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

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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, was 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 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-sub-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 blue-print, 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. Materials and Methods.
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).
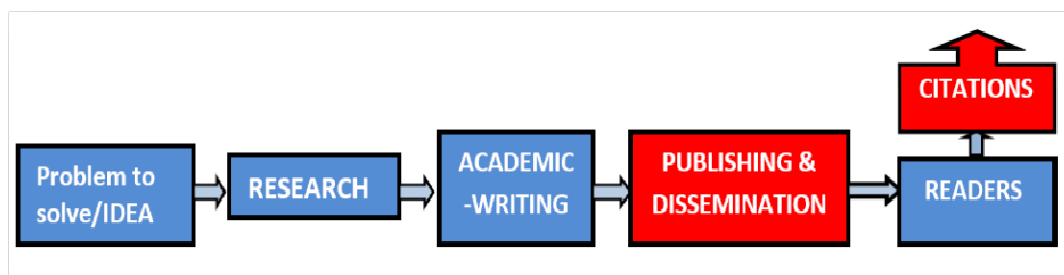

Figure 1: Focus of the-study (modified from Starovoytova 2017a).

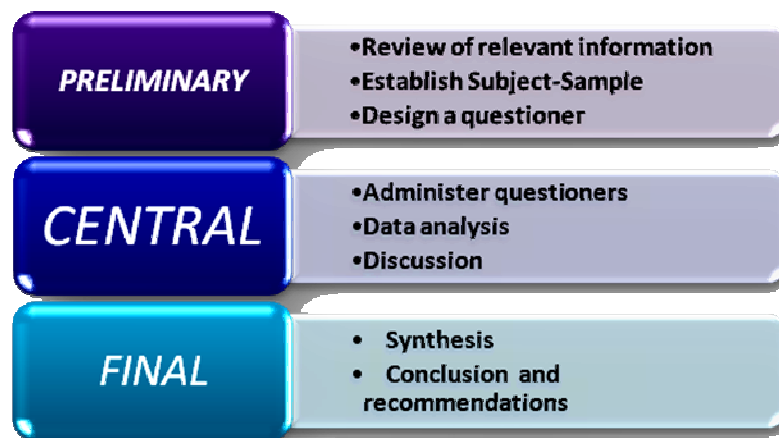The-study followed the-steps, which shown in-Figure 2.

Figure 2: Sequential-parts of the-study (Starovoytova & Namango, 2016a).

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 (SPPS-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 questionnaire

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 $a > 0.8$), 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 if which, 11 were submitted-back, giving a-response-rate of 73 %.

3.2.1. Analysis of part1: Demographic-Characteristics
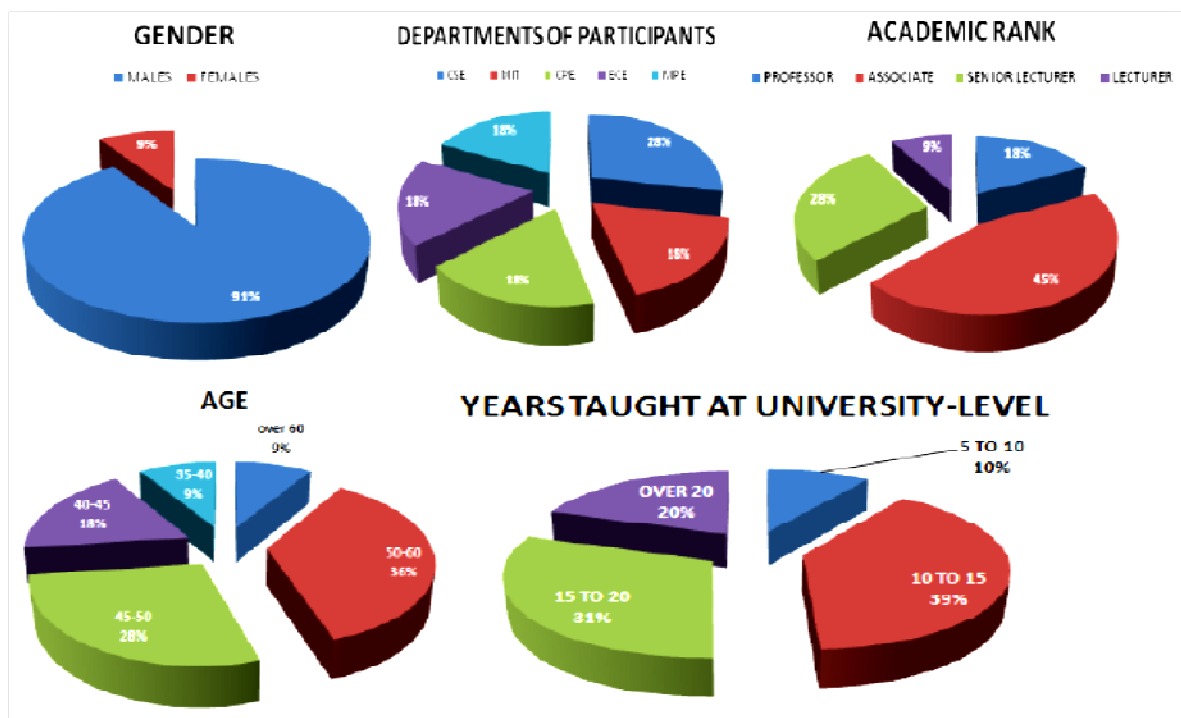
Figure 3 shows the-demographics of respondents.

