People`s democratic republic of Algeria

Ministry of higher education and scientific research

Setif 1. University -Farhat ABBAS

Faculty of Economic, Commercial and Management

Department: Commercial Science

Submitted as part of the requirements for obtaining a master`s degree

in commercial sciences

Speciality: Digital marketing

Thesis title:

The Effectiveness of Search Engine Optimization (SEO) in Digital Marketing

Comparative study between coursera.org and edraak.org

Thesis by:
Mohamed Tahar Bensalem
Chouaeb Boudjerada

Supervisor:
Dr: Soumia Lagha

Date of dissertation defense:
…/…/2025

Discussion committee		
Chairperson	**Soufian Bouali**	Associate professor (A)
Supervisor	**Soumia Lagha**	Associate professor (B)
Examiner	**Nasser Bouchareb**	Professor

Academic year: 2024/2025

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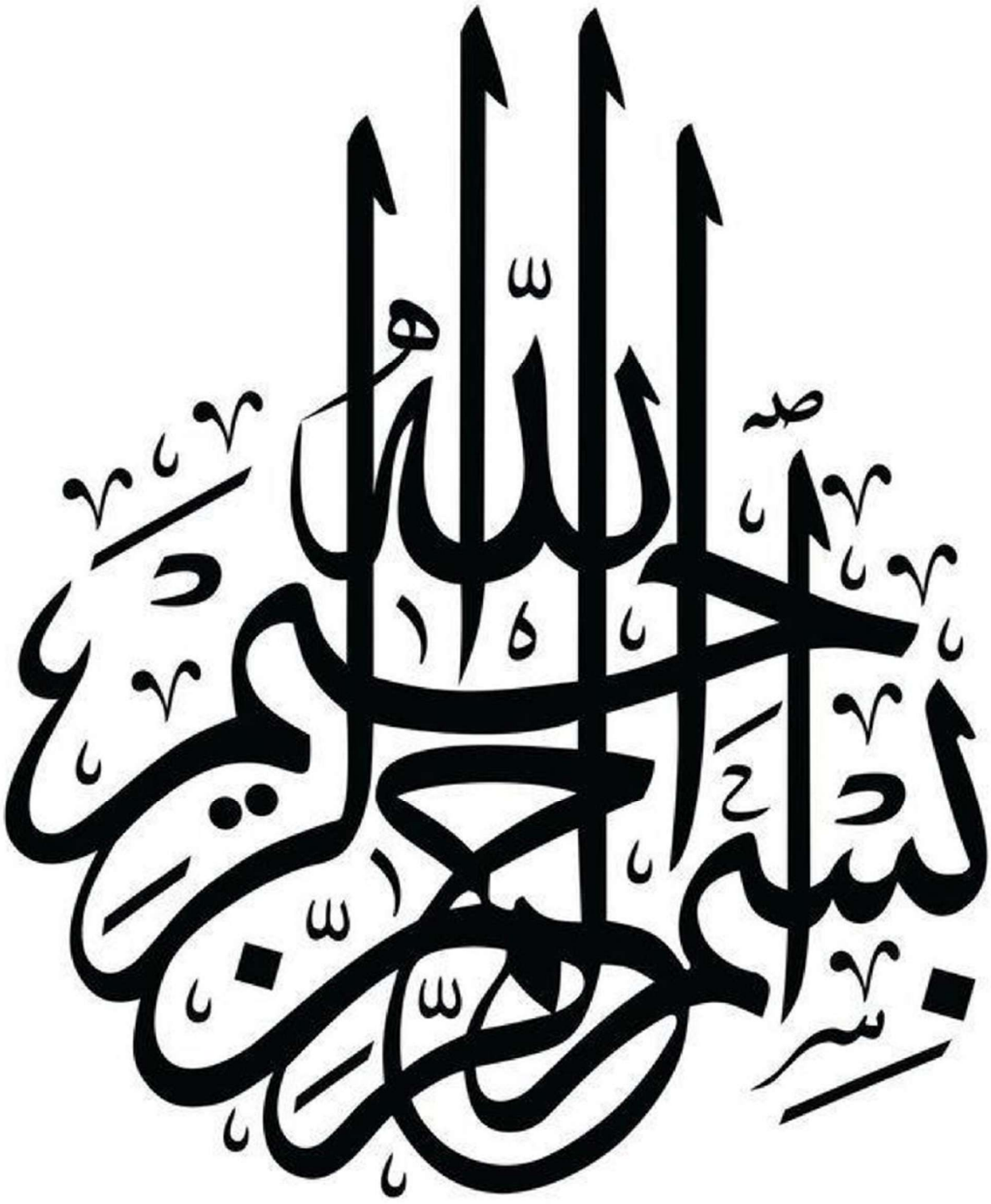
بسم الله الرحمن الرحيم

