

# The New Era of Open Access to Knowledge: Expansion to Under-Represented Disciplines

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The feasibility and sustainability of Open Access (OA) journals and articles has been debated for over a decade [1-3]. Even with the ongoing debate, open access to scientific journal articles continues to gain momentum. Since 1993, open access journal articles have grown to account for 7.7% of all peer-reviewed published journal articles in 2009 [4] and 12% of all journal articles in 2012 [5]. Laakso and Björk [6] comment, "It no longer seems to be a question whether OA is a viable alternative to the traditional subscription model for scholarly journal publishing; the question is rather when open access publishing will become the mainstream model."

Laakso and Björk [6] identified three eras that open access publishing has undergone to achieve its current state. They classified 1993 to 1999 as the "Pioneering years," 2000-2004 as the "Innovation years" and 2005 to 2009 as the "Consolidation years." However, despite the growth in OA journals and articles, not all disciplines are increasing in their online availability at no cost to readers at the same rate. Earth Sciences leads the open access movement, having the highest number of articles published in open access and the field of Chemistry lags behind with the fewest number of open access articles [4]. The number of articles available through open access from scientists conducting research in the fields of Speech-Language Pathology, Deaf Studies, and Audiology is unknown. A search of journals and articles using the keywords "speech-language pathology," "audiology," "communication disorders," and "Deaf" on the Directory of Open Access Journals indicated that 0.1% or a total of 11 out of 9,914 journals were available in open access in the field of speech-language pathology (n=4) and audiology (n=7). No journals were found related to the topic of Deafness. The number of articles available in an open access format amounted to .07% (808 articles of 1,146,063 totals). These numbers indicate that a scarce amount of the research literature in communication disorders, hearing impairments, and deafness is available through open access to scientists, clinicians, educators, students, and the public. Thus, one goal of the next era of open access should include the expansion of open access to disciplines that currently are under represented. Research from communication disorders, Deaf studies, and hearing aids are three such areas that have been lacking in the open access journal and article publishing.

Individuals who have communication disorders, who are Deaf, and/or who wear hearing aids are present in every socio-economic group throughout the world. Studies associated with those who are Deaf, have communication disorders, or who wear hearing aids are crucial to our understanding of Deaf culture, the nature, assessment and treatment of communication disorders, and the technological advances and effectiveness of hearing aids. This lack of OA journals and articles may result in slowing the process of scientific discovery that could substantially impact the quality of life for millions. Open access can lead to advances in health care and increase scientific discovery [7]. It is because of this that the new era of OA journals and articles must include the expansion of under-represented disciplines.

OA journals provided at no cost and through online availability to consumers results in widespread dissemination of information.

In a review of the literature, Davis and Walters [8] found that OA journal articles were downloaded more frequently than traditional journals and that the public, particularly those with disabilities, have substantially increased their reading of scientific literature through OA journal articles. This new OA journal, the Journal of Communication Disorders, Deaf Studies and Hearing Aids (JCDSHA), will provide a much-needed open access outlet for those conducting applied and basic research in speech-language pathology, deafness, and audiology. Through scientific articles submitted to JCDSHA, new findings will be available for clinicians, scientists, and the public at no cost to them. The sharing of cutting-edge data can promote a greater understanding of communication disorders, deafness, and hearing aids. As a result, the new era of expansion in OA journals has the potential to improve the lives of countless individuals.

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