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 pre-prints, 23.3 % 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 Alemna *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-major-characteristics 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-most-widely-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 11million 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 first-step, 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 OAJs, are not *properly*-peer-reviewed; 18% stated, that quality of articles, published, in OAJs, 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'.
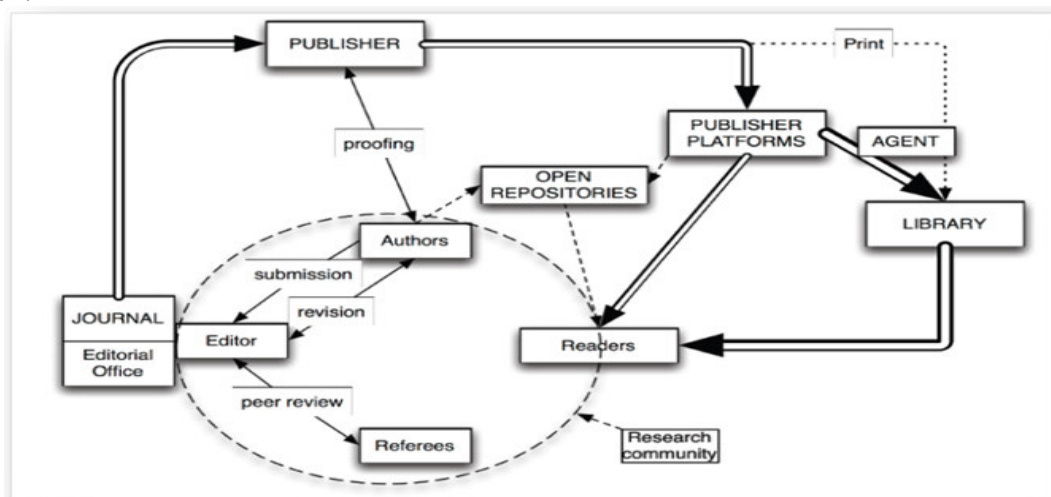

Figure 3: Publication and dissemination (STM, 2015).

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. Poschl (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).
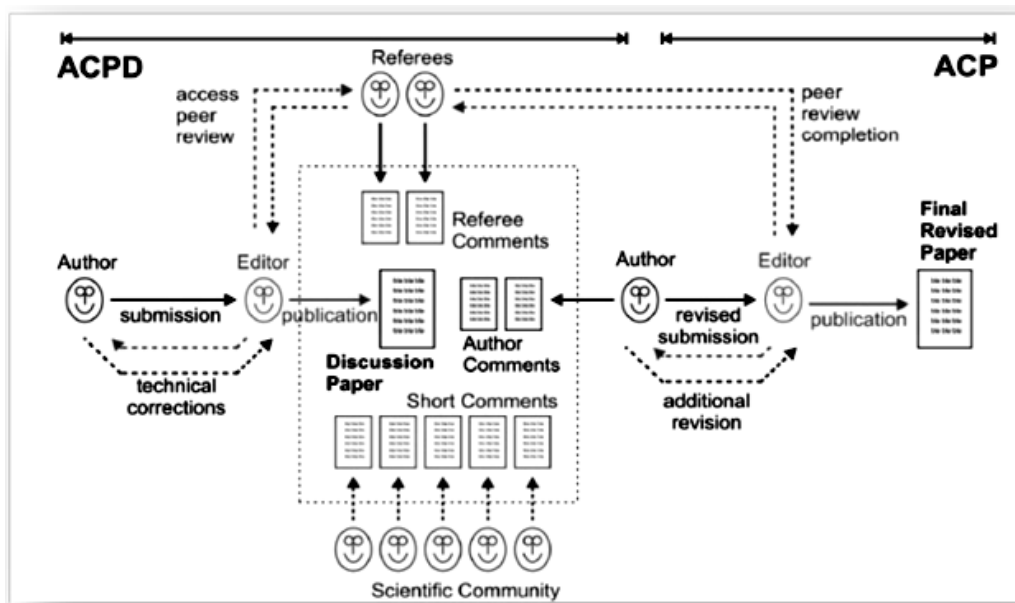
Keys: *bold-arrows*--basic-processes; *dashed-arrows*--optional-processes.

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-resilient 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-

papers, research-reports and professional-journals, most-helpful. Communities, like personal-presentations, brief-report-summaries, websites and video-clips, to-learn, about a-work and its-results. Journalists, generally, like brief-summaries and video-clips.

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.
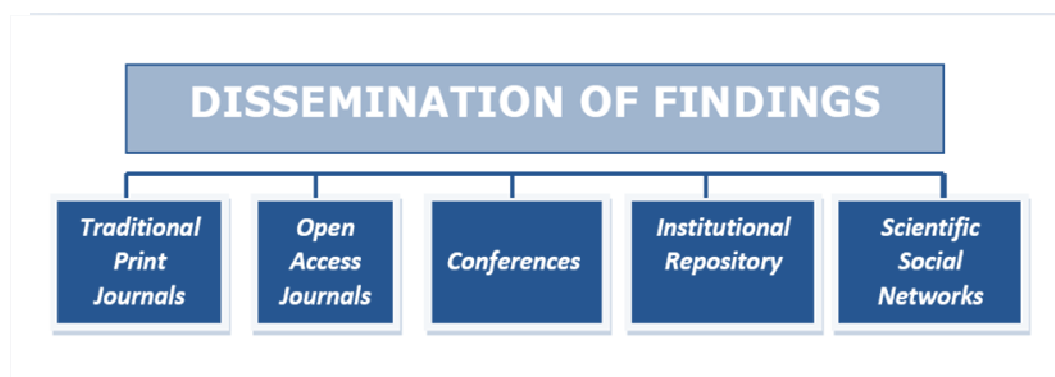

Figure 6: Major-dissemination-channels.

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 &

Henderson, 2013).

Besides, the-average, 2010 cost of publishing an-article, in-a-subscription-based-journal, with print and electronic-editions, was estimated to-be-around £3,095 (excluding non-cash peer-review-costs). For OA, these-range, from $290 (*Hindawi*), through $1,088 (*PLOS*), up to a-significantly-higher-figure, for *eLife*. Many-prestige-journals usually-charge several-thousand-dollars; Oxford-University-Press, with over 300 journals, has fees, ranging from £1,000-£2,500; with possible, but *not* automatic, discounts of 50% to 100% to-authors, from developing-countries. Wiley-Blackwell has 700 journals, available, and they charge a-flat USD 3,000, OA-fee. *Springer*, with over 2600 journals, charges USD 3,000.00, excluding VAT (McGrath, 2016). As an-effect of sharp-increases in-subscription-prices, librarians face budgeting-issues, and now allocate more-funds to-journals, and less, to-books (Starbuck, 2013). Researchers have-been, largely, protected-from this-crisis, because they have *no* direct-involvement, in journal-purchasing, which is undertaken through institutional-libraries.