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This work marks the result of a journey filled with learning, growth, and perseverance. It would not have been possible without the support and encouragement of those who stood by me with kindness, patience, and belief in my potential.

I am deeply grateful to my supervisor, **Dr. Lagha Soumia**, whose guidance, expertise, and unwavering support were the foundation of this research. Her thoughtful feedback and sincere encouragement helped shape every step of this work. I am honored to have worked under her supervision.

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Thank you all for your contributions and support.

Dedication

To every soul who walked beside us in silence,

To the unseen hands that lifted us in moments of doubt,

To those who believed—quietly, patiently—without ever asking for recognition.

To the silent strength in our shadows,

whose prayers were louder than our voices,

whose hope in us burned quietly through every failure,

every sleepless night, every almost.

This work is a tribute to the power of encouragement, to the beauty of shared effort,

and to the unspoken strength we draw from love, sacrifice, and silent support.

To those who lit the path without seeking the spotlight,

and to the quiet voices that whispered, "**You can**."

This is for you.

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Introduction

In a world that is getting more and more digital, the existence of digital marketing as a key determinant of success for companies of all kinds is self-evident. The progress from conventional marketing to digital marketing is ever-growing and has completely transformed the way businesses interact with their customers. This shift can be seen particularly starkly in the online education industry, which increasingly is all about having a strong digital presence and visibility when engaging with and retaining a global student population that may be incredibly diverse and far-flung at the same time. At the core of these digital strategies is Search Engine Optimization (SEO): A concentrated effort to improve a site's visibility in organic (unpaid) search engine results.

SEO works In practice, the power of SEO isn't only about a given technique, but a strategic approach, one that has a direct impact on user acquisition, brand confidence, and market leadership. With just a few clicks, online courses are a dime a dozen, the race for user attention is tough, and a savvy SEO strategy is often what separates a good course from a great one. This research- Through an exploration into the complex world of SEO, this research aims to critically evaluate its relevance in the digital marketing landscape by performing a case study on the online education sector. Analyzing and Contrasting the SEO Strategy of a Global Leader: Coursera. org, as well as a leading regional platform, Edraak. org, in order to contribute to a wider understanding about how SEO efforts are modified for different marketing goals by countries and market specialties.

1.2 Research Problem and Questions

In an era where digital visibility determines business survival, online learning platforms must go beyond paid advertisements and social campaigns to focus on organic reach a key pillar of sustainable digital marketing. However, implementing and evaluating a successful SEO strategy remains a complex challenge. Rapid algorithm updates, shifting user behavior, and technological trends demand continuous adaptation. This study seeks to understand how SEO, with its three core components technical, on-page, and off-page contributes to the performance of educational platforms in the digital space. By comparing a globally dominant platform (Coursera.org) with a regional, Arabic-focused one (Edraak.org), the study aims to uncover how SEO effectiveness differs across these contexts and how such strategies shape their online success. The main problem this study addresses is:

- **What extent is Search Engine Optimization (SEO) effective in enhancing digital marketing outcomes In coursera and edraak ?**

This core question leads to several sub-questions:

- How do Coursera and Edraak differ in their implementation of **technical, on-page, and off-page SEO practices?**

- ❖ What are the measurable impacts of SEO on **KPIs** such as **organic traffic**, **user engagement**, and **domain authority** for each platform?
- ❖ How do **market scale** (global/regional) and audience targeting moderate SEO effectiveness?

