culture, so science must must be freely-available (Medves et al., 2010). On the other-hand, Social Science Research Network (SSRN), Web of Science, Scholar, and Pubmed, and most importantly, some reputed publishers, do not-necessarily compel an author to pay fees (page-charges, processing-fee, reviewing-fee, and open-access-charge) as a prerequisite of publication. However, the time from the submission for review, to actual publication, can take, in some instances, up to 1.5 years. Desperate-authored, in most cases, however, have no-luxury of time. On the other-hand, many other reputed OAJs do charge fees, but it is done, in an ethical and transparent manner, without compromising the very essence of publication—ethics—its Quality.

Moreover, only print-media, however, may limit, sharing of research-results, with a wider audience and, hence, may make some academic-staff reluctant, to share their research-findings, in such-journals. The use of traditional-journals was also condemned by Van de Sompel (2004), who pointed out, that the established-scholarly communication systems have not kept pace with revolutionary changes, in publishing.

A compelling alternative, to the subscription mode of journal-publishing, is the OAJ mode, which usually involves a publication-charge, being paid, by the author(s). Due to a rather sensitive-market, OA has become popular, in many countries. As Byrne (2005) rightly observed, alternative outlets of dissemination, such as the use of e-journals, e-books, digital-libraries, multi-media, and OA Initiatives (OAI) are being adopted, by-
scholars. According to Gideon (2008), OA-Publishing (OAP) system emerged, in-response, to the-restrictive and expensive-access-to-knowledge, in-scholarly and scientific-journals, which is imposed, by commercial-publishing-houses, on one-hand, and the-advancement of the-Internet, and its-capabilities, on the-other. Consequently, pioneering-academics have taken the-massive-opportunity, offered by the-Internet, by starting their-OAJs.

4.3.1.2. Open-access Journals (OAJs)
The-definition of OA, proposed by the-Budapest-Open-Access-Initiative, in-2002, is as-follows:

Free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited (http://www.budapestopenaccessinitiative.org).


An old tradition and a new technology have converged to make possible an unprecedented public good. The old tradition is the willingness of scientists and scholars to publish the fruits of their research in scholarly journals without payment, for the sake of inquiry and knowledge. The new technology is the internet. The public good they make possible is the world-wide electronic distribution of the peer-reviewed journal literature and completely free and unrestricted access to it by all scientists, scholars, teachers, students, and other curious minds.

After the-declarations, some-universities, worldwide, began supporting the-OA-initiative, by becoming signatories, to-the Budapest, Bethesda, and/or Berlin-declarations, to OA. As of 2013, 664 are institutional-signatures; the-only-institution, in-Kenya, that is a-signatory, to this-initiative, is the-Rift-Valley-Institute of Science and Technology (Budapest, 2012). Moreover, the-Registry of Open-Access-Repositories Mandatory-Archiving-Policies (ROARMAP) is a-database, which shows the-growth of OA-mandates, by universities and research-institutions. The-database contained 410 registered-institutional-mandates, by August 2013, and only-two, from Kenyan-universities were-active, namely: the-University of Nairobi (UoN), and the-Strathmore University (SU) (University of Southampton, 2012). More-recent-study, by Matheka et al. (2014), reports that several-more-Kenyan-universities, now, have OA-mandates.

OA evolved, due-to two-main-reasons: (1) the-expense of subscriptions, to-bundled-journal-databases (known as ‘the serials crisis’) (Young, 2009); and (2) a-movement arguing, for-publically-funded-research, to-be made-available, freely, to-the-public, who had-paid, for-it. For-example, some-funding-agencies, frequently require, research-findings be-made-available, through OA. Such-policies are spreading-out, despite lobbying and heated-debates, on OA-model. For-illustration, French-funding-agency ANR; the-NIH, in-the-U.S.A.; and the-European-Research-Council all require OA-archiving. These-two-reasons are aligned with different-philosophical-approaches: one-economic, and the-other—democratic (Grabarek-Matthews, 2008).

Besides, more-recent-study by EC (2014) pointed-out, that the-growth of OA influenced by four-main forces: (a) historical-growth in the-interest in OA, which translates into new-papers, being increasingly-available, for-free, (b) the-growing-interest in OA, also-translates into actors, increasingly making old-papers, available for free; (c) OA-policies that allow for delaying OA to-scientific-papers with embargo-periods, creates additional-growth in old-papers, being made-available, for-free, and (d) the-number of published-scientific-papers, is growing, so, even for a-constant-proportion of OA, the-number of OA papers would-keep-on growing. On-average, as of April 2014, the-number of OA available-papers, increased by 9.4%, per-year.

Observing OA-development, over-time, shows an-impressive-growth; for-example: in-1997, all-publications were print-only; in 2005 - 40% e-only; 30% print-only and 30% print-plus-electronic (Butler, 2013). Laakso et al. (2011), for-example, report 18 % average-growth-rate, for the-number of journals, since 2000. More-importantly, the-number of published OA-articles exhibited a-yearly-growth-rate of 30 %, almost ten-times, the-growth-rate of journal-articles, in-general (3.5 %); in-2009, the-authors counted 4,769 journals, and 4 years-later; this-number has more-than-doubled to 10,006, in the-same directory, DOAJ. Total-Number of OAJs, established, in-selected-developed and developing-countries, per-year, for-the-period between 2009 and 2013, is: U.S.A. - 4,981; UK-2,551; in-Africa, Kenya is third, with 23-journals, following African-giants: Nigeria-127, and S. A. -217 (www.doar.org).

Recent-estimates place the-proportion of articles, published in OAJs, at about 12% (while OAJs make-up
about 26-29% of all-journals), with 5% more-available, via delayed-access, on the-publisher’s website, and an additional 10-12% via self-archived-copies, while about 25% of authors are from-developing countries.

OA-publishing has also-led, to the-emergence, of a-new-type of journal, the-so-called mega-journal, (exemplified by PLOS ONE), which characterized by three-features: (1) full-OA, with a-relatively-low publication-charge; (2) rapid ‘non-selective’ peer-review, based on ‘soundness not significance’ or relevance, to a-particularly-community; and (3) a-very-broad subject-scope. The-number of mega-journals continues to-grow.

In-addition, since April 2014, over 50% of the-scientific-papers, published in (2007-2012) can-be-downloaded, for-free, on-the-Internet. Overall, out of the 4.6 million-scientific-papers, from peer-reviewed journals, indexed in-Scopus, during the 2011-2013-period, 2.5 million were available, for-free, in April, 2014. Based on the-adjusted OA-availability-statistics, one can-estimate, that about 47% of the-papers, indexed in-Scopus, between 1996 and 2013, can-be-downloaded, for-free, as of April, 2014. This means, that 10.1-million-papers, would-be-downloadable, out-of the-21.5-million-papers, indexed in-Scopus, for that-period, and which can-be-considered, to-be peer-reviewed-papers, published in-scientific-journals.

The-fields with the-greatest-proportion, of OA, are: General-Science & Technology (Adjusted OA=90%), Biomedical-Research (71%), Mathematics and Statistics (68%), and Biology (66%). However, OA is not as commonly used in-Visual and Performing-Arts (Adjusted OA=25%), Communication and Textual-Studies (31%), Historical-Studies (34%), Engineering (35%), and Philosophy and Theology (35%) (EC, 2014).

On-the-other-hand, benefits of OA included: (1) high-visibility (Swan, 2010); (2) improved accessibility; (3) increased-dissemination and citations; (4) reduced-production-costs, and (5) immediate community-awareness, of scientific-advances (Hernández-Borges et al., 2006). Moreover, many-publishers, of scholarly-journals, consider electronically-publishing and the-content, of their-publications, as reasonably-safe-way of advertising, their-publications and disseminating-scholarly-work (Pavliscak, 1996).

With-regard-to citations, various-studies showed that freely-available-articles consistently had higher-citations, than these, published under restricted-access (Larivière, 2015; Mcguigan & Russell, 2008). Eysenbach (2006) looked at-articles, published in the-Proceedings of the-National-Academy of Sciences (PNAS) and concluded, that ‘OA articles are more-immediately-recognized, and cited, by-peers, than non-OA-articles, published in-the-same-journal’, even after allowing, for self-selection.

Numerous-authors, worldwide, however, have reported very-different-rates, of citation-advantage (from 27% to, as-much-as, 600%). Moreover, according to Hajjem et al. (2005), the-increase varies, across disciplinary-fields and years; ranging between 36 % and 172 %. For-example: (1) According to Swan’s study (2010), OA has-proven-vari-lable, for-citations: in-a-meta-study of 35 studies surveyed, 27 showed a-citations-advantage (the-percentage-increase ranged from 45% to, as-high-as, 600%); (2) For-those, from less-developed-countries, the-effect is-more-profound: the-influence of free-access, on-citations, has been-shown-to-be-twice, as-large, for-the-poorer-countries, in-the-developing-world, compared to-richer countries, as-measured, by-per-capita gross-national-income (Evans & Reimer, 2009); and (3) Antelman’ study (2004), based on the-citations, in-the-ISI-Web of Science-database, and 4 disciplines, namely: political-science, electrical and electronic-engineering, and mathematics, found, that in all-the-four disciplines, freely-available-OA-articles have a-greater-research-impact (citations).