Moreover, the-main academic publishers' operating-margins rose to a 39% profit-margin, in-2013 (Morrison, 2014). Exorbitant-journal-prices (via annual-subscription-fees), license-fees, or pay-per-view- fees, have resulted in-huge-profits, for the-publishing-companies. For-example, in-2012, Elsevier collected around 1 billion Euros, in-adjusted-operating-profit; while *ReedElsevier* CEO, Erik Engstrom, made 2.66 million Euros in-salary, benefits, and bonus, the-same-year (Forgues, 2013).

On the-other-hand, from a-scientific-standpoint, the-academic-publishing-system can-be associated with the-gift-economy (Morrison, 2012). Allen Press, for-example, surveyed over 70 society-publishers, and established, that volunteers are used, by most-academic-publishers, with 32 % of respondents, each relying on the-help, of over 100 volunteers (Tillery, 2012). In-fact, the-aim of academia, and of the-scientific- community, in-general, is to-serve, the-public, without profit-being a-motivation. This-explains why, from 1900 to 1940, the-majority of scholarly-journals was-published by the-not-for-profit-sector (Mabe, 2003).

Print-journals can-be characterized, by the-exuberant-subscription-prices, on-one-hand; and exploitation of volunteers, for their-main-operations, on-the-other-hand. Jointly, this-mode of operation, resulted in-both; gigantic-profits, for such-media, and also strain, to-already financially-struggling- universities. This-situation, however, attracted a-lot of criticism. For-example, *The Cost of Knowledge* is a-campaign, which begun in-2012, specifically targeting the-scientific-publishing-company *Elsevier* (Sample, 2012). Cost of Knowledge petition, was signed by more-than 3,000-academics, including several Fields medal-winning-mathematicians, to-boycott the-academic-publisher. The-petition claims Elsevier charges 'exorbitantly-high' prices, for its-journals, and criticizes its-practice of selling journals in 'bundles', so libraries 'must buy a large-set, with many-unwanted-journals, or none at all'; in-addition, it says, the-publisher makes 'huge-profits by exploiting their-essential-titles, at the-expense of other-journals' (Flood, 2012). According to Forgues (2013) by the-time of his-study, more than 14,000-researchers have signed the 'Cost of Knowledge' petition against Elsevier.

Besides, 2013 Nobel-Prize-winner, Randy Schekman, called for a-boycott, of traditional academic-journals, including *Nature*, *Cell*, and *Science*. Instead, he-promoted the-OAJ *eLife*, saying that his-laboratory research-findings will *no*-longer be-send, to Nature, Cell and Science, as they twist scientific-process (Sample, 2012). Davis *et al.* (2008) also stated that: 'I have published in the-big-brands, including papers that won me a-Nobel-prize. But no longer', he writes. 'Just as Wall Street needs to-break the-hold of bonus-culture, so science must break the-tyranny of the-luxury-journals'. Moreover, Harvard- University says, it-can*not*-afford journal publishers' prices; University-wants scientists, to-make their-research, OA, available-free, to-all, and resign from publications, that keep articles behind 'pay-walls'. A-memo, from Harvard's faculty advisory-council, said, major-scientific-publishers, have made, scholarly-communication 'fiscally-unsustainable' (Butler, 2013). In-May 2016, the-Council for the European-Union agreed, that from 2020 *all*-scientific-publications, as a-result of publicly-funded-research, *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-authors, 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--it's 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 to 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).

The-goal of OA is well-captured, in three-declarations: (1) The-Budapest-Open-Archives-Initiative (BOAI) of February, 2002; (2) The-Bethesda-Statement of June, 2003 on Open-Access-Publishing and (3) The- Berlin-Declaration on Open-Access to Knowledge, in the-Sciences and Humanities, of October, 2003. The-three-declarations and the-OA-movement assume, that all-information, generally-deemed-useful, should-be-*free* and belongs to a 'public-domain', that of 'humanity' (Christen, 2012). This-is exemplified in-the-Budapest-Declaration (2001):

> 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 a-further 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-valuable, 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 commissioned-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-platform).

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 expectantly, 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 www.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, Czerniewicz & 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-valuable-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 (depositing) 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. Singeh *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.sspnet.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.edu110* (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.

McGrath (2016), in-his-work on 'A Guide to Ensuring Wide Dissemination and Lasting Impact for Your Research', provided very-articulate and practical Research-Dissemination-Guide; the-following paragraphs, present its-summary, on self-archiving.

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/mxWlJF; 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 is an-important-channel, for-disseminating-research, and establishing, oneself, in-the-research-community. It-will, hence, be-given some-consideration, in-the-next section.

4.3.1.6. Conference-presentations

Conferences are a-means of developing national and international-connections, with governmental, advocacy or academic-opinion-leaders, and engaging, in a-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) In-addition to-text, graphs, and pictures, one can-include sound, movies and links, to-websites and control, how the-various-items, are-displayed. An-alternative is *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 *non*refundable, 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-crumple, 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 Coword-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 'biblio-metrics' 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 (Ajao & 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-resent-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 elaborated-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-designed, 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's 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* PayPall 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-lower-impact, 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 commercially, 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.[2]

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: **W**hite/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 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 "Race 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 on "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 her-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-creditability, 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-medias, 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-audience, 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 & 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-resent-statistics, on Kenyan-input, in-terms of publication and citations.

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References.

AANA (2007). Annual Meeting News, *AANA Annual Meeting News,* p. 8.

Ajao,O. and Ugwu, B. (2016). "Some problems facing scientific medical publications in Nigeria" [Online] Available: http://www. Problems publishing Nigeria. pdf. (11 February, 2017).

Aronson, J.; Fried, C. and Good, C. (2002). "Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence", *Journal of Experimental Social Psychology*, 38.

Ale Ebrahim, N. *et al* (2013). *"*Effective Strategies for Increasing Citation Frequency", *International Education Studies*; Vol. 6, No. 11.

Alexandrov, G. (2006). "The purpose of peer review in the case of an open-access publication", *Carbon balance and management*, 1: 10.

Anemone, R. (2011b). "Race as a cultural construction". Race and Human Diversity: A Biocultural Approach. Upper Saddle River, NJ: Prentice Hall. pp. 163–183. ISBN 0-131-83876-8.