1.3 Research Hypotheses

This study adopts a set of directional research hypotheses, based on previous literature and preliminary observation:

Main Hypothesis (H0):

Search Engine Optimization (SEO) significantly enhances the overall effectiveness of digital marketing strategies in terms of visibility, user engagement, and organic performance metrics.

From this central hypothesis, the following sub-hypotheses are derived:

- ➢ **H1:** Coursera.org and Edraak.org differ significantly in the implementation of technical, on-page, and off-page SEO strategies.
- ➢ **H2:** The application of SEO significantly increases **KPIs** such as website traffic and user engagement in digital marketing.
- ➢ **H3:** Global platforms such as Coursera.org demonstrate higher SEO effectiveness compared to regional platforms like Edraak.org, due to advanced technical infrastructure and a stronger backlink profile.

1.4 Objectives of the Study

This study aims to achieve the following specific objectives:

- To identify and critically evaluate the key technical, on-page, and off-page SEO practices implemented by Coursera.org and Edraak.org.
- To measure and quantify the effectiveness of these SEO strategies through a set of precise Key Performance Indicators (KPIs), including organic traffic, domain authority, bounce rate, and average time on page.
- To analyze how the distinct SEO approaches adopted by each platform contribute to their overall digital marketing success, including user engagement and market reach.

1.5 Significance of the Study

- **Academic Significance :** Advances SEO theory by validating factor interdependencies (e.g., technical SEO as a foundation for content success). enriches the academic discourse on the role of SEO in digital marketing strategy
- **Practical Significance:** The findings offer actionable insights and best practices for digital marketers, SEO specialists, and managers of online platforms, enabling them to refine their strategies, optimize their resource allocation, and improve their competitive positioning.

1.6 Scope of the Study

- **Spatial Limits:** The study is focused on the digital presence of two online platforms. The first, Coursera.org, has a global operational scope. The second, Edraak.org, is primarily focused on serving the Arabic-speaking Middle East and North Africa (MENA) region.
- **Temporal Limits:** The data collection for the comparative analysis was conducted as a snapshot to represent the state of SEO for both platforms in the first half of 2025. The theoretical framework is based on literature published between approximately 2005 and 2025, reflecting the evolution of SEO practices.
- **Thematic Limits:** The study is conceptually grounded in the fields of Digital Marketing and Search Engine Optimization (SEO). Its methodological approach is a comparative case study. The evaluation of "effectiveness" is strictly defined by the study's chosen KPIs: Visibility, Traffic, Engagement, Technical Soundness, and Authority & Reputation.

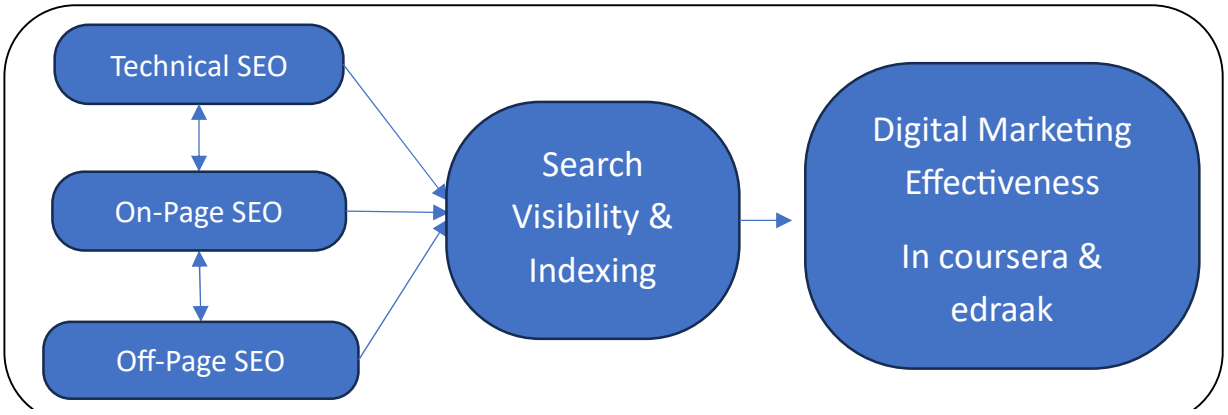
1.7 The limits of the study:

