Search engine marketing (SEM) is a form of Internet marketing that involves the promotion of websites by increasing their visibility in search engine results pages (SERPs) through optimization (both on-page and off-page) as well as through advertising (paid placements, contextual advertising, and paid inclusions).Depending on the context, SEM can be an umbrella term for various means of marketing a website including search engine optimization (SEO), which adjusts or rewrites website content to achieve a higher ranking in search engine results pages, or it may contrast with PPC, focusing on only paid components.

SEM methods and metrics

1. **Keyword research and analysis** involves three "steps:" ensuring the site can be indexed in the search engines, finding the most relevant and popular keywords for the site and its products, and using those keywords on the site in a way that will generate and convert traffic.

2. **Website saturation and popularity**, how much presence a website has on search engines, can be analyzed through the number of pages of the site that are indexed on search engines (saturation) and how many backlinks the site has (popularity). It requires pages to contain keywords people are looking for and ensure that they rank high enough in search engine rankings. Most search engines include some form of link popularity in their ranking algorithms. The followings are major tools measuring various aspects of saturation and link popularity: Link Popularity, Top 10 Google Analysis, and Marketleap's Link Popularity and Search Engine Saturation.

3. **Back end tools**, including Web analytic tools and HTML validators, provide data on a website and its visitors and allow the success of a website to be measured. They range from simple traffic counters to tools that work with log files and to more sophisticated tools that are based on page tagging (putting JavaScript or an image on a page to track actions). These tools can deliver conversion-related information. There are three major tools used by EBSCO: (a) log file analyzing tool: WebTrends by NetIQ; (b) tag-based analytic programs WebSideStory's Hitbox; (c) transaction-based tool: TeaLeaf RealiTea. Validators check the invisible parts of websites, highlighting potential problems and many usability issues ensure websites meets W3C code standards. Try to use more than one HTML validator or spider simulator because each tests, highlights, and reports on slightly different aspects of your website.

4. **Whois tools** reveal the owners of various websites, and can provide valuable information relating to copyright and trademark issues.