Anemone, R. (2011a). "Race and biological diversity in humans". Race and Human Diversity: A Biocultural Approach. Upper Saddle River, NJ: Prentice Hall. pp. 1–10. ISBN 0-131-83876-8.

Antelman, K. (2004). "Do open access articles have a greater research impact?" *College and Research Libraries* ,65.

Anuradha, V.; Gopakumar, V. and Baradol, A. (2011).Awareness and use of open access and free resources on the internet: a case study at BITS, Pilani K K Birla Goa Campus, Goa.

Alemna, A. *et al.* (2001). "The role of libraries in the use of African-published journals in African universities", *International Information and Library Review*, Vol. 33.

Association of African universities (2009).14th General Conference & Golden Jubilee Celebration.

Atkinson, M. (2001). "Peer review culture", *Science and Engineering Ethics*, 7(2).

Ball, R. (2011). "The scholarly communication of the future: From book information to problem solving", *Publishing Research Quarterly*, *27*(1).

Babor, T.; Morisano, D. and Stenius, K. (2004). How to choose a journal: scientific and practical considerations in Chapter 2 of Publishing Addiction Science: A Guide for the Perplexed.

Bartholomew, L.; Parcel, G.; Kok, G.; Gottlieb, N. and Fernández, M. (2011). Planning Health Promotion Programs: An Intervention Mapping Approach. *3rd ed*. San Francisco, CA: Jossey-Bass.

Beall, J. (2010). "Predatory Open-Access Scholarly Publishers," *The Charleston Advisor*, 11, no. 4.

Beall, J. (2013). "List of Publishers," *Scholarly Open Access*: Critical analysis of scholarly open-access publishing. Online] Available: http://scholarlyoa.com/publishers. (15 February, 2017).

Begovic, M. (2014). Leader's Corner. [Online] Available: http://magazine.ieee-pes.org/januaryfebruary-2014/leaders-corner-12/?print=1. (8 February, 2017).

Blank, R.; Dabady, M. and Citro, C. (editors) (2004). *Measuring Racial Discrimination*. Panel on Methods for Assessing Discrimination. Committee on National Statistics, Division of Behavioral and Social Sciences and Education. National Research Council of the National Academies. Washington, DC: National Academies Press.

Bloch, S. and Walter, G. (2001). "The impact factor: time for change", *Australian and New Zealand Journal of Psychiatry* 35.

Borsuk, R. *et al.* (2009). "To name or not to name: The effect of changing author gender on peer review" BioSci 59.

Bosch, S. and Henderson, K. (2013)."The winds of change: Periodical price survey 2013", *Library Journal,* Vol.4.

Benos, D. *et al.* (2005). *"*Ethics and scientific publication", *Adv Physiol Educ,* 29.

Be´dard, J. and Gendron, Y. (2003). Qualitative research on accounting: some thoughts on what occurs behind the scene, in Humphrey, C. and Lee, B.H.K. (Eds), The Real Life Guide to Accounting Research: A Behind- the-Scenes View of Using Qualitative Research Methods, Elsevier, Amsterdam.

Broxton,T.; Interian, Y.; Vaver, J. and Wattenhofer, M.(2011). "Catching a viral video", *Journal of Intelligent Information Systems*, 40, no. 2.

Bruner, J. S. (1957). "On perceptual readiness", *Psychological Review*, *64*.

Budapest, H. (2012). Budapest Open Access Initiative: Ten years on from the Budapest Open Access Initiative.[Online] Available: http:www.budapestopenaccessinitiative.org (19 February, 2017).

Budapest Declaration on Open Access (2001). [homepage] [Online] Available: http://www.budapestopenaccessinitiative.org/ (18 February, 2017).

Butler, D. (2002). "Soros offers open access to science papers", *Nature Web Debates,* [Online] Available: http://www.nature.com/nature/debates/e-access/. (23 February, 2017).

Butler, D. (2013). "Investigating Journals: The dark side of publishing", *Nature,* 495 (7442).

Byrne, A. (2005). "IFLA and professional ethics", *Australian Library Journal*, Vol. 53 No. 1.

Cartmill, M. (1998). "The status of the race concept in physical anthropology" (PDF). *American Anthropological Association,* 100 (3).

Ceci, S. and Williams, W. (2010).The mathematics of sex: How biology and society conspire to limit talented women and girls. Oxford, England: Oxford University Press.

Colman, A. (1973). " 'Scientific' Racism and the Evidence on Race and Intelligence", *Special issue of RACE, April issue.*

Cohen, G. and Garcia, J. (2014). "Educational theory, practice, and policy and the wisdom of social psychology", *Policy Insights from the Behavioral and Brain Sciences*, *1*, 13-20.

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.

Cleary, M, and Freeman, A. (2005). "Facilitating research within clinical settings: the development of a beginner's Guide", *International Journal of Mental Health,* 14.

COPE (1999). Committee on Publication Ethics: Guidelines on good publication practice. [Online] Available: http://publicationethics.org/files/u7141/1999pdf13.pdf (24 February, 2017).

Cortina, J. (1993). "Interaction, nonlinearity, and multi-collinearity: Implications for multiple regression", *Journal of Management,* 19(4).

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

[Online] Available: www.tandfonline.com (25 February, 2017).

Cyranoski, D. (2015). "Collateral Damage: how a case of misconduct brought a leading Japanese biology institute to its knees", *Nature*, 520.

Czerniewicz, L. and Wiens, K. (2013)." The online visibility of South African knowledge: Searching for poverty alleviation", *AJIC*, [Online] Available: http://www.wits.ac.za/files/j9dqq_991720001373364320.pdf (18 February, 2017).

Davis, P.; Lewenstein, B.; Simon, D.; Booth, J. and Connolly, M. (2008). "Open access publishing, article downloads, and citations: randomized controlled trial", *British Medical Journal*, 337.

Davis, P. and Fromerth, M. (2007). "Does the arXiv lead to higher citations and reduced publisher downloads for mathematics articles?" *Scientometrics*, 71.

Derntl, M. (2014). "Basics of research paper writing and publishing", *Int. J. Technology Enhanced Learning*, Vol. 6, No. 2.