Besides, according to EC (2014), on-average, the-citation advantage of OA-papers is 40.3%, while the-citation-disadvantage is 27%, for non-OA-papers (based on a-total-research-sample-size of 209,000 papers). In-addition, OA-papers were between 26% and 64% more-cited, on-average, for any-given-year, than all-papers combined, whereas non-OA received between 17% and 33% fewer-citations (based on a-sample-size, of at-least 10,000 papers, any-given-year).

Xia & Nakanishi (2012), in his-article, on OA, also explored the-geographic-distribution, of OA-practices, at-the-global-level, with a-keen-interest, on the-expansion of OA, over-space, and time. Besides, during 1992-2003-period, the-share of cross-national-citations grew from 42% to 48%, another-sign of the-increasing-globalization, of science (NSF, 2006).

According to the-Publishing and E-learning-Consultancy (2006) there are 3-main-options of OA-publishing: (1) Immediate full OA: the-entire-contents of the-journal are made freely-available, immediately-on-publication (for-example PLoS Biology); (2) Hybrid and optional OA: here, only part of the-journal-content is made immediately-available. There are two-distinct models: (a) The-journal makes its-research-articles immediately-available, but requires a-subscription, to-access other ‘value-added’ content, such-as commission-ed-review-articles, journalism, etc.(an-example is BMJ); (b) The-journal offers authors the-option to-make their-article-OA, in-an-otherwise subscription-access-journal, in-return, for-payment of a-fee (e.g. Springer’s Open Choice or OUP’s Oxford Open schemes); and (3) Delayed OA: the-journal makes its-contents freely-available, after a-relatively-short-period, typically 6-12 months (e.g. the-majority of journals on-the-HighWire-platfrom).

On-the-other-hand, adoption of OA, according to the-Budapest-Open-Access-Initiative would-involve two-main-outlets: OAJs (gold OA) and Institutional Repositories (IRs) (green OA). The ‘gold’ OA or 'author pays’, based on-the-notion, that, if an-OA-journal does not charge readers, it has to-charge authors, in-order, to-sustain
it (Budapest, 2012).

Furthermore, *not* every OAJ is a legitimate, reputable, or trustworthy. Escalating-number, of new-questionable-publishers and OAJs, has recently-emerged, as a-very-lucrative-business, and an-easy and much-faster-way, for desperate-authors, to-publish. Besides, many, so-called ‘predatory’ commercial journals, due-to monetary-motivation, insistently-advertise, and, even, guarantee, publication of any manuscript, rapidly, and at an-affordable-cost. The-former will-be addressed, in the-next-sub-section.

4.3.1.3. Predatory-journals

Out of 82 % of respondents, published-severally, in-OAJs, few-interviewed-faculty reported, that they were *not* confident, that the-OA-journal, they have-chosen, is a-legitimate-one, and they did *not* know, exactly, how to verify the-journal’s status. This is in-accord, with the-findings of McNaught (2015), who pointed-out, that researchers really-struggle, to-differentiate credible-journals, from a-new-wave of ‘low credibility,’ counterfeit, and predatory-journals’. Moreover, according to Willinsky (2010), the-combination of OA, online-publishing with the-demand, for increased-publication-rates, from academics, has-created the opportunity, for predatory and counterfeit-publishing, to-evolve, exist, grow, and prosper, within the-sector. Private-individuals and groups, have created bogus-journals, which-appear, to-replicate credible, peer-reviewed-journals and made-these- available, through OA (Beall, 2010).

Predatory-journals have-begun, to-reposition-themselves, in the-market, to-provide OA-publishing, and simultaneously, to-provide an-easier and faster-way, to-publish, is in-a-contrast to-traditional-publications, that tend-to-take an-extraordinarily-long-time, prior to-being-available for access, within both; the professions and the-community, at-large. The ‘low-credibility’, counterfeit, and predatory-journals, are also an-excellent-potential-source, of publication, for dishonest-authors. It-is-likely that under ‘pressure to publish’, an-academician may-opt to-publish, in a-journal, knowing-well, that it-is predatory or counterfeit, because their-misconduct is unlikely, to-be-detected. Predatory-journals, which, previously-lacked professional-presentation and were easy, to-identify, now, maintain websites and publications, that mimic the-highest-standards, of publication and electronic-presence.

The names of predatory and fraudulent-journals, can-be-obtained *via* a-list, maintained and updated, by Jeffrey Beall, whose website ‘Scholarly Open Access’ attempts to-critically-analyze OA, in-academia (Beall, 2013). Moreover, detailed-description of predatory-publishers, journals, and related-issues, is available at http://scholarlyoa.com/publishers/. The-Beall’s List of predatory-publishers and Journals, has-grown, in-size, from merely 18, in-2011 to-nearly 700, in-2015. Analogues, according to Hussein (2016), the-global-number of predatory-publishing-entities has-increased (during 2013–2016 period) as-follows: Standalone-journals --from 126 to 882 (700%); and Publishers-from 225 to 923(410%).

Beall’s-list also-contains over-twenty-six misleading-metrics companies, fabricating spurious-variants of Impact-Factors. Furthermore, many-fake-indexing agencies, societies, and academies, have-created false-identity, to-sound or to-appear, similar to-reputed-agencies. Beall’s-list provides primary-guidance and information on-predatory-publishers, predatory-standalone-journals, misleading-metrics-companies, and also hijacked-journals (http://scholarlyoa.com/2015/01/02/bealls-list-of-predatory-publishers-2016/).

Besides, according to Patwardhan et al. (2014), several-journals, starting-with-names like ‘International’, ‘Global’, ‘Asian’, etc. are bogus, spurious, and predatory. According to Xia (2012), most authors, published in ‘predatory’ journals, are from-developing-countries, particularly Nigeria, India, and some-African and Middle-East countries. This-mainly-happens, due-to-the-fact, that most of the-authors forced, to-self-publish, their-research-findings.

The-portrayal, presented-above, illustrates a-new-specie, of OAJs (low-credibility, counterfeit, and predatory-journals) as an-ever-growing hungry-‘monster’, which uses desperation and inexperience, of many-authors, to its-advantage. Despite, that the-‘monster’ is still-an-infant, making only about 3 % of all-OAJs, it-is growing very-rapidly, fed by the-unstoppable-greed, corruption, and devious-ingenuity, of the-founders and managers, of such-journals. This-situation, *cannot* be-left unattended, and expectedly, should-lead-to an-establishment of an-international-independent-body, responsible for close-monitoring and, even, ‘policing’, of OA-publishing-sector. The-main-function of that-body will-include establishment and enforcement, of an-individual mandatory-certification, *via* meticulous-evaluation, of publisher’s-credibility (to-allow the-legal-operation, of an-OA-publisher). In-its-absence, however, authors, themselves, should-be very-cautious, to-cross-check, the-chosen-journal, through Beall’s-list.

The-other (‘green’) route to-OA is *via* self-archiving, in Institutional-Repository (IR); will-be given a-closer-look, in-the-next-section.

4.3.1.4. Institutional-Repository (IR)

As the-name implies, *self archiving* - is a-process, in-which, authors, themselves, upload a-copy, of their published-articles, and, even, unpublished-work, to-be-available, free-of-charge, for-everyone, on-the Internet or *via* Institutional-Repository (IR). IR is referred-to as the ‘Green Road OA’, established for purposes of collecting, preserving, and disseminating the-intellectual-output, of an-institution, which is in-digital-form. This-repository
might-be an Institutional-Repository (IR), run by the-institution (typically a-university) or a-central subject-based repository, such-as, for-example: arXiv, in-physics, and PubMed Central, in-biomedicine (Publishing and E-learning-Consultancy, 2006).

The-two-main-objectives, for having IR, are: (1) to-provide OA, to-institutional research-output, by self-archiving it; and (2) to-store and preserve other-institutional digital-assets, including un-published, or otherwise, easily-lost (‘grey’) literature (e.g., theses or technical-reports). Universities can-also benefit, from-showcasing, their-research-outputs (Publishing and E-learning-Consultancy, 2006).

There-are 3-main-versions, of the-article, that the-author might-archive: (1) The pre-print: this is the-author’s final-draft-manuscript, of the-article, prior-to-submission, to-a-journal and the-peer review process; (2) The post-print: the author’s manuscript, after it-has been peer-reviewed, and the-comments of the-reviewers and the-journal-editor added, but prior to-copy-editing and other-additions (such-as reference-links); and (3) The publisher’s version: the-final-version, following copy-editing, typesetting, and layout, tagging for reference-linking and links, to-other-services (typically a-pdf-file).

According to McGrath (2016), one should also ‘self-archive’, or upload, their-publications, to-their-own-blog, or an-online-archive, such-as: www.mendeley.com/, www.academia.edu/ and www.researchgate.net/ (for sciences and engineering) or www.zotero.org and www.ssrn.com/en/ (for social-sciences). Before self-archiving, however, one must-ensure that they are legally-entitled to-do-so (the-copyright-owner-controls, whether and how one can-share the-results of study).