Several challenges were encountered during the course of this research:

- **Access to Internal Data:** The lack of access to the internal analytics of Coursera and Edraak means that Difficulty in obtaining precise internal analytics (e.g., bounce rates, exact traffic logs) from the platforms.
- **Tool Limitations:** Reliance on third-party tools (e.g., SEMrush, Google PageSpeed Insights) limited the accuracy and scope of SEO performance measurement, also Which led us to pay expensive subscriptions for us as students to be able to do these analyses.
- **Dynamic Nature of SEO:** Search engine algorithms and website content are constantly changing. The data, collected as a snapshot in time, represents a specific moment and may not reflect past or future states.

1.8 Conceptual Model of the Study

Figure 1: The study model



Source: Elaborated by the student

1.9 Operational Definitions

For the purpose of this study, the key concepts are operationally defined as follows:

➢ **SEO Strategies**

❖ **Technical SEO:** Operationally defined as the foundational health of the website's technical infrastructure that allows search engines to efficiently access and index content. It is measured by assessing the following indicators:

- **Page Speed:** The performance score (out of 100) and Core Web Vitals data (LCP, CLS, FID) for both desktop and mobile versions of the platforms, obtained using Google PageSpeed Insights.
- **Mobile-Friendliness:** The confirmation of whether a page is mobile-friendly, verified using Google's Mobile-Friendly Test.
- **Crawlability & Indexability:** The presence, structure, and proper functioning of the robots.txt and sitemap.xml files, analyzed through direct website inspection.
- **Security:** The implementation of a valid SSL certificate (HTTPS) across the entire domain, verified through browser security inspection tools.

❖ **On-Page SEO:** Operationally defined as the optimization of individual web page content and HTML source code to improve relevance and ranking. It is measured by the qualitative and quantitative assessment of:

- **Heading Structure:** The use of a single, keyword-rich H1 tag and a logical hierarchy of H2/H3 tags on key pages.
- **Keyword Targeting:** The strategic alignment of primary and long-tail keywords within page content with user intent, analyzed using SEMrush.
- **Meta Tags:** The presence of concise, compelling, and keyword-rich title tags and meta descriptions within character limits on the homepage and popular course pages.

- **URL Structure:** The use of clean, static, and descriptive URLs that incorporate relevant keywords, assessed via direct inspection.
- **ALT Tags:** The consistent use of descriptive, relevant alternative text for images to improve accessibility and image search visibility.
- **Content Freshness:** The frequency of new content additions (e.g., courses) and updates to existing content (e.g., blog posts, "last updated" dates).

❖ **Off-Page SEO:** Operationally defined as the activities performed outside of the website to build its authority, credibility, and reputation. It is measured by analyzing:

- **Backlink Profile:** The quantity and quality of external links, measured by the total number of referring domains, the Domain Authority (DA) or Authority Score (AS), and the authority of the top referring domains, using SEMrush.
- **Social Media Signals:** The brand's presence and audience size on key social media platforms (e.g., Facebook, Twitter, LinkedIn) and the frequency of content updates.
- **External Mentions:** The prevalence and nature (e.g., positive, negative) of discussions about the platform on external forums and communities like Quora and Reddit.

➢ **SEO (KPIs)**

Operationally, **SEO Effectiveness** is defined as the measurable success of the SEO strategies in achieving digital marketing goals. It is quantified using the following Key Performance Indicators (KPIs), primarily collected using SEMrush:

- **Website Authority:** The predictive ranking strength of a website, measured by its **Domain Authority (DA) / Authority Score (AS)** and the **Page Authority (PA)** of its homepage.
- **Organic Traffic:** The volume of non-paid visits from search engines, measured as the **Estimated Monthly Organic Traffic** in visits per month.

- **User Engagement:** The quality of user interaction with the website's content upon arrival, measured by:
- **Average Time on Page/Session Duration:** The average time a visitor spends on the site during a session.
- **Bounce Rate:** The percentage of visitors who leave the site after viewing only one page.
- **Search Engine Visibility:** The prominence of a website in search results, measured by the **number of estimated organic keywords** it ranks for and the **ranking positions** for those keywords.