Di Cosmo, R. *(2006). "*The Role of Public Administrations in the ICT Era*", The European Journal for the Informatics Professional, 7 (3).*

Dulle, F. and Minishi-Majanja, M. (2011)."The suitability of the unified theory of acceptance and use of technology (UTAUT) model in open access adoption studies", *Information Development*, 27(1).

Dunn, K. (2007). "Why It's Important For You To Present Your Data at Scientific Conferences", *Psychological Science Agenda*, November.

EC (2014). Communicating EU research and innovation guidance for project participants. HORISON 2020 Version 1.025. September, 2014.

Eagly, A. and Steffen, V. (1984). "Gender stereotypes stem from the distribution of women and men into social roles", *Journal of Personality and Social Psychology*, 53.

Ellinger, A. (2011). Creating a whole from the parts: Qualities of good writing. In Rocco, T.S. and Hatcher, T. (2011). The handbook of scholarly writing and publishing. San Francisco: Jossey-Bass.

Elliot, J. (2005). Using Narrative in Social Research. Qualitative and Quantitative Approaches. London: Sage Publications, ISBN 1-4129 0040 9.

Emanuel, E.; Wendler, D. and Grady, C. (2000). "What makes clinical research ethical?" *JAMA*, 283.

European Commission (2012). Towards better access to scientific information: Boosting the benefits of public investments in research. [Online] Available: http:// ec.europa.eu/research/science-society/documentlibrary/pdf. (18 April, 2017).

Evans, J. and Reimer, J. (2009). "Open access and global participation in science", *Science*, 323:1025.

Eysenbach, G. (2006). "Citation advantage of Open Access articles", *PLoS Biology*, *4*(5). [Online] Available: http://dx.doi.org/10.1371/journal.pbio.0040157(10 April, 2017).

Flood, A. (2012). Scientists sign petition to boycott academic publisher Elsevier. *The Guardian*. [Online] Available: https://www.theguardian.com/science/2012/(10 April, 2017).

Forgues, B. (2013). "Academic Publishing: Past and Future", *M@n@gement*, 2013/5 (Vol. 16).

Frohlich, G. (2007). "Peer Review und Abweisungsraten: Prestigeschmuck wissenschaftlicher Journale", *Forschung und Lehre*, pp.338–339.

Frost, R. (2009). Case study: Open Access visibility and impact of an individual researcher. [Online] Available: http://www.openscholarship.org/jcms/c_6220/(28 April, 2017).

Fiske, S. and Taylor, S. (1991). *Social Cognition (2nd ed.)*. New York, NY: McGraw-Hill.

Fitzgerald, B. (2003). "Introduction to the Special Series of Papers on Informing Each Other: Bridging the Gap between Researcher and Practitioners", *Informing Science*, Volume 6.

Garfield, E. (2005). "The Agony and the Ecstasy--The History and Meaning of the Journal Impact Factor", International Congress on Peer Review and Biomedical Publication, 16 September 2005, Chicago.

Garfield, E. (2006). "The history and meaning of the journal impact factor", *JAMA*, 295.

Gargouri, Y., Hajjem, C., Lariviere, V., Gingras, Y., Caarr, L., & Brody, S.T. (2010). Self-selected or mandated, open access increases citation impact for higher quality research. *PLoS ONE*, *5*(10).

Glaser, J.; Spencer, K. and Charbonneau, A. (2014). "Racial Bias and Public Policy", *Policy Insights from the Behavioral and Brain Sciences*, Vol. 1(1).

George, D. and Mallery, P. (2003). SPSS for Windows step by step: A simple guide and reference. (*4th ed.*). Boston: Allyn & Bacon.

Gideon, E. (2008). "Open access initiative and the developing world", *African Journal of Library, Archives and Information Science*, 18 (2).

Grabarek-Matthews, M. (2008). Exploring Academic Reference Librarians' Familiarity with, Attitudes toward, and Use of Open Access Resources. Msc, The University of North Carolina.

Griffiths, M. and Auer, M. (2015). "Research funding in gambling studies: Some further observations", *International Gambling Studies*, 15.

Greenwald, A.; McGhee, D. and Schwartz, J. (1998). "Measuring individual differences in implicit cognition:

the implicit association test", *J Pers Soc Psychol,* 74(6).

Greenwald, A.; Poehlman, T.; Uhlmann, E. and Banaji, M. (2009). "Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity", *Journal of Personality and Social Psychology*, *97*.

Greenwald, A. and Schuh, E. (1994). "An ethnic bias in scientific citations", *European Journal of Social Psychology, Vol. 24.*

Guedon, J. (2001). In Oldenburg's Long Shadow: Librarians, Research Scientists, Publishers, and the Control of Scientific Publishing, Association of Research Libraries.

Guthrie, J. and Parker, L. (2012). "Reflections and projections: 25 years of interdisciplinary perspectives on Accounting, Auditing & Accountability research", *Accounting, Auditing & Accountability Journal,* 25(1).

Hajjem, C.; Harnad, S. and Gingras, Y. (2005). "Ten-Year Cross-Disciplinary Comparison of the Growth of Open Access and How it Increases Research Citation Impact", *Engineering Bulletin, 28* (4).

Hamrick, T.; Fricker, R. and Brown, G. (2010). "Assessing What Distinguishes Highly Cited from Less-Cited Papers Published in Interfaces", *Interfaces*, 40 (6).

Hardy, M. and Bryman, A. (Eds.) (2004). Handbook of Data Analysis. London, Thousand Oaks, and New Delhi: Sage Publications, ISBN 0761966528.

Harley, D.; Acord, S.; Earl-Novell, S.; Lawrence, S. and King, C. (2010) Assessing the Future Landscape of Scholarly Communication: An Exploration of Faculty Values and Needs in Seven Disciplines, UC Berkeley: Center for Studies in Higher Education.

Hassan, M. (2001). Can science save Africa? *Science*, 292: 609.

Harper, S. (2012). "Race without Racism: How Higher Education Researchers Minimize Racist Institutional Norms", *The Review of Higher Education,* Volume 36, No. 1.

Harnad, S. and Brody, T. (2004). Comparing the impact of Open Access (OA) vs. non-OA articles in the same journals. *D-Lib Magazine*, *10*(6). [Online] Available: http://www.dlib.org/dlib/june04/harnad/06harnad.(28 April, 2017).