Moreover, authors are also-obliged, to-deposit copies, of their-books, reports, articles, or newsletters, in a-number of specified-libraries called legal-deposit (copyright-deposit) libraries, in-the-author’s-state. To-find the-legal-deposit-libraries, in one’s country, authors can-check: https://en.wikipedia.org/wiki/Legal_deposit; and then, simply post-their-publications, to-the-legal-deposit section, of the-library. This-way, anyone, wanted-to-read, the-publications, can-find-them, as they will-be-included, in-libraries’ catalogues, they-will also be-picked-up, in-the-Internet-searches, especially through the worldcat.org site, which lists the-contents of libraries, worldwide. In-addition, libraries manage most-repositories, so sending electronic-copies, means they will-also-get-included, there. Besides, if-an-author is employed by-an-organization, that has-a-repository (e.g., a-university, or a-research-institute), they should-upload a-copy, to-their IR. To-find a-relevant-repository for a publication authors can-check: www.opendoar.org/countrylist. Furthermore, if-a-researcher created dataset(s), during the-course of their-research, they-should deposit them, in-an-archive, where other-users can-reuse, their-data, as-long-as the-authors have-received-consent, from-the-participants and ethical-approval, for-archiving (McGrath, 2016).

Research-findings of-a-study, by Krishnamurthy (2008) showed, that in-2007, Europe had 372 IRs, North-America 196, Asia 88, and Africa, only, 9. One of the-contributing-factors, to such-slow-progress, of IRs, in-Africa, could-be-attributed to-an early-stages of e-maturity, of African-universities. Moreover, university-publishing-in-Africa, barely sixty-years-old (1955-2016) and it could-be-considered, at its ‘infant’-stage, in-comparison to its-beginnings, in-the UK, with the-Oxford University, in-1478, and its-introduction in-the U.S.A., at-the-Cornell-University, in-1869. Besides, a 2009-survey, carried-out, by the-Kenya-Libraries and Information-Services-Consortium (KLISC), evaluated the-extent, to-which institutional repositories (IRs) had-been-established, in-Kenya. It confirmed, that many-universities were in-the-development-stages of policy-issues, customization and submission (Morris, 2011). The-situation, however, is slowly-improving, as currently(www.doar.org), in-Kenya, total No. of IRs is 9, of which 4, are in-universities, with a No. of items, deposited in-the-IRs 58,377, while nearly 50,000 from-the University of Nairobi (UoN). This-information indicates, that in-Africa, including Kenya, IRs is, yet, to-be fully-appreciated and adopted. In-the-local-context, MU’ IR is, yet, to-be-realized.

On-the-other-hand, Czemiewicz & Wiens (2013), in-their-study, provided an-excellent-illustration, of direct-benefits, of IR. They described an-article, that was accessible only through-a-subscription, of USD 593, for 12 issues, or by online-access, to-the-single-article, for 24hrs, at-a-cost of USD 31.50, however, after it had-been legally-deposited, into-a-university-repository, it had-been-downloaded (from IR) 2,356 times, at-the-time of their-writing. Ironically, the-journal, in-which the-article, was-published, subsequently-offered an OA-publishing-option, at-a-cost, to-the-author of USD 3,000.

IRs is, definitely, a-way-to-go, for any-African-university; hence, IR provides a-valueable-mechanism, for Kenyan-researchers, wishing to-improve their-online-visibility, share their-scholarly-output online, extend their-research-networks, and make their-work-available, free, to-all, with the-Internet-access. Kumar et. al. (2011), note that: ‘Institutional repositories should become an integral part of scholarly communication’. For an-IR, to-be-successful, and serve its-full-potential, it-is-imperative, that its-faculty are aware of its-existence, understand its-value, and be-willing, to-contribute their-scholarship.

Furthermore, academic-staff plays a-crucial-role, in-self-archiving (deposing) their-research-works, in-the-IRs, or providing their-works, for-deposition; an-activity, which require high-levels of awareness, good-will, discipline, and dedication. Dulle & Minishi-Majanja (2010) concluded, that addressing-issues, relating to-
researchers’ self-efficacy, fears, and misconceptions, ICT-infrastructure, researchers’ information-search, publishing-skills, and policies, would-enhance the-adoption of repositories, among-researchers. At-the-level of the-Ministry of Education, the-legal-policy should-be-established and enforced, that every-university, regardless, if it-is public, or private, must-establish their-IRs. Cross-checks, on-the-growth, of respective-IRs should-be conducted, periodically, by-the-independent-body. MU should-establish and maintain its-IR. Secondly, a-responsible-faculty, from each-school, should-be appointed, to-ensure, that all-the-scientific-publications, done by the-school’s faculty, are timely submitted, to the-IR.

27% of the-respondents, in-this-study, claimed, that they have-deposited, their-research-findings, at IR, where-the-author deposits (self-archive) a-version, of the-published-article, typically a-pre, or post-print, in an-open-repository. According to the-University of California (2007), 79% of respondents, in-their-study, were ‘not aware of’ or ‘aware of but don’t know much about’ digital repositories (DRs), while 8% had submitted to DRs. In 2011, Kim investigated the-perceptions of faculty-members, from 17 Carnegie Doctorate-granting-universities, in the-U.S.A., regarding IRs. He-reports, that about 60 % were-unaware, of their-university IRs. Singhe et al. (2013), also-reported, that in-their-study, plagiarism was the-major-barrier, for their-faculty’s willingness, to-participate in-the-IR. Mischo & Schlembach (2011) studied Engineering-faculty, at the-University of Illinois. The-survey-results show, that their-faculty published little, in author-pays ‘Gold’ journals.

4.3.1.5. Social-networks

Social-media such-as: Pinterest, LinkedIn, Facebook, Twitter, and Tumblr, are great-ways, of getting the-research-findings-out (Broxton et al., 2013). Researchers can-follow, people and organizations, of-the-same-interests, as theirs, and use these-channels, to-share the-research-findings. For-example, with Facebook, links to-the-publications, can-be put, on a-researcher’s page, where friends and associates will-find-them. For www.linkedin.com, a-researcher shall-join groups, like the-Social-Research-group and send a-message, to-the-group, any-time they-publish-any-developments/milestones, about their-research. If-one-uses Twitter, they-should-compile lists, of other-Twitter-users, and use-these, to-inform-them, of the-progress. The-following-site, on-how to-use such-lists, is useful: http://support.twitter.com/articles/. Also, it-is paramount, to-use an-appropriate hash-tags in-tweets, to-reach relevant-audiences.

Authors should-also create a-blog, or use their-existing-one, or write newsletter-articles, to-communicate, about their-research-progress. This-connects-the-researcher with their-audience, from-day-one and keeps-them-updated; even very-short-postings, covering landmarks, are-valuable. Besides, important-blogs about scholarly-communication include: Scholarly Kitchen and Open Knowledge foundation; at http://scholarlykitchen.sslenet.org/, and http://blog.okfn.org/category/open-data/, respectively.

According to McGrath (2016), social-media, is likely to-become more-important, given the-rapid-growth, in-membership, of the-newer-scientific-social-networks (Academia, Mendeley, ResearchGate) trends, in-general-population, and the-integration, of social-features, into-publishing platforms, and other-software. Scientific-social-networks have-grown-significantly; the-three-main networks, which-all-launched, around 2008, are Academia.eda110 (which has-reported over 16-million-registered-users), ResearchGate (over 5-million-users), and Mendeley (around 3.5-million-users; acquired by Elsevier, in-April, 2013), and a-fourth-network, Colwiz, launched in-2011, currently-has about 260,000-users. Awareness of the-networks also-appears-to-be correspondingly-high, especially for ResearchGate, in STM-fields, and for Academia, in social-sciences and humanities. The-numbers of documents self-archived, by-users, are-also-substantial: Mendeley reported, that its-users had-uploaded over 470-million-documents; ResearchGate reported that 14-million-documents were ‘accessible’ via its-platform (Van Noorden, 2014). In-the-author’s opinion, based on-personal-experiences, with all-the 4-social-networks, ResearchGate is, currently, hands-down, the-most-user-friendly, the-most-visible, the-most-informative, and most-interactive social-scientific-network.

Sawant (2012) also-noted the-development, of web-communication-tools, which-include: wikis and online-magazines, through-which, academic-staff could-make-available, their-research-findings.

55% of the-responded-faculty disseminates their-work, in-print-journals, with commercial-publishers. A-major-study by Harley et al. (2010) similarly-found, researchers-remaining-focused, on conventional formal-publication, and very-cautious about new-models, of web-based scholarly-communication.

On-the-other-hand, as-expected, publishers are very-concerned, about the-possible-impact, of widespread-self-archiving, of journal-articles; with very-high-levels, of deposit. Logically, libraries (whose-budgets are under-financial-constrain), such-as, in-most-developing-countries, including Kenya, will-increasingly-choose, to-rely on-the-self-archived-version, rather than subscribe, to the-costly publisher’s version.