Literature review

Digital marketing and SEO (Search Engine Optimization) are closely interconnected, as SEO is a fundamental component of digital marketing strategies. While digital marketing encompasses a broad range of online tactics including social media marketing, email campaigns, pay-per-click (PPC) advertising, and content marketing. SEO specifically focuses on improving a website's visibility in organic search engine results. By optimizing content, keywords, and technical aspects of a website, SEO helps attract targeted traffic, which enhances the overall effectiveness of digital marketing efforts. Essentially, SEO acts as a driving force within digital marketing, ensuring that businesses rank higher on search engines like Google, thereby increasing brand awareness, engagement, and conversions. A well-rounded digital marketing strategy leverages SEO alongside other channels to maximize reach and ROI.

2.1 Evolution of Digital marketing

The digital environment has fundamentally changed how businesses engage with their target audiences. (Ghorbani, Allameh,, & Minaee, 2013)

2.1.1 Definition

Digital marketing encompasses all marketing efforts that use an electronic device or internet. Businesses leverage digital channels such as search engines, social media, email and their websites to connect with current and prospective customers. This can also be referred as ‘online marketing’, ‘internet marketing’ or ‘web marketing’. Digital marketing is defined by use of numerous digital tactics and channels to connect with customers where they spend much of their time: online. From website to business's online branding assets - digital advertising, email marketing, online brochures, and beyond -- there’s spectrum of tactics falling under the umbrella of "digital marketing. (Desai, 2019)

2.1.2 Digital marketing methods and Tactics

Digital marketing has undergone a dramatic transformation since its inception, shaped by technological advancements and changing consumer behaviors. In the 1990s, the rise of the internet introduced basic websites and email marketing, while search engines like Yahoo and AltaVista laid the foundation for SEO. The 2000s saw the emergence of Google AdWords (now Google Ads), making paid advertising accessible, while social media platforms (MySpace, then Facebook) revolutionized audience engagement. By the 2010s, mobile marketing, content marketing, and data analytics became crucial, with Google’s algorithm updates (Panda, Penguin) refining SEO practices. Today, AI-driven marketing, voice search, chatbots, and programmatic advertising dominate, with a strong emphasis on personalization, automation, and omnichannel strategies. As technology evolves,

digital marketing continues to adapt, integrating augmented reality (AR), blockchain, and the metaverse into future strategies.

- **Content Marketing**

Content marketing remains a powerful tool for brands to attract and engage audiences. However, the landscape has evolved beyond traditional blog posts and articles. Interactive and immersive content formats such as videos, podcasts, live streams, and augmented reality (AR) experiences are gaining traction, offering new opportunities for brands to captivate their audience's attention. By creating compelling and shareable content, brands can establish themselves as thought leaders in their industry and foster deeper relationships with their customers. (Abraham, 2014)

- **Personalization**

Personalization is now a key element of successful digital marketing. Through the use of data analytics and artificial intelligence, marketers can deliver customized experiences that appeal to individual users. Techniques such as tailored product suggestions, targeted advertisements, and personalized emails help drive user engagement and conversions. As consumers increasingly expect these personalized interactions, data-driven strategies are essential for fostering deeper relationships with audiences. (Bhojaraja & Muniraju, 2013)

- **Video Marketing**

Video has become one of the most effective mediums for brand communication. Platforms such as YouTube, TikTok, and Instagram make video creation and sharing more accessible. Short-form content, live streams, and story formats are especially popular, offering brands authentic and engaging ways to interact with their audience. From product showcases to behind-the-scenes clips, video enables brands to express their identity and connect on a deeper level. (Bhojaraja & Muniraju, 2013)

- **Influencer Marketing**

Influencer partnerships have become a core aspect of digital marketing. Collaborating with influencers allows brands to access highly engaged niche audiences. Micro-influencers, in particular, provide valuable reach and engagement. As the practice matures, brands must carefully choose partners who align with their values and strategic goals to ensure authentic and effective campaigns. (Kamal, 2016)