Hernandes-Borges, A. *et al.* (2006). "Awareness and attitude of Spanish medical authors to open access publishing and "author pays" model", *Journal of the Medical Library Association*, Vol. 94, No. 4.

Hill, C.; Corbett, C. and Rose, A. (2010). "Why So Few? Women in Science, Technology, Engineering, and Mathematics", *Amer Assoc Univ Women*, Washington, DC.

Hussein, E. (2016). "Journal Impact Factors and Researcher h-index: How to improve research quality?", PPT presentation, Al-Furat Al-Awsat Technical University, Al-Mussaib Technical College, Pumps Engineering Dept.

Hughes, R. and Giles, M. (2010). "CRiT walking in higher education: Activating critical race theory in the academy", *Race, Ethnicity & Education, 13*(1),

Jackson, D.; Haigh, C. and Watson, R. (2009). "Nurses and publications--the impact of the impact factor", *Journal of Clinical Nursing,* 18.

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

Johns Hopkins University (2013). [Online] Available: http://guides.library.jhu.edu/content. php?pid=315747&sid=2583679(22 April, 2017).

Kim, J. (2011). "Motivations of faculty self-archiving in institutional repositories", *The Journal of Academic Librarianship*, *37*(3).

Kumar, S.; Singh, S. and Karisiddappa, C. (2011). "Role and challenges of digital repositories in scholarly Communication", *International Journal of Information Dissemination and Technology*, 1(4).

Koohang, A. and Harman, K. (2006)." The academic open access e-Journal: Platform and portal", *Informing Science Journal,* 9.

Kothari, C. (2014). Research methodology: methods and techniques.3rd edition, New Delhi: New Age International (P) LTD Publishers.

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

Krishnamurthy, M. (2008). "Open access, open source and digital libraries: a current trend university libraries around the world", *Program: electronic library and information systems*, 42 (1).

KULVER: Research Program on Assigning Cultural Values Communication and dissemination strategy. [Online] Available: http://www.KULVERFormidlingsplanengelskFinal (3 April, 2017).

Knight, L. and Steinbach, T. (2008)."Selecting an Appropriate Publication Outlet: A Comprehensive Model of Journal Selection Criteria for Researchers in a Broad Range of Academic Disciplines", *International Journal of Doctoral Studies*, Vol. 3.

Kurtz, M.; Eichhorn, G.; Accomazzi, A.; Grant, C.; Demleitner, M.; Henneken, E. and Murray, S. (2005)." The effect of use and access on citations", *Information Processing and Management: an International Journal*, 41(6).

Journal of Education and Practice
www.iiste.org
ISSN 2222-1735 (Paper)   ISSN 2222-288X (Online)
Vol.8, No.28, 2017

Laakso, M.; Welling, P.; Bukvova, H.; Nyman, L.; Björk, B.-C. and Hedlund, T. (2011). "The Development of Open Access Journal Publishing from 1993 to 2009", *PLoS ONE,* 6 (6).

Larivière, V.; Haustein, S. and Mongeon, P. (2015). "The Oligopoly of Academic Publishers in the Digital Era", *PLOS ONE* 10.6, p.e0127502

Lee, K.; Bacchetti, P. and Sim, I. (2008). "Publication of clinical trials supporting successful new drug applications: a literature analysis", *PLoS Med* , 5(9):e191.

Lortie, C. *et al.* (2007). "Publication bias and merit in ecology", *Oikos,* 116:1247–1253.

Mabe, M. (2003). "The Growth and Number of Journals", *Serials, 16* (2).

MacCallum, C. and Parthasarathy, H. (2006). "Open access increases citation rate", *PLoS Biology*, vol. 4(5).

Medves, J.; Godfrey, C.; Turner, C.; Paterson, M.; Harrison, M.; MacKenzie, L. and Durando, P.(2010). "Systematic review of practice guideline dissemination and implementation strategies for healthcare teams and team-based practice", *Int J Evid Based Healthc*, 8 (2).

Mail, C. and Weitkamp, E. (2013). "A Case Study in Serendipity: Environmental researchers use of traditional and social media for dissemination", *PLoS ONE*, 8(12).

Marashi, S.-A.; Seyed Mohammad Amin, H.-N., Alishah, K., Hadi, M., Karimi, A., Hosseinian, S., *et al.* (2013). "Impact of Wikipedia on citation trends", *EXCLI Journal*, 12.

Masic, I.; Sivic, S. and Pandza, H. (2012)."Social Networks in medical education in Bosnia and Herzegovina", *Mater Sociomed,* 24.

Matheka, D.; Nderitu, J.; Mutonga, D.; Otiti, M.; Siegel, K. and Demaio, A. (2014). "Open access: Academics publishing and its implications for knowledge equity in Kenya", *Global Health*, 10, article #26. [Online] Available: http://dx.doi.org/10.1186/1744-8603-10-26 (8 April, 2017).

McGrath, B. (2016). A Guide to Ensuring Wide Dissemination and Lasting Impact for Your Research. Research-Dissemination-Guide.

McLaughlin, T. (2006). Top Wall Street jobs still elude women, minorities. Boston Globe. [Online] Available: http://www.boston.com/news/education/higher/articles/(23 April, 2017).

McGuigan, G. and Russell, R. (2008). " The business of academic publishing: a strategic analysis of the academic journal publishing industry and its impact on the future of scholarly publishing", *Electronic Journal of Academic and Special Librarianship*, 9.

McNaught, K. (2015). "The Changing Publication Practices in Academia: Inherent Uses and Issues in Open Access and Online Publishing and the Rise of Fraudulent Publications", *The journal of electronic publishing*, Volume 18, Issue 3.

Mischo, W. and Schlembach, M. (2011). "Open access issues and engineering faculty attitudes and practices", *Journal of Library Administration*, *51*(5-6).

Miller, M. and Legg, S. (1993). "Alternative assessment in a high-stakes environment", Educational Measurement: Issues and Practice, 12(2).

Moed, H. (2010). "Measuring contextual citation impact of scientific journals", *J Informetr* ; 4.

Morris, C. (2011). Displace open access repository development in Africa: Kenya, Malawi.

Morrison, H. (2012). *Freedom for Scholarship in the Internet Age.* (Unpublished dissertation). Simon Fraser University, Burnaby, Canada.