Conference-presentations can-be-put on: www.slideshare.net or www.prezi.com, where other-researchers can-find them, through a-simple web-search. With poster-sessions, at-conferences, one should-include the-images on their-website or Pinterest-pages and, in-newsletters. Vine-clips (six-second repeating-films), can-be-
added, to one’s website via https://vine.co/, and talks can-be-uploaded, onto https://soundcloud.com/ or iTunes university, www.apple.com/education/ipad/itunes-u/. Authors should keep clips, as-short-as-possible; clips, longer-than 4 minutes, will-be less-frequently-watched, than shorter-ones. Videos, which-provide people with a-flavor, of the-research, are particularly-compelling. The-clips can-be also-added to one’s Twitter and Facebook-accounts (McGrath, 2016).

Authors can-also: (1) provide a-copy of publication, to Google Books, so that the-full-text, can-be-read, by anyone. See https://goo.gl/mxWJF; and (2) Post, the-research-findings, to-Wikipedia; being so-widely-used, and accessible, it-is-beneficial, for-visibility, that-the-findings are included, in-it. Here is how to do it: http://en.wikipedia.org/wiki/Wikipedia:Your_first_article. Moreover, new-assessment tool–Altmetrics, are currently-emerged, to-describe the-number of times, a-scholarly-item is mentioned, in-social-media, such-as: Wikipedia, Twitter, Facebook, etc. Their-research’s-social-media-mentions, can-be checked on: www.altmetric.com.

Besides, more-than-half, of all-web-access, is now, on-mobile-devices and this-trend is exceedingly growing, so authors can-also-check how their-publications appear on iPads, tablets, Kindles, and smart-phones. As new-social-media-channels become-available, authors-should take-advantage of them, to-share their-research, with a-wider-audience (McGrath, 2016).

Mail & Weitkamp (2013) also-found, that only a-few-environmental-researchers, actively-used social-media, to-disseminate, their-research-findings. They-have, mainly, relied on-academic-journals and face-to-face-communication, to-reach the-intended-audience. A-good-example of this is myExperiment.org, a-social-networking-site, for-experimental-scientists.

In-addition-to, journal-articles and self-archiving, research can-be-disseminated, through conference-presentations. Academic or scientific-conferences i s an-important-channel, for-disseminating-research, and conference-abstracts; (2) Conference-papers; or (3) Some-form of post-conference-publication, such-as Wikipedia, Twitter, Facebook, etc. They-have, mainly, relied on-academic-journals and face-to-face-communication, to-reach the-intended-audience. A-good-example of this is myExperiment.org, a-social-networking-site, for-experimental-scientists.

In-addition-to, journal-articles and self-archiving, research can-be-disseminated, through conference-presentations. Academic or scientific-conferences i s an-important-channel, for-disseminating-research, and conference-abstracts; (2) Conference-papers; or (3) Some-form of post-conference-publication, such-as Wikipedia, Twitter, Facebook, etc. They-have, mainly, relied on-academic-journals and face-to-face-communication, to-reach the-intended-audience. A-good-example of this is myExperiment.org, a-social-networking-site, for-experimental-scientists.

Conferences are a-means of developing national and international-connections, with governmental, advocacy or academic-opinion-leaders, and engaging, in-direct, face-to-face-communications, and discourse. According to Dunn (2007), attending and presenting, at-conferences, offers numerous-opportunities, to-any-researcher: such-as: (1) Contribute-to and learn-about, the-most-cutting-edge-research, available in-one’ field. In-addition, data, can-be-presented, during many-stages, of research-development (e.g., preliminary-findings, recently-collected-data, or data, that is, yet, to-be-published); (2) Advocate for one’s particular-subfield (by-sharing research-findings with people, outside one’s-specific-discipline, to-increase the-research-visibility, and provide interested-individuals, with more-information); (3) Learn how-to-articulate a-research (by practicing presentation-skills, and learning how-to-answer, quickly and articulately, specific-questions, asked); (4) Contribute to one’s-overall-research-profile (by-including a-history of conference-presentations, in one’s CV); and (5) Meet other-researchers in one’s- field and make potential-contacts, for future-collaborations (by-discussing, face-to-face, one’s-research and learning, valuable-information, from researchers, of similar-interests).

Additional-opportunity is, that conference-presentations are, usually, published, either, as-a: (1) Set of conference-abstracts; (2) Conference-papers; or (3) Some-form of post-conference-publication, such-as proceedings. These may-be published as a-book, special-issue of a-journal, or a-serial. Moreover, conference-presentation can-take different-forms, such-as: (1) Keynote-address; (2) Speech, for-plenary-session(s); (3) Oral-PowerPoint-presentation; and (4) Poster. Most-conferences, also-run concurrent-sessions, when many-researchers are-presenting their-work, to-a-smaller-audience, within limited-time, around 10 to 30 minutes.

Presentation-tools could-be: (1) the-most-popular--Microsoft’s PowerPoint presentation, so-called PPT; (2) Prezi - a web-based presentation- application, where one creates a-presentation, by-adding-objects, to a-virtual-sheet, and run the-presentation, by-zooming-in, on-different-parts of it (PHCRIS, 2017).

On the-other-hand, in-many-disciplines, conference-publications, are not considered, as-highly-as other-forms of dissemination, such-as, for-example, peer-reviewed-articles.

In-the-local-context, for-a-number of years, now, the-university was no-longer-able to-fund lecturers’ participation, in-International-conferences, hence, many-scholars missed the-opportunity, to-share their-research, with international-experts, when the-organizers could not provide, the-air-tickets, and waive registration-fees. Another-example, is the-bi-annual-International-conference, organized by the-university, where a-faculty supposed-to-pay a-registration-fee of KES 6,000 (around USD 60), which is nonrefundable, even if one is presenting a-paper. For-several-years, now, conference-proceedings were not published, discouraging researchers, to-present, any-work, at-the-forum, whatsoever. Some-respondents, rightfully-confessed, on why they are not supporting the-university’s international-conference:” …Just complete-waste of time, effort, and money…” On the-other-hand, new-research-findings, disseminated, through-workshops and conferences, only benefit the-individuals, who-attend the-particular-workshop or conference; therefore it is a-potential-double-loss.
Presenting research-findings via conference-presentations, is potentially-beneficial, on many-aspects, therefore, sufficient-funding, of such-activities, should-be provided, by the-government. Alternatively, faculty, themselves, should-be more-proactive, in-looking for sponsorship, to-attend conferences. For-example, the-University, and its-schools, should-establish affiliations, with the-new-specialist research-networks and professional-associations, which fund research, and participation, in-International conferences, such-as: H-West-Africa-Network; the-Council for the-Development of Social-Research, in-Africa (CODESRIA); and SEPHIS, among-others. Additional-opportunities, for funding, should-be-looked for, from the-International-funding and Fellowship-awarding-bodies, such-as: Institute of Commonwealth-Studies; Fulbright, British-Academy, Japan-Foundation, Institute of Developing Economies (Tokyo), the PICA (at Northwestern-University), and DAAD-Fellowships (Germany), among-others.

After finishing the-coverage, of the-main-channels, of dissemination of research-findings, it-would-be valuable, also to-address other-relevant-issues, such-as: Credibility and academic-ranking of journals, and Reputation-dimension of a-faculty. These-will-be-discussed, in-the-next-sections, of this-article.

4.4. Other-relevant-issues, to dissemination of-research-findings.

4.4.1. Future-prospects of the-dissemination.

Sawant (2012) explored the-changes, that had-taken-place, in-the-scholarly-communication-process, over-time. He used available-literature on-both; the-traditional and OA, to-compare and contrast, the-two-processes. The-author found, that Web 2.0-technologies had-affected, the-creation and dissemination of knowledge, and that, new-avenues of the-peer-review-process, had-been-established. His-study concluded, that OAP, had-changed-scholarly-publishing, in-the-generation and dissemination, with open-archiving, using IRs, to-aid-collection, preservation, and dissemination, of institutions’ intellectual-capital.

Within-a-relatively-short-time, online-publishing has transformed publication, from solely-print-copies, to-almost-exclusively e-formats, which-are either-downloadable, or printable, by-an-end-user (Steele, 2008). OA and online-publishing are the-predictable-outcomes of a-digital-age, in-which digital-scholarship, and digital-research-outcomes have, largely, become the-norm (Salem & Boumil, 2013). According to Czerniewicz & Goodier (2014), there is a-growing-consensus, among-different-stakeholders, that the-traditional-scholarly-communication-system (print only journals) is ‘broken’ and ‘not in sync’ with the-ever-changing-practices, in a-digitally-mediated-era. Today, print-only-option, has practically-cramped, and, in a-worst-case-scenario, probably, will be-completely-vanished, or at the-very-best, become microscopic, trivial, and, largely, irrelevant.

Despite the-obvious-global-growth and benefits of OA, several-authors, however, express dissatisfaction with the-sluggish-pace, at which OA was-being-adopted, especially, among African-countries. For-example: Muinde & Gorman (2009) pointed-out, that progress, in-capitalizing on OA, to-enhance accessibility and visibility, in-Africa, is slow, while Reinsfelder (2012) indicated, that adoption of OA, has-been-slower, than its-supporters predicted.