- **Social Media Marketing**

Social media platforms serve as key channels for engaging with audiences directly. Whether through Facebook, Instagram, Twitter, or LinkedIn, each platform offers unique opportunities for content sharing, advertising, influencer collaboration, and community building. By utilizing social media, brands can enhance visibility, drive traffic, and capture leads. (Kamal, 2016)

- **Search Engine Optimization (SEO)**

SEO continues to play a crucial role in boosting brand visibility and improving search engine rankings. As user behavior shifts toward mobile and voice search, SEO strategies must evolve to include long-tail keywords, quality content, and optimized site performance. Staying updated on algorithm changes and best practices is essential to maintain discoverability. (Redjeki & Affandi, 2021)

- **Email Marketing**

Email remains a highly effective marketing channel despite the rise of social platforms. It allows for direct, personalized communication that can generate a strong return on investment. Campaigns including welcome messages, promotions, newsletters, and cart reminders help brands nurture customer relationships and drive conversions. (Giraldo, Arias, Rosas, Arias, & Calderon, 2022)

- **Mobile Marketing**

the Mobile Marketing Association (MMA, 2008) defines mobile marketing as"the set of practices that enables organizations to communicate and engage with their audiencein an interactive and relevant manner through any network or mobile device. (Robayo-Pinzón, Montoya, & Rojas-Berrio, 2017)

With the surge in mobile usage, optimizing for mobile is now critical. Mobile marketing includes responsive websites, apps, SMS campaigns, and location-based promotions. By focusing on mobile-friendly experiences, brands can better connect with consumers who are constantly on the move. (Bhojaraja & Muniraju, 2013)

- **Artificial Intelligence and Automation**

AI and automation are reshaping digital marketing by improving efficiency, enabling real-time data analysis, and facilitating large-scale personalization. Tools like chatbots, predictive analytics, and automated ad buying are transforming brand-consumer interactions and campaign management. These technologies help reduce costs and enhance performance across digital initiatives. (Tien, et al., 2020)

- **Data Privacy and Compliance**

In an era where data is central to marketing, protecting consumer privacy is vital. Regulations like GDPR and CCPA require brands to follow strict rules regarding data handling. Ensuring transparency, securing user consent, and safeguarding data are essential steps to build trust and maintain ethical standards in marketing operations. (Tien, et al., 2020)

- **Pay-Per-Click (PPC):**

PPC is a method of driving traffic to your website by paying a publisher every time your ad is clicked. One of the most common types of PPC is Google Ad Words, which allows you to pay for top slots on Google's search engine results pages at a price "per click" of the links you place. Other channels where you can use PPC mainly

include Paid ads on Face book, Promoted Tweets on Twitter, Sponsored Messages on LinkedIn. (Desai, 2019)

2.2 Search Engine

A search engine serves as a tool to promote a website and its related business online. It examines website content to collect information, making it essential to optimize the site for better visibility in search results. This process helps position the website among the top results. The software used by search engines for this purpose is known as “crawlers,” “robots,” or “spiders.”

Search engines are generally divided into two main types, crawler-based and human-powered directories, each operating through distinct mechanisms.

Crawler-based search engines function in three main stages. First, they scan or "crawl" through websites. Second, they analyze the webpage content, focusing on specific URLs or keywords to assess how well the content matches search queries. This data is then formatted and stored in the search engine's index. Finally, when a search is made, they retrieve the most relevant webpages from the index, displaying them as hyperlinks with brief summaries. (Enge E. , Spencer, Fishkin, & Stricchiola, 2009)

human-powered directories depend on manual review and categorization. Website owners submit a brief summary of their site, but they have no control over which part of that content will appear in the search description. Websites with high-quality, relevant content are more likely to be accepted and included in directories like the Open Directory, Google Directory, Yahoo Directory, and Looksmart.

Today, many search engines incorporate both human-reviewed listings and crawler-based results, forming what are known as hybrid search engine (Rogan G. , 2009)

2.2.1 How Search Engines Work

Search engines continuously scan the web for newly published content. As defined by Caimin (2016), a "search engine" is software that conducts keyword-based searches across multiple websites. Its core components include: (1) algorithms that prioritize the most relevant results; (2) search engine software elements such as logical operators, search fields, and display formats; (3) a database; and (4) a spider or "crawler," which navigates and analyzes website content.