Muinde, F. and Gorman, G. (2009). Barriers to open access to scientific information in Kenya, with particular reference to agricultural information. School of information Management, Victoria University of Wellington, New Zealand.

Murray, S. (2014). Publishing in Africa: Findings & Analysis, African Journals OnLine (AJOL).

Mutula, S. and Odero-Musakali, D. (2007). "Internet adoption and assimilation in Kenyan university libraries", *Library review journal*, 56 (6).

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.

Mweru, M. (2010). "Why Kenyan academics do not publish in international refereed journals", World Social Science Report, Chapter 3: Unequal capacities.

Nairaland (2017). Top 10 Most Spoken Languages In All Of Africa – Culture. [Online] Available: http://www.nairaland.com/901689/top-10-most-spoken-languages (11 April, 2017).

Nariani, R., and Fernandez, L. (2012). "Open Access Publishing: What Authors Want", *College & Research Libraries,* 73 (2).

Norris, M., Oppenheim, C., & Rowland, F. (2008). "The citation advantage of Open Access articles", *Journal of the American Society for Information Science and Technology*, 59(12).

NSF (2006). Science & Technology Indicators. *Chapter 3: Science and Engineering Labor Force*, [Online] Available: http://www.nsf.gov/statistics/seind06/c3/c3s4.htm (14 April, 2017).

Osterloh, M. and Frey, B. (2008). Anreize im Wirtschaftssystem. CREMA Research Paper. In Universität Zürich.

Patwardhan, K.; Galib, R.; Thakur, P. and Kumar, S. (2014). "Peer reviewed journals of Ayurveda – An appraisal", *J Res Educ Indian Med.*; 20.

Patton, L. and Catching, C. (2009). "Teaching while Black": Narratives of African American student affairs faculty", *International Journal of Qualitative Studies in Education, 22*(6).

Pavliscak, P. (1996). "Trends in Copyright Practices of Scholarly Electronic Journals", *Serials Review*, V.22, No.3.

Perkel, J. (2006). "Open Access brings more citations", *The Scientist Magazine.*

Pislyakov, V. and Shukshina, E. (2012). Measuring Excellence in Russia: Highly Cited Papers, Leading Institutions, Patterns of National and International Collaboration. Paper presented at the Proceedings of STI 2012, Montréal.

Poschl, U. (2004). "Interactive journal concept for improved scientific publishing and quality assurance", *Learned Publishing*, 17(2).

Publishing and E-learning Consultancy (2006). Scientific Publishing in Transition: An Overview of Current-Developments. Mark Ware Consulting Ltd, UK.

Reinsfelder, T. (2012). "Open access publishing practices in a complex environment: conditions, barriers and basis of power", *Journal of librarianship and scholarly communication*, 1 (1).

Resnik, D.; Peddada, S. and Brunson, Jr, W. (2009). "Research misconduct policies of scientific journals", *Accountability in research*, 16(5).

Roasting, H. and Barts, N. (2007). Bibliometrics: representation Instrument of the multidisciplinary positioning of a scientific area. Implementation for an Advisory Scientific Committee. Proc.8th Int. conf. of the ISKO Spanish Chapter, University of Leon, Spain.

Sachs, J. (2005). *The End of Poverty: Economic Possibilities for Our Time*, Penguin Press.

SAGE (2012). 10 Ways to Increase Usage and Citation of your Published Article Using Social Media. [Online] Available: http://www.sagepub.com/authors/journal/10ways.sp (23 April, 2017).

Salem, D. and Boumil, M. (2013). "Conflict of Interest in Open-Access Publishing", *New England Journal of Medicine*, 369, no. 5.

Sample, I. (2012). Free access to British scientific research within two years, Guardian, 15 July. [Online] Available: http://www.guardian.co.uk/science/2012/jul/15/free-access-british-scientific-research. (22 April, 2017).

Sarli, C. and Holmes, K. (2011). Strategies for Enhancing the Impact of Research. [Online] Available: https://becker.wustl.edu/impact-assessment/strategies (16 April, 2017).

Sawant, S. (2012). "Transformation of the scholarly communication cycle", *Library Hi Tech news*, 29 (10).

Searing, S. (2006). Questions to ask when selecting a journal. In L. J. Hinchliffe & J. Dorner (Eds.), How to get published in LIS journals: A practical guide (p. 4). Elsevier Library Connect.

Schober, J.; Farrington, A. and Lacey, E. (2009). Presenting and Disseminating Research. The NIHR RDS for the East Midlands / Yorkshire & the Humber.

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

Solórzano, D.; Villalpando, O. and Oseguera, L. (2005). "Educational inequities and Latina/o undergraduate students in the United States: A critical race analysis of their educational progress", *Journal of Hispanic Higher Education, 4*(3),

Smith, R. (2006). The Trouble with Medical Journals. London: Pavilion Press.

Singeh, F.; Abrizah, A. and Karim, N. (2013). What inhibits authors to self-archive in open access repositories? Malaysian case. *Information Development*, 29(1).

Starovoytova, D.; Tuigong, D.; Sitati, S.; Namango, S. and Ataro, E. (2015). "Potential of Theory of Innovative Problem Solution (TRIZ) in Engineering Curricula", *International Journal of Innovative Science, Engineering & Technology*, Vol. 2 Issue 5, ISSN 2348 –7968.

Starovoytova, D. and Cherotich, S. (2016). "Analysis of Masculinities Across Engineering Disciplines", *Research on Humanities and Social Sciences*, Vol.6, No.18, ISSN 2224-5766(Paper).

Starovoytova, D. and Namango, S. (2016a). "Faculty perceptions on cheating in exams in undergraduate engineering", *Journal of Education & Practice*, Vol.7, No.30, ISSN 2222-1735 (Paper), ISSN 2222-288X.

Starovoytova, D. and Namango, S. (2016b). "Viewpoint of Undergraduate Engineering Students on Plagiarism", *Journal of Education and Practice*, USA; ISSN 2222-1735 (Paper) ISSN 2222-288X (Online), Vol.7, No.31.

Starovoytova, D. (2017a). "Scientific Research, Writing, and Dissemination: (Part 1/4) - Boosting Research Quality*", Journal of Education and Practice*, ISSN 2222-1735 (Paper), ISSN 2222-288X. Vol. 8, No. 22.

