Chapter 7
Beyond Scientometrics

ABSTRACT

Numerous websites are currently being used by researchers for sharing and disseminating research, some of which are CiteULike, BibSonomy, Connotea, Mendeley, ResearchGate, etc. For measuring this data, scientists create alternative indicators related to traditional indicators like bibliometric indicators, scientometric indicators. The main purpose of these indicators is that with such huge amount of information available, some specific tools and techniques are required to filter and evaluate the research outcomes. These indicators reveal the societal and unknown impact of the work that traditional metrics are unable to do. The most prominent indicators for this purpose include Altmetrics or article metrics or alternative metrics. The detailed discussion is provided in this chapter.

INTRODUCTION

Some researchers suggest that the quantitative research evaluation indicators and other related methods are not reliable for reliable for the evaluation of small research output as they cannot capture the whole context of research methods and its impact. In this regard, qualitative research evaluation methods are undoubtedly the only accurate method for assessing research output (Thelwall, et al., 2016)**.** The common methods as discussed in earlier chapters for research evaluation is determining the citation impact of the research. On the other hand, Bibliometric indicators have known cons. These indicators levy a delay of a number of years on evaluations, since citations

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on which these indicators are mostly based take time to accrue while these are read, cited, peer-reviewed and then published. The alternative indicators resulting from the web may be timelier because much of the web and all of the social web allows immediate publishing. These indicators also reflect better impacts than citations (Thelwall & Kousha, 2015)**.** The web may also contain evidence of educational uses of research, such as citations in online syllabi. A massive amount of literature is being created online via internet particularly through Web 2.0 tools like Social Networking Sites for academic purpose (Liu & Adie, 2013; Wani, Zainab & Hussain, 2017). Numerous websites are currently being used by researchers for sharing and disseminating research, some of which are CiteULike, BibSonomy, Connotea, Mendeley, ResearchGate etc. For measuring this data scientists create alternative indicators related to traditional indicators like Bibliometric Indicators, Scientometric Indicators. The main purpose of these indicators is that with such huge amount of information available, some specific tools and techniques are required to filter and evaluate the research outcomes (Priem et al., 2010). These indicators reveal the societal and unknown impact of the work that traditional metrics are unable to do **(Ortega, 2015)**. The most prominent indicators for this purpose include Altmetrics or Article Metrics or Alternative Metrics. The detailed discussion is provided here:

ALTMETRICS

The growth of Web 2.0 tools especially Social Networks along with the widespread acceptance of electronic publishing, for dissemination and discussion of scientific literature, makes it possible to quantify the discussion of an article on blogs, podcasts, social media platforms, and news media – a phenomenon known as "Altmetrics" (Trueger et al., 2015). It was proposed in 2010 as a generalization of article level metrics. Altmetrics is derived particularly from the Social Web (Priem, et al., 2010), online scholarly sources (Neylon & Wu, 2009) and also from the general web (Almind & Ingwersen, 1997). It is considered to be the latest trend in the metric sciences and are considered as non-traditional metrics proposed as alternative to citation impact measures. It accounts to measure the research impact, article-downloads, mentions in social media, reads, profile view etc. An altmetric approach to assess research impact proves to be a useful indicator to assess the article level impact of researchers. The visibility of research increases using platforms