In-addition, in Zainab’ study of 2010, it-was pointed-out, that the-future of scholarly-communication was, likely, to-be-dominated more by OAJs and archives, as preferred-channels, for-communication. Likewise, Willinsky (2003) and Grabarek-Matthews (2008) studied the-ways, in-which print-editions will-continue to-be-used, for some-time, but concluded that the-future will-eventually-lead to an-exclusively digital-form of dissemination, of research-findings.

On-the-other-hand, according to Schneider et.al. (2007), within the-planning of all-research-activities, it-is-useful, to-have in-mind the-type of dissemination-format and potential-audience, that would best-suit, when the-outcomes are known. To-be effective, dissemination-strategies should-be-incorporated into the-early-stages, of the-research-planning: successful-dissemination-plans are usually considered before the-project begins (Whitehead & Schneider, 2012). Dissemination-plans should-start, with the-choice, of an-appropriate-outlet; in-case scientific-journal is the-preference, authors should-clearly-understand, what-exactly is a-credible-scientific-journal.

4.4.2. Credibility and ranking of scientific-journals

With the-enormous-amount of information, currently-available, in-so-many-journals, and other-media, it-is-paramount, for all-professionals and academics, to-be able-to-judge, accurately, the-quality and reliability, of a-publishing-channel, as scientific-journals differ-dramatically, in-terms of their-scientific-reputation.

From-interviews, a-number of faculty believed, that any-Journal with ISSN-number is a-reputable-one, and, hence, up-to-standard. In-reality, ‘International-Standard Serial-Number’ (ISSN) is an-8-digit-code, used, merely, for-identification, of any-print and electronic-media, applied for library-classification, ordering and distribution-purpose. Besides, ‘Obviously, ISSN and ISBN numbers are necessary for administration and logistics, however they do-not-reflect quality of any-Journal, periodical, monograph or a book’ (Patwardhan, 2015).

Assessing the-quality, of a-journal, and its-contents, based on-the-level of effectiveness, of the-editorial-team, done mainly via bibliometric-tools (based, primarily, on-citations). The-term ‘Bibliometrics’ is analogous to Ranganathan’s ‘Librametrics”; the-Russian-concept of ‘Scientometrics”; ‘Informetrics’ and to some-other
well-established sub-disciplines, such as ‘Econometrics’, ‘Psychometrics’, ‘Technometrics’, and ‘Chemometrics’, where mathematical and statistical-calculus, have been systematically-applied, to study and solve-problems, in their-respective-fields. Citation-analysis leads to more sophisticated-methods, such as Co-citation analysis, Mapping of the-literature, Bibliographic-coupling, and Co-word-analysis. The most-used bibliometric-methods are: Co-citation analysis, Bibliographic-coupling, and Co-word-analysis (Roasting & Barts, 2007). These-techniques measure researcher’s contributions, to-science and technical-development.

Citation-indexes were first-developed, in-the-1950s, as a-means, to-measure the-average-citations of articles, in-journals (Bloch & Walter, 2001). Contemporary ‘bibliometrics’ are sourced from a-U.S.A.-based company, Thomson-Reuters Institute of Scientific-Information (ISI) Web of Knowledge, via annual-Journal-Citation-Reports (JCR). The most-common citation-index is the ‘impact factor’ (IF). Thomson-Reuters-Journal Impact-Factor (JIF), which is a-measure of the-frequency, with which the-‘average-article’, in-a-journal, has been cited. It-is calculated, by-dividing the-number of citations, each-year of ‘citable-items’ (mainly articles, but excluding such-items as-editorials) published in-journal, indexed by Thomson-Reuters, in-the-previous two-years (Garfield, 2005). IF depends-on: the-quality of the-journal, the-language, in-which it-was-printed, and the-territory covered, by-the-distribution-system. IF is an-arithmetic-measure of the-journal, and cannot predict the-quality, of-the-article, but high-IF indicates the-possibility of high-quality (Masic et al., 2012). Other-popular ‘alternative’, but less-conservative, bibliometric-databases are: Scopus, and Google-Scholar.

On-the-other-hand, there are numerous-critiques, demonstrating conceptual and technical-reasons, why the-IF is not-necessarily an-ideal-indicator, for evaluating-research (Jackson et al., 2009; Cheek et al., 2006). For-example: (1) less than 5%, of all-journals, are-actually-included, in-the-database and indexes; (2) English-language, and in-particular, U.S.A.-based-journals, are-favored; (3) factors are-usually-based on-levels of readership, rather than the-quality, of-published-research; and (4) invalid-works, such-as withdrawn/retracted-articles, continue to-be-cited, in-other-articles. It-leads to-the-bias, in-the-calculation of IF. In-this-regard, various-methods of ranking-journals, apart-from the-IF (Garfield, 2006) have been established and well-documented, such as: h-Index; Immediacy; g-Index; e-Index; delta-h-Index; delta-g-Index; i10-Index; h5th-Index; h10th-Index; Weighted-Impact-factor; PageRank, for-electronic journals; and the-Eigen-factor, for print-journals, among-others (Ajoa & Ugwu, 2016; Hussein, 2016).

Out of a-total of 7,681 journals, listed in the-Science-edition and/or Social-Sciences-edition of Thomson Scientific’s Journal-Citation-Reports (2004), a-mere 0.3% are African-journals (i.e. 23 journals). According to CWTS/Thomson SCI-database (2005), citation-statistics for Kenya, for (2001–2004), are as-follows: ArCo Index - 0.2; Total publications – 2,067; International co-publishing - 74%; Citation-rate, per-publication - 1.89; Cited-publications - 45%; Relative-citation-scores: Field-normalization - 0.8; and Journal-normalization - 0.8. The worldwide-citation-rate, per-field, is set at-unity; scores above 1, indicate a-citation-impact-rate, above field-average. Journal-normalized relative-citation-scores: similar to the-field-normalized-relative-citation-rate, but at the-level of the-collection of CI-listed-journals, in-which the-entity has-published.

From the-presented-information, and citation-statistics, three-things were-revealed: (1) large-room for improvement, in-terms of citations; (2) necessity to further-research, to-obtain more-recent-statistics, on Kenyan-citations; and (3) clear-guidance, on where and how to-publish, should-be-prepared, by-the-university.

Another-important-consideration is ethics; it-is-vital, to-note, however, that, ethical-issues, in-writing and, in-publishing, do differ, having their-own-specifics and nuances; hence, the-former will-be-élaborated-on, in-the-subsequent-section.

4.4.3. Publication-Ethics, in-scientific-publishing
Recent-study, by Starovoytova (2017d), cited Benos et al., 2005, where different-forms, of scientific-misconduct, in-publishing, were-identified, such as: Redundant-publications; Animal-welfare concerns; Duplicate-publications; Authors-disputes; Data-fabrication; Human-welfare-concerns; Plagiarism; Conflict of interests; and others (reviewers-bias, submission of irregularities, etc.). To-handle scientific misconduct, authors, reviewers, and editors of journals, have massive-collective, and individual responsibility, for vigilantly-monitoring and upholding, high-ethical-standards, and for trying to-avoid, and having zero-tolerance for, any-form of academic-misconduct.

To-avoid misconduct, however, is not a-straightforward-task, and several-studies suggest, that research-results are not, always, conveyed-accurately, and in-an-ethical-manner. Recent-incidences, have reiterated, that any-compromise in-ethics; integrity and academic-misconduct, even by-a-single-individual, can-have serious-consequences, and can-lead, to-more-serious collateral-damage, causing risk to-reputation, of the-entire-affiliated-institution (Cyranoski, 2015). If proper-care, however, is taken, such-incidences can-be-avoided. Many of us, still, generally, remembering Ethics, and Publication-Ethics, in-particular, only when one is a-victim, or a-suspect, of scientific-misconduct.

When conducting research, it-has-to-be-done, according to the-responsible-conduct of research, for the-research, to-be-ethically-acceptable and reliable (TENK, 2012); as-such, the-research-method must-be-valid and scientifically-feasible, the-research should-be-élaborated, using accepted-principles, methods, and scientific-
practices (Emanuel et al., 2000). The Committee on Publication-Ethics (COPE), as a forum of editors and publishers, of peer-review-journals, promotes integrity, in research-publications, by, for example, providing guidelines for authors, editors and publishers, which are available at www.publicationethics.org. Guidelines, for authors COPE (1999), are further-appropriate, for this study; as they stress ethical and responsible research, compliance, to all relevant legislation, presenting results clearly, honestly, and without-plagiarism, fabrication, falsification or inappropriate-data-manipulation. Researchers should describe their methods clearly, so that their findings can be confirmed or, if needed, reproduced, by others.

Authors should submit only original work; not plagiarized, nor published elsewhere. In addition, authors should avoid a temptation, of splitting data, or using contents in parts, just to increase number of papers, from the same data, so-called salami-slicing, unless, each of the salami-slice is comprehensively presenting, completely different sub-topics, ideas, and points of view.