Starovoytova, D. (2017 b)."Scientific Research, Writing, and Dissemination: (Part 2/4) - Barriers to Effective-Research, at Engineering-School*", Journal of Education and Practice*, ISSN 2222-1735 (Paper), ISSN

2222-288X. Vol.8, No.25

Starovoytova, D. (2017c).”Scientific Research, Writing, and Dissemination: (Part 3/4) – Scientific Writing”, *Journal of Education and Practice*, ISSN 2222-1735 (Paper), ISSN 2222-288X. Vol.8, No.30.

Starovoytova, D. (2017d). "Plagiarism under a Magnifying-Glass", *Journal of Education and Practice*, Vol.8, No.13, ISSN 2222-1735 (Paper), ISSN 2222-288X.

Starovoytova, D. and Namango, S. (2017). "Awareness of Engineering Faculty on Plagiarism", *Research on Humanities and Social Sciences*, ISSN (Paper) 2224-5766 ISSN (Online) 2225-0484 (Online), Vol.7, No.7.

Starbuck, W. (2013). "Why and Where Do Academics Publish?", *M@n@gement, 16* (5).

Steel, C. (2008). "Scholarly Monograph Publishing in the 21st Century: The Future More Than Ever Should Be an Open Book", *Journal of Electronic Publishing*, 11, no. 2.

STM(2015). International Association of Scientific, Technical and Medical Publishers Fourth Edition, published Prins Willem Alexanderhof 5, The Hague, 2595BE, The Netherlands.

Suber, P. (2012). Open access. Cambridge: MIT Press. [Online] Available: http://mitpress.mit.edu/books/open-access (28 April, 2017).

Shavell, S. (2007). Should copyright of academic works be abolished? [Online]Available: http://cyber.harvard.edu/sites/cyber.harvard.edu/files/Copyright%207-17HLS (2 April, 2017).

Schneider, Z. and Whitehead, D. (2012). Nursing and Midwifery Research methods and appraisal for evidence-based practice, 4th edition.

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

Taylor and Francis Group (2012a). Optimize citations. [Online] Available: http://journalauthors.tandf.co.uk/beyondpublication/optimizingcitations.asp (20 April, 2017).

Taylor and Francis Group (2012b). Promote your article. [Online] Available: http://journalauthors.tandf.co.uk/beyondpublication/promotearticle.asp (8 March, 2017).

Taylor, E. (2000). Critical race theory and interest convergence in the backlash against affirmative action: Washington state and Initiative 200. *Teachers College Record,* 102 (3).

Teferra, D. (2003). Scientific communication in African universities: challenges and opportunities, In Phillip Altbach (*ed*) Scientific Communication in African Universities: External Assistance and National Needs.

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.

The Research Information Network (2010) Quality assurance and assessment of scholarly research A guide for researchers, academic administrators and librarians, [Online] Available: www.rin.ac.uk/quality-assurance (12 March, 2017).

Tijssena, R. (2007). "Africa's contribution to the worldwide research literature: New analytical perspectives, trends, and performance indicators", *Scientometrics,* Vol. 71, No. 2.

Titus, S.; Wells, J. and Rhoades, L. (2008). "Repairing research integrity", *Nature,* 453:980-2.

Tillery, K. (2012). *2012 Study of Subscription Prices for Scholarly Society Journals.* Allen Press. [Online] Available: http:// allenpress.com/system/files/pdfs/ library/2012_AP_JPS.pdf. (5 March, 2017).UNESCO (1950). "The Race Question" (PDF).

University of Southampton (2012). 11-06 Impact case study Open Access and Digital Archiving. [Online] Available: http://impact.ref.ac.uk/casestudies2/refservice.svc/ (5 March, 2017).

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.

Utulu, S. and Bolarinwa, O. (2009). "Open access initiatives adoption by Nigerian academic staff", *Library Review*, 58 (9).

Van Noorden, R. (2014). Global scientific output doubles every nine years. [Online] Available: http://blogs.nature.com/news/2014/05/global-scientific-output-doubles-every-nine-years.html (7 March, 2017).

Van Teijlingen, E. and Hundley, V. (2002). "Getting your paper to the right journal: a case study of an-academic paper", *Journal of Advanced Nursing,* 37.

Van de Sompel, H. *et al.* (2004). "Rethinking scholarly communication", *D-Lib Magazine,* v. 10, n. 9.

Vanclay, J. (2013). "Factors affecting citation rates in environmental science", *Journal of Informetrics*, 7(2).

Ware, M. (2011). "Peer review: Recent experience and future directions", *New Review of Information Networking*, 16 (1).

Wasike, J. (2013). "An assessment the status of open access resources in Kenyan university libraries", *Library Hi Tech News*, 30(6).

Williams, P.; Stevenson, I.; Nicholas, D.; Watkinson, A. and Rowlands, I**.** (2009). The role and future of the

monograph in arts and humanities research, Aslib Proceedings: New Information Perspectives, Year: 2009, 61, 67–82.

Willinsky, J. (2003). "The Nine Flavors of Open Access Scholarly Publishing", *Journal of Postgraduate Medicine,* 49(3).

Willinsky, J. (2010). "Open access and academic reputation", *Annals of Library and Information Studies*, 57, no. 3.

World Bank (2005). *Meeting the Challenge of Africa's Development: A World Bank Group Action Plan*. World Bank, New York.

Wyatt, S.; Finn, R.; Wadhwa, K.; Linde, P. and Reilly, S. (2013). RECODE project: Deliverable D7.1: Dissemination Strategy, Seventh Framework Program for Science in Society.

Xia, J. (2012). "Diffusionism and open access", *Journal of Documentation*, 68(1).

Xia, J. and Nakanishi, K. (2012). "Self-selection and the citation advantage of Open Access articles", *Online Information Review*, 36(1).

Young, P. (2009). The serials crisis and open access: A white paper for the Virginia Tech Commission on Research. [Online] Available: http://scholar.lib.vt.edu/faculty_archives/ (23 March, 2017).

Zainab, A. (2010). "Open access repositories and journals for visibility: implications for Malaysian libraries", *Malaysian Journal of Library & Information Science*, 15 (3).