▶ The Use of Free Web-Based Mind Mapping Tools in the Studies of ESP: A Review of Research

Eglė Selevičienė,
Mykolas Romeris University, Lithuania, eseleviciene@mruni.eu

Purpose: This study aims at presenting a research review of the effective use of free web-based mind-mapping tools in the studies of English for Specific Purposes (ESP) in higher education. Mind maps, whether paper-and-pencil or web-based, are one of the best-known logical organization tools. In the Typology of Free Web-based Learning Technologies (Bower & Torrington, 2020), mind mapping tools fall under the cluster of *Image-based* tools and are described as educational tools that support the development of images to represent interrelated concepts in the form of a visual knowledge network that can be shared via URL. They can be used to represent conceptual and even meta-cognitive understanding. The category of mind mapping in the Typology includes such web-based freeware as *Bubbl.us*, *Mindomo*, *WiseMapping*, *MindMup*, *Popplet*, *Mind42*, *Mindmeister*, *Slatebox*, *Coggle* or *DebateGraph*.

Design/methodology/approach: This study is a systematic literature review which summarizes evidence of the effective use of aforementioned free web-based mind mapping tools in the context of teaching and learning ESP in higher education. It incorporates empirical research, published as articles in pre-eminent international scholarly journals, book chapters, and conference presentations in the realm of ESP in higher education within the period of 2017–2022.

Findings: The results of this current literature review imply that web-based mind mapping techniques are considered by the majority of researchers as a power tool for improving ESP students' reading comprehension. They help learners to visualize what they are reading, to extract the most important details of ESP texts, to detect connections between separate pieces of information, and to identify sequences or disclose causes and effects. The use of Web-based mind mapping software seems to be effective for developing ESP vocabulary, as it assists in building up a structure of knowledge for ESP terms by associating them with other related words or concepts. This study also concludes that the use of free web-based mind mapping tools for teaching and learning ESP may be guided by assumptions underpinning *cognitive* or *constructivist* philosophical approaches, however the majority of the research lacks a clear theoretical background. ESP teachers and students mainly have positive attitudes towards the use of Web-based mind-mapping tools in studies of ESP in higher education. On the other hand, some of the tools are described as complicated to use.

Research limitations/implications: As the focus of the study was on the use of free web-based mind mapping tools for teaching and learning ESP in higher education,

it is not inconceivable that different evaluations would have arisen if the focus had also been on the use of commercial products.

Practical implications: This study provides useful insights for both practitioners and researchers interested in the use of web-based mind mapping tools for teaching and learning ESP in higher education.

Originality/Value: The review contributes to the body of knowledge within the field by presenting evidence on the effective use of web-based mind mapping freeware after carefully analyzing available empirical research published in the last five years.

Keywords: *Web-based educational technologies, mind-mapping technologies, English for Specific Purposes, higher education.*

Research type: Literature review.