Besides, in the Singapore statement of research integrity it is stated, that an expert, doing a peer-review should provide a fair, prompt, and rigorous evaluations and respect confidentiality, when reviewing other work, however, this is not always, the case. According to Resnik et al. (2009), a typical reviewer spends on average, 5-hours, per-review, and reviews some 8 articles, a year; most reviewers providing their services, on voluntary basis, free of charge. There have been several advancements, in the area of peer-review. Some variants of open-peer-review, mentioned before (e.g. disclosure of reviewer names, either before, or after publication; publication of reviewer reports, alongside the article) are becoming more common. Cascade-review (transferring articles, between journals, with reviewer reports) and even journal-independent (portable) peer-review are establishing, a small grip. The most notable change, in peer-review practice, however, has been the spread of the soundness not significance peer-review criterion, adopted by OA ‘mega-journals’, like PLOS ONE and its imitators.

In addition, the author, of an article, usually, was required, to transfer the copyright, to the journal publisher. Publishers claimed this was necessary, in order, to protect authors’ rights, and to coordinate permissions, for reprints, or other use. However, many authors, especially those, active in the OA movement, found this unsatisfactory, and have used their influence, to effect a gradual move, towards a license to publish, instead. Under such a system, the publisher has permission to edit, print, and distribute the article, commercially, but the author(s) retain(s) the other rights, themselves.

4.4.4. Choosing appropriate journal

A good starting point, in choosing appropriate journal(s), is to check journals, cited in the reference list, of one’s own article (Searing, 2006); Williams et al. (2009) also recommended Cabell’s online directory (www.cabells.com/), which provides IF, and explains guidelines and review-process, for each journal, listed in the directory.

In particular, authors should base their choice on the following factors:

I. Journal’s background and specifics

Suber (2002) points out, that if quality is real excellence, then prestige is reputed excellence. Prestige and credibility, however, are based in our perception, which is, largely, subjective, and vary, from one scholar to the other.

Authors, hence, should check, for themselves, the credentials and publishing history, of a journal, and in particular: (1) Website of the journal (should be active and updated); (2) Accreditation and identification, including International Standard Serial Numbers (ISSNs), which is mandatory, for any legitimate journal, and Digital Object Identifiers (DOIs), which is optional, for an article; (3) The type of dissemination, of the journal (print only, print & OA, or OA only); (4) Journal’s age; (5) Any interruptions, in publishing, from the very start, up to the present time; (6) The editorial board members, and the Chief editor, and their institutional affiliation; (7) Frequency of circulation (number of issues, per year), for example: some journals, including majority of African university based, publish only 1-2 issues, per year, while others (like, for instance, the Journal of Education & Practice, of IISTE), publish as much as 36 issues, per year; (8) Impact factor (quoted most recently); (9) Visibility (inclusion in indexes, directories, and aggregators) via multiple computerized databases and cross references; (10) Fit between the style and length of a manuscript, (max allowable number of pages, number of tables, diagrams, etc.); (11) Cost, of a publication, is particularly significant, for self sponsored publishing; and (12) For self sponsored publications, method of payment, is important, as for example, some journals allow only PayPal or Credit Card online options of payment, which in most developing countries, is still not very common, in contrast to money transfer via Bank or Western Union.

The authors should also ensure, that they choose a journal, with a wide circulation, and a high impact factor, which is widely indexed, in the research databases. OA option, where people do not need to pay, for the journal, or the articles, to be able, to read them (OA journals can be selected at http://doaj.org/). Moreover, the Institute of Education provides a quick guide, to check the quality of the identified journal, via: http://libanswers.ioe.ac.uk/a.php?qid=295422.

II. Probability of timely acceptance (Rejection rates; and Time line, from submission to publication).
Time, for journal-publication, is the sum of: (1) the-time, from initial-submission, to final-acceptance of a-finished-article (Review-Cycle-Time-Delay); and (2) the-time from final-acceptance to-actual publication (Searing, 2006), also-called Publication-Time-Delay (Knight& Steinbach, 2008).

Publication-time is very-important, as-for-example, an-article about the-year 2000 Bug, would-have little-significance, if published now (Fitzgerald, 2003). On-the-other-hand, in-very-dynamic-fields, such-as Engineering, Design and Innovations, time is paramount, as somebody-else can publish first, the-similar development, in a-field, resulting in-inferior-quality, or even, irrelevancy, of one’s-efforts.

It-is recognized that well-structured, designed and conducted-research has a-much-higher-chance, of being published (Starovoytova 2017b, 2017c; Cleary & Freeman, 2005). At-times, however, top-journals get, at-least ten-times, as-many-submissions, as they-are-physically-able-to-publish, resulting in low-acceptance rates (Guthrie & Parker, 2012). Several-reputable-journals pride-themselves, on high rejection-rates, supposedly reflecting the-high-quality, of these-journals (Frohlich, 2007). For such-journals, the-rejection-rates amount to-approximately 95%, which encourages the-reviewers, to-reject manuscripts, in-almost-all-cases, in-order-to-defend this-significant ‘quality-measure’.

Moreover, a-past-editor of the BMJ pointed-out, that the-whole-business of publishing, at-the-field, is corrupt and ‘prone to bias’ (Smith, 2006). This-bias can-take numerous-forms; for-example: conventionally, ‘publication-bias’ is a-broadly recognized-phenomenon, whereby positive-results have an-increased likelihood, of being-published, and are published, in-more-influential-journals (Lee et al., 2008). In-recent study, by Starovoytova (2017c), pointed-out, that:

...respondents also-complained, that editors rejected results, which-are-considered-as-negative, and hence discouraged-them from publishing. In the-author’s humble-opinion negative-results-should-be published, due to-following considerations: (1) negative-results are also results; and (2) if negative-results are not-published, other-researchers would-be completely-unaware of them and would, then, repeat the-same-research, with the-same-negative-result, going round and round, and, hence, wasting their-time, energy, and resources.

III. Philosophical and Ethical Issues (OA; Copyright issues; and any-bias, such-as: racism and sexism)

(a) Suber (2012) pointed-out, that: ‘All the major open-access initiatives agree that peer-review is essential to scientific journals, whether these journals are online or in print, free of charge or ‘priced’. OA removes the-barrier of price, not the filter of quality control’.

Searing (2006) cautioned authors to ‘remember that some-tenure-committees still look-down their noses at upstart electronic-only journals’. The-authors are cautioned against ‘electronic-only’ OAJs, but not those OAJs, that publish, in-print, and also-make articles available, free of charge, online. As OAJs have matured, many have developed impact-factors and citation-rates equal, to-similar-traditional print-journals (Koohang & Harman, 2006). According to Knight& Steinbach (2008), many OA-journals also-have reputations, for peer-review, as-rigorous-as, or more-rigorous, than similar-traditional print-journals. Nonetheless, Suber (2002) noted, that: ‘It is only a matter of time before the open access journals have earned prestige roughly in proportion to their quality (or at least have the same disparity between these two that characterizes their well-established traditional counterparts)’.

(b) On-the-other-hand, in-recent-study, by Starovoytova &Namango (2017), they cited Titus (2008), who pointed-out, that Copyright laws exists, to-protect an-intellectual-property. They make it illegal, to-reproduce someone else’s expression, of ideas, or information, without permission, and proper attribution. This can-include music, images, written-words, video, and a-variety of other-media. In-addition, Elliott (2005) pointed-out, that copyright grants exclusive-rights-to-creators, of original-literary, scientific, and artistic-works, with-extensions to computer-programs, and databases. It-protects the-form of the-expression of ideas, but not the-idea, information, or concept, expressed.

At one-time, a-work was only protected by-copyright, if it included a-copyright-trademark (the © symbol). According to-laws, established in 1989, however, works are now copyright-protected, with or without, the-inclusion of this-symbol.

Copyright-policies differ, among-academic-publishers. Usually, the-author of an-article was required to-sign a-copyright-agreement, to-transfer the-copyright, to-the journal-publisher. Publishers claimed this-was-necessary, in-order-to-protect author’s rights, and to-manage permissions, for-reprints, or other-use. Many-authors, however, particularly-those active, in-the-OA-movement, found this unsatisfactory (Di Cosmo, 2006), and persuaded, to-effect a-gradual-move, towards a-license-to-publish, instead. Under such-a-system, the-publisher has permission to-edit, print, and distribute the-article commercialy, but the-author(s) retain the-other-rights, themselves. These-rights usually-include the-ability to-reuse parts of the-paper, in-the-author’s future-work, and allow the-author, to-distribute a-limited-number of copies (reprints and post-prints). Some-publishers, for-example the-American-Physical-Society, also-grant the-author the-right, to-post and update, the-article, on the-author’s or employer’s-website, and on free e-print-servers, to-grant-permission, to-others, to-use or reuse, figures, and, even, to-reprint the-article, as-long-as no fee is-charged.
The rise of OAJs, in which the author retains the copyright, but sometimes needs to pay a publication-charge, such as the Public Library of Science family of journals, is another recent response, to copyright-concerns (Di Cosmo, 2006). Moreover, due to so-called, OA-revolution and widespread self archiving, Steven Shavell, of the Harvard University, putting a question: ‘Should copyright of academic works be abolished?’; he also provides a model, on how to the publishing machinery will operate, in the near future, in the absence of copyright.