Figure 2:The Basic Process of a Search Engine

Source:Created by the student.

The primary objective is to provide users with high-quality information in an accessible and easy-to-understand format. If a business lacks an online presence, such as a website or digital brand, it is unlikely to appear in search engine results or be visible to users. (Jones, 2016)

2.2.2 Search engine marketing

Search Engine Marketing (SEM) is a digital marketing strategy focused on enhancing a website's visibility and ranking on search engine results pages (SERPs) through both paid advertising SEA and optimization techniques SEO. Statista projects global SEM spending will reach $135 billion by 2024. Over time, SEM has evolved from basic practices like keyword stuffing and link building to more advanced approaches, including search engine optimization (SEO) and (SEA).

Evans (2009) identified three essential elements of SEM: paid advertising (SEA), SEO, and conversion optimization—each contributing to increased website visibility and traffic. He emphasizes the importance of integrating these elements for a well-rounded SEM strategy. (Evans, 2009)

One major advantage of SEM is its ability to deliver measurable outcomes, which facilitates tracking return on investment (ROI). Research by Shih et al. (Shih, Chen, & Chen, 2013)indicates that SEM effectively boosts website traffic and lead generation, with companies using SEM experiencing higher conversion rates than those that do not. Dinner et al. (2014) further found that SEM significantly influences online sales, particularly benefiting small and medium-sized businesses. (Dinner, Van Heerde, & Neslin, 2014)

To implement SEM effectively, organizations can use strategies such as keyword research, pay-per-click (PPC) advertising, and landing page optimization. Chaffey et al. (2019) highlight keyword selection as a key success factor, noting that in-depth keyword research helps businesses understand their audience and create content that aligns with user intent. (Chaffey & Ellis-Chadwick, 2019)

Overall, SEM is a vital component of digital marketing, offering a powerful means for businesses to enhance visibility and attract leads. However, due to its complexity, a cohesive strategy that incorporates paid ads, SEO, and conversion optimization is essential. When executed effectively, using methods like keyword analysis, PPC campaigns, and optimized landing pages, SEM can significantly support an organization’s marketing objectives.

While Search Engine Marketing (SEM) encompasses both Search Engine Optimization (SEO) and Search Engine Advertising (SEA), this study will primarily focus on SEO. Given the growing importance of organic visibility and sustainable digital growth, the effectiveness of SEO strategies within digital marketing will be the central subject of analysis throughout this research. (Shih, Chen, & Chen, 2013)

2.2.3 Search Engine Optimization (SEO)

Search Engine Optimization (SEO) is a foundational component of digital marketing that focuses on enhancing a website's visibility in organic search engine results. By aligning content, structure, and technical elements with search engine algorithms, SEO enables businesses to increase qualified traffic and strengthen their digital presence. Unlike paid advertising, SEO offers sustainable, long-term visibility through strategic implementation of both on-page and off-page techniques. Given the increasing reliance on search engines as primary sources of information, understanding and applying effective SEO practices has become crucial for digital marketers seeking measurable and lasting outcomes. (MOZ, 2023)

Before delving into technical specifics, it's important to distinguish between search queries and keywords. A search query is the actual text entered by a user into the search bar—it can be anything, including misspelled words. While a query might contain one or more keywords, it may also include none. Keywords, however, are specific terms or phrases commonly found in user queries. Search engines track the most relevant keywords to enhance the accuracy and relevance of their results.

SERPs are typically structured in two main sections: organic results on the left, and pay-per-click (PPC) advertisements on the right—though PPC ads sometimes appear above organic listings as well. (Gudivada, Rao, & Paris, 2015)

A 2013 study by Chitika Insights revealed that over 90% of users never go beyond the first SERP page, which usually displays ten organic results. Another study (Maxwell Iskiev, 2025) showed that over 60% of user traffic is captured by the top three results. These findings highlight the critical importance of achieving a prominent search ranking. (Iskiev, 2025)

Search Engine Optimization (SEO) is designed to improve a webpage's position within search results. It integrates keyword strategies with broader inbound marketing efforts. Inbound marketing focuses on drawing in users rather than pushing content toward them—essentially, allowing potential customers to find the company rather than the other way around. SEO is one of the most effective inbound marketing tools, working to enhance a site's SERP ranking by optimizing it for keywords tied to user queries (Bradley, Win the game of Googleopoly: Unlocking the secret strategy of search engine domination., 2015)

Search engines serve as gateways to the vast information available online. The most widely used search engines are Google, Yahoo!, and Bing. A search query is the phrase or question a user types into the search field.