(c) Regarding bias, racial discrimination is, generally, a well-known phenomena; in scientific publishing, there are claims, that it can manifest in two main avenues; in peer review process, and in citation practices. For example, scientific writers, from the African continent, are of almost all major races. Race is the categorization of humans, into groups, based on physical traits, ancestry, genetics, or social relations, or the relations between them. The world population can be divided into 4 major races, namely: White/Caucasian, Mongoloid/Asian, Negroid/Black, and Australoid (Anemone, 2011a; Anemone 2011b; Cartmill, 1998; UNESCO, 1950). The United Nations, in a 1950 statement, however, opted to drop the term ‘race’ altogether and speak of ‘ethnic groups’; there are more than 5,000 ethnic groups, in the world, according to a 1998 study, published in the Scientific American. In this regard, our initial statement, to be exact, should be rephrased to: ‘Scientific writers, from the African continent, are of various ethnic groups’.

On the other hand, racial discrimination is defined as ‘(1) differential treatment, on the basis of race, that disadvantages a racial group and, (2) treatment on the basis of inadequately justified factors, that disadvantage a racial group’ (Blank et al, editors) 2004. Not all discrimination occurs at the individual level or is intended. Glaser et al, in their study summarized some central aspects, of the psychology of racial bias (e.g., categorization, stereotyping, prejudice, discrimination, and subtle forms of bias). Bias typically comes from our strong, instinctive tendencies to: (1) categorize objects and people, into groups (Cohen & Garcia, 2014; Bruner, 1957), (2) prefer things (and people) merely, because they are familiar (Aronson, 2002) or because they belong, to our group; (3) simplify a complex world, with stereotypes (e.g., white, black, yellow, red, etc.); see Greenwald et al. (2009); and Fiske & Taylor (1991); and (4) rationalize unfairness (Eagly & Steffen, 1984). Although most people avoid racial bias, racial discrimination remains prevalent, because prejudice can influence our judgments and behaviors, in subtle, unexamined ways. Most biases can operate, outside of conscious awareness and control, nevertheless distorting our judgments and making discriminating all the more difficult, to avoid (Glaser & Knowles, 2008; Greenwald et al., 1998).

Almost 50 years passed, since Eysenck quoted Jensen’s paper, pointing out on so-called ‘a priori’ argument, as follows: ‘... the myth of racial equality, while more acceptable in principle to any liberal and well meaning person than its opposite, is still a myth: there is no scientific evidence to support it. Indeed, as Jensen has pointed out, the a priori probability of such a belief is small: Nearly every anatomical, physiological, and biological system investigated shows racial differences. Why should the brain be an exception?’

Later on, Colman, in his work – ‘Scientific Racism and the Evidence on Race and Intelligence’, called this argument as the dubious doctrine, of reductionism; nevertheless, even now, in the 21st Century, some individuals still identify Africa, as a dark continent, where people, largely, of low IQ, are living, on trees, and, hence, nothing good can come out of it.

Besides, Harper in his article “Racism without Racism: How Higher Education Researchers Minimize Racist Institutional Norms”, reviewed 255 peer reviewed journal articles, published over a decade long period (from 1999 to 2009), and concluded, that many higher education scholars (for example: Hughes & Giles, 2010; Patton & Catching, 2009; Solórzano et al., 2005; Taylor, 2000) have observed complex race related phenomena and problems, in U.S.A universities, and in scholarly publishing. Moreover, key race scholars have long argued, that those, who embark upon the elusive quest, for racial justice, must be acknowledging, that racism, in general, is, still, real (Ball, 2011). Moreover, Greenwald & Schuh, in their study “An ethnic bias in scientific citations”, investigated the behavior of scientists, citing other scientists’ publications. In particular, evidence for discrimination, based on ethnicity, of authors’ names, was found, in the scientific citations, which are documented, in the Social Sciences Citation Index.

Moreover, gender discrimination is standing under the same huge umbrella of biases; for example, Ceci & Williams (2010) in their study of “Understanding current causes of women’s underrepresentation in science”, pointed out, that recent scientific reports often assert discrimination against female scientists in hiring, publishing, citation, and funding. Such claims of discrimination, against women, in science and in academia, are consistent with claims of glass ceilings, reduction of authorship credit and pay, for comparable work, smaller laboratory space, and fewer research resources (Hill et al., 2010; Borsuk et al., 2009; Lortie et al., 2007; McLaughlin, 2006).

Majority of the studies, available via OA, on the subject matter, were conducted in U.S.A.; in the local Kenyan context, Mweru (2010), pointed out, that participants, in the study, felt that the underlying reasons,
behind negative-reviews on their-manuscripts, lay-in a-downbeat-attitude, towards sub-Saharan-based-scholars, and their-research, and a-disregard, for the-issues, that were-addressed, in-their-articles. This is particularly-interesting, in-view of the-supposedly-anonymous-nature of manuscripts, when they-are-presented-for-review.

On-the-other-hand, some-scholars, acknowledged this relatively-new-phenomenon—playing the ‘race card’—where authors, always attribute their-failures-to-injustice, due-to ethnic-discrimination, against them. Future-researchers should look, into-the-phenomenon. In-addition, comprehensive-large-scale-study, on-the-subject-matter (bias in-scientific-publishing), should-be initiated and funded, for-example, by-international-organizations, such-as: UNESCO.

In-publishing, however, it would-be more-appropriately, to point-out, on the-real, or perceived, broad ‘geographic-prejudice’, instead of individual-racial-discrimination, of particular-writer(s). To-circumvent a-frustration of ‘geographic-prejudice’, it-is advisable, to-also-check geographic-spread of authors, in previously-published-issues. Moreover, Knight& Steinbach (2008) also-developed a-comprehensive-model, to-guide authors, when selecting a-journal, to-which to-submit their-work.

The-careful and thoughtful-selection of a-journal, taking into-account all-considerations, outlined, in-this-paper (as-much-as practicable), is obviously worth every-effort, and time, spent on-the-exercise. Appropriate-selection, likely to-save valuable-time, for-authors, peer-reviewers, journal-editors, and publishers; it-will-also, hopefully, increase the-likelihood of acceptance of submitted-manuscript, and contribute, not only to-the-author’s CV, but also to-specific-discipline, and Science, at-large.

The-correct-choice, of a-journal, is an-important-step; however, it-is not the-final-step, on the-way to successful-publication. After identifying legitimate and reputable-journal(s), the-next-step is submission, for-review. This-step is rather-straightforward, still, few-issues need to-be-addressed.

4.4.5. Submission of a-manuscript, for-review.
Issues to-consider, when submitting a-manuscript, to a-journal, are (Whitehead & Schneider, 2012): (1) matching the-manuscript’s topic, approach and target-audience, to-the-journal’s scope, intent and readership; (2) identifying the-submission-process, including the-journal’s timelines, for peer-review and publishing accepted-manuscripts; and (3) determining the-impact-factor; and most-importantly, the-credibility, of the-journal.

Not a-single, but several-scientific-journals (option A, B, and, even, C) should-be-identified, before submission. This-is particularly-important, in-case of possible-rejection, of a-manuscript, by-an-A-journal. Targeting other-journals, should-be, on-the-basic of similar-scope and house-style, so that a-resubmission will not require major-modifications. Identifying an-appropriate-journal (van Teijlingen & Hundley, 2002) can-be also assisted, by asking experienced-colleagues and reviewing previous-issues, of the-known journals, for the-style and scope of papers, published.

Most-importantly, however, is that authors must submit their-manuscript, to only one-journal, at-a-time (due-to copyright-law).

Manuscript-submission-processes vary-considerably, among journals and publishers, ranging from mailing a-set of printed-copies, of the-manuscript, mailing a-disc or CD; e-mailing the-manuscript (as an-attachment) to the editorial-office; or through to-complete online-submission via the-journal’s website. Most of the-main-publishing-houses, such-as Wiley-Blackwell, IISTE, and many-others, however, have moved, to-complete online-submission, review and article-proofing, prior to-publication (Whitehead & Schneider, 2012).

Choice of appropriate-dissemination-channel, in-conjunction with proper-submission of a-manuscript, can result in the-rapid-publication, of an-article, that achieves the-exposure, it deserves. On-the-other-hand, a-wrong-choice, might-result in-rejection, delay, and even loss of an-author’s motivation, to-persist, in-seeking publication, for a-potentially-valuable scientific-contribution.

After a-manuscript was, eventually, published, absolutely-nothing, can-be-done, to-improve its-quality. However, efforts should-be directed, to-increase the-visibility, of research-findings, to a-wider audience, and hopefully, consequently, boost the-citation-rates, of an-article. The-following-section, therefore, outlines the-relevant-concerns.