For any company, securing a spot on the first page of Google's SERP represents a major competitive advantage.

As the dominant search engine in both Europe and the United States, Google holds substantial credibility with users. It has become so embedded in daily life that the term "to google" has entered the English language as a verb meaning "to search online." Table 1 presents search engine usage statistics in Algeria for 2024 (www.gs.statcounter.com):

TABLE 1: Search Engine Market Share in Algeria (2024)

table 1: Search Engine Market Share in Algeria (2024)

Search Engine	Usage %
Google	96.82
Bing	2.18
YANDEX	0.37
Yahoo	0.34
DuckDuckGo	0.16
Qwant	0.06

Source: Created by the student using statcounter website

Clearly, Google maintained a near-monopoly in the Algeria search engine market during this period, making it the primary focus of this study.

When you perform a search, you'll typically see paid advertisements at the top or side of the results page, while unpaid or organic listings appear beneath them. SEO methods help boost a website's presence by improving its position in these non-paid results. (MOZ, 2023)

The image below shows a standard Search Engine Results Page (SERP).

picture 1:exemple of a google SERP

Source: Screenshot taken by the student.

As illustrated in Picture 1, the top four entries are sponsored ads, followed by the first organic result—here, a Wikipedia entry, known for offering basic and reliable definitions. On the right side is a "featured snippet," which displays a brief excerpt from a website, typically aimed at answering a question or defining a term (Breikss, 2011)

The next sections will examine the key components of SEO in more detail.

2.3 SEARCH ENGINE OPTIMIZATION (SEO) TECHNIQUES.

Search engines function as virtual marketplaces where buyers and sellers can connect. SEO focuses on optimizing websites to enhance their visibility in search engine results, aiming to attract the attention of users and increase site traffic. As a concept, SEO is extensive and complex, making it difficult to grasp all at once. Its primary objective is to elevate a website's ranking in organic search results. When businesses develop websites, their main intention is to drive targeted traffic through search engines. (Sheram, 2005, pp. 45-47)

SEO techniques are viewed as fundamental, ethical practices that should be integrated into website development. Achieving top search rankings is not immediate—it's a gradual process that continues throughout the website's lifespan. These strategies help communicate the site's purpose to search engines, ultimately guiding the intended audience to the site via relevant search queries. (Sheram, 2005, p. 48)

Today, many businesses create websites and then bring in SEO professionals to optimize them for better search engine compatibility. There's a common but incorrect belief that SEO involves mysterious methods only understood by specialists. In reality, even web developers without SEO expertise can apply basic optimization practices during development to improve search engine friendliness.

Broadly, SEO strategies are divided into two categories: On-page and Off-page SEO. Both are vital and must be implemented together to achieve effective SEO results for both static and dynamic websites. (Ledford, 2007)

Search engines provide various tools for analyzing how webpages are crawled, indexed, and ranked. These engines scan websites using their unique criteria, extract content, store it in their databases, and display it in search engine results pages (SERPs) based on users' queries. Ensuring that a website is designed for efficient crawling and indexing can significantly improve its search ranking. (Rogan G. , 2009)

The following sections will outline essential On-page and Off-page SEO strategies that should be applied when optimizing dynamic websites. As previously noted, dynamic websites are generally not as search engine friendly as static ones, particularly across most search platforms.

2.3.1 ON-PAGE SEO TECHNIQUES

On-page SEO encompasses all the actions taken directly on a website to improve its position in search engine results pages (SERPs). This includes optimizing content structure, keyword usage, meta titles and descriptions, header tags (H1–H6), internal linking, and URL formatting. One of the most