4.4. Increasing citation-rates of a publication.
Citing is considered as ‘currency’ of modern-science, which is why its-analysis of the-editors, authors, and readers, become indispensable. Citation to a-publication is a-quality-indicator, important for both; the-author and the-affiliated-university (Jones & Evans, 2013). On-the-other-hand, according to Marashi et al. (2013), citations, to an-article, might-strongly-depend on the-visibility, rather than the-merit, of the-article. Citation-score is usually-takes many-years, to-accumulate, however, it can-be-boosted. For-example, according to Ale Ebrahim et al. (2013), there are 33 ways, for improving citation-rates:

(1) Use a-unique-name, consistently, throughout, academic-careers; (2) Use a-standardized institutional-affiliation and address, using no-abbreviations (Sarli & Holmes, 2011); (3) Repeat key-phrases, in the-abstract, while writing-naturally; (4) Assign keyword-terms, to the-manuscript (Sarli & Holmes, 2011); (5) Make a-unique-phrase, that reflects author’s research-interest and use-it,
throughout-academic-life; (6) Publish in-journal, with high-impact-factor (Vanclay, 2013); (7) Self-archive articles; (8) Keep professional-web-pages and published-lists, up-to date (Jones & Evans, 2013); (9) Make research easy to-find, especially for online-searchers (Jones & Evans, 2013); (10) Open-Access (OA), as it increases citation-rate (MacCallum & Parthasarathy, 2006); (11) Deposit paper in Open-Access-repository (Frost, 2009); (12) Co-publish, with international-authors (Pislyakov & Shukshina, 2012); (13) Team-author-articles, to-get cited more (Krause, 2009); (14) Use more-references; (15) Publish a-longer-paper; (16) Publish papers with Nobel-laureates, if possible (Ball, 2011); (17) Contribute to Wikipedia (SAGE, 2012); (18) Start blogging (SAGE, 2012); (19) Join academic-social-networking-sites (Taylor & Francis Group, 2012b); (20) Write a review-paper; (21) Papers, published after having first-been-rejected, elsewhere, receive significantly-more citations (Ball, 2012); (22) Papers with a-larger-number of ‘callouts’ be-likely to-receive a-higher-number of citations (Hamrick et al., 2010); (23) Avoid selecting a-question-type of title; (24) Share detailed-research-data; (25) Publish across-disciplines; (26) Present a-working-paper (Taylor & Francis Group, 2012a); (27) Publish your-article, in one of the-journals, everyone, in-your-discipline, reads (Taylor & Francis Group, 2012a); (28) Publicize yourself, by linking latest-published-article, to-an-email-signature (Taylor & Francis Group, 2012a); (29) Publish in a-journal with-the-highest-number of abstracting and indexing (Ale Ebrahim, 2012); (30) Create a-podcast, describing the-research-project; (31) Make an-online-CV, like ORCID or ResearcherID; (32) Publish tutorials-papers; and (33) Use all-tools, which are-available on ‘Enhancing Visibility and Impact’ at: http://www.mindmeister.com/

Moreover, Griffiths & Auer (2015) suggests: (1) submitting a-manuscript, to-special-issues, of journals; (2) publishing a-straightforward-paper, on cutting-edge-research, or a ‘hot’ topic; (3) choosing an-effective-title; and (4) citing one’s previously-published-papers. Many-authors, intentionally and inappropriately, cite their-previous-articles, to-raise their-rating, in-the-research-community (Masic et al., 2012). Self-citation is, often, viewed quite-negatively, by-some-academics; however, ‘it is absolutely-fine, to cite your-own-work, where relevant on a-new-manuscript’. Furthermore, in his-study, he also-claims, that ‘self-citation can increase, more than double of your-citation-index’.

5. Conclusion and Recommendations.

5.1. Conclusion

This study identified dissemination-patterns and preferences, by the-engineering-faculty. Besides, it also pointed-out on numerous-barriers, to-the-effective-dissemination, of research-findings.

Education, Research, and Extension, are fundamental-functions, of any-University-system. The-amount of quality-publications, in peer-reviewed-reputed-journals, their-citations, are commonly-used-metrics, in ranking of a-University, as-well-as, an-individual-faculty; besides, they directly-affect academic-reputation, of both. Therefore, faculty should, first, fully-understand, how to-produce an-ethical and valuable research-output, and, subsequently, disseminate it, in the-most-appropriate-median, to-reach the-wider community. It is-a responsibility, of an-individual-academic-member, and a-collective responsibility, of academic-community, to-improve-quality of research and writing, as-well-as, promote culture of ethical-publishing.

The-credibility of research and publication-activities relies on the-rigor and meticulousness, of each-step, of the-process. In-order for a-publication, to-be-truly successful, the-results must-be-shared with the-appropriate-recipient, in-the-right-way. This-paper elaborated on the-importance of tailored dissemination-tools, for the-different-target-audiences.

The-freedom of choice, on where to-publish, however, is largely, remains a-prerogative of the-author(s); based on their-perceptions and awareness, on the-subject-matter, and their-particular-circumstances. The-author trusts, the-above-synopsis, reporting this-concise and unfunded-study, will, hopefully, contribute to-increased-knowledge and understanding, of dissemination-process, to-enable them, to-make a-well informed-decision. In-addition, the-author anticipates, that this-paper humbly-contributes, to-the-up-and-coming, of ideas and ventures, reinventing and reinforcing scientific-publishing and research dissemination. Besides, the-author foresees this-concise-paper will-help-encourage an-informed-debate, on the-issues, facing scientific-publishing and dissemination. In-addition, the-author believes, that this-work should-be of interest to-all-the-stakeholders, involved in-producing, disseminating and evaluating academic research, including: The-higher-education-funding-bodies; Research-Councils; University senior-managers and Research-administrators; and researchers, themselves.

Finally, the-study synthesized the-following-recommendations:

5.2. Recommendations

Government level:

1) Sufficient-funding, for-research and dissemination-activities, should-be provided, to university, by the-Government.
2) At the level of the Ministry of Education, the legal policy should be established and enforced, that every university, regardless, if it is public, or private, must establish and maintain, their IRs.

University level:
For the university, to become a leading institution, with international standing, in research and publication, it must take appropriate confirmatory actions; in particular:

1) University should identify and compile wide-ranging faculty wise directory of quality journals and reputed publisher(s), in each area of specialization. The directory should act as a reference, on where to publish; on submissions of PhD dissertations and Master theses; and on academic publications, for promotion. The directory should be regularly updated and displayed, on the University official website.

2) A learning refereed module on ‘Publication Ethics’ should be expertly developed, which should be a vital part of any research course or study. The module should be also available on Open and Distance Learning platform, of the university (MUSOMI).

3) University should subscribe anti plagiarism software, to enable staff and students, to scan their work, before final submission for review.

4) MU should establish and maintain its IR (while waiting for official policy)

5) The university should approach DATAD, eSAP, INASP, and others, to make use of their facilities and assistance, in research and dissemination.

School level:
1) Schools should initiate internal competitions, for best contribution, in a specific field.

2) Publication output can also increase when Universities/Schools/Institutes/Departments produce their own journal; in particular SOE should revive the school’s journal.

3) A responsible faculty, from each school, should be appointed, to ensure, that all the scientific publications, done by the school’s faculty, are timely submitted, to the IR.

Faculty level:
1) Faculty, should make an informed and wise decision, on where to publish, for example, by cross checking, their potential journals, through Beall’s list.

2) To increase the visibility of their research findings, they should also publish journal articles, on different elements of research findings; make presentations, at conferences; self archive; contribute chapters to books; and use social media, about their research, to reach all target audiences.

In addition, the following areas, for further research, were identified: (1) comprehensive large scale study, on the biases in scientific publishing, should be initiated and funded, for example, by international organizations, such as UNESCO; and (2) to obtain more recent statistics, on Kenyan input, in terms of publication and citations.

6. Acknowledgement
The authors wish to recognize the faculty members, SOE, participating in the survey, for their time and the effort spent, enabling the successful and timely completion of this study.

References.


Cheek, J.; Garnham, B. and Quan, J. (2006).”What’s in a number? Issues in providing evidence of impact and quality of research (ers)”, Qualitative Health Research, 16.


Creaser et al., (2010). Authors’ awareness and attitudes toward open access repositories. 16(S1):145 – 161.


Jones, K. and Evans, K. (2013). Good Practices for Improving Citations to your Published Work. University of BATH.


Krause, K. (2009). Increasing your Article’s Citation Rates. *Open Access Week.*


Mutwiri, C. (2014). Challenges facing academic staff in a adopting Open access outlets for Disseminating Research findings in selected University libraries In Kenya. A thesis submitted for the award of the degree of doctor of philosophy (PhD), library and Information science, In the school of Education of Kenyatta university.


Schneider, Z. et.al. (2007). Nursing and Midwifery Research. 3rd Edition: Methods and Critical Appraisal for Evidence-Based Practice.


Swan, A. (2010). *The Open Access Citation Advantage: Studies and Results to Date*. Southampton: University of Southampton.


TENK (2012). Finnish advisory board on research integrity: Responsible conduct of research and procedures for handling allegations of misconduct in Finland.

The British Academy (2007). *Peer Review: The Challenges for the Humanities and Social Sciences.*


University of California Office of Scholarly Communication and the California Digital Library eScholarship Program (2007). Faculty attitudes and behaviors regarding scholarly communication: Survey findings from the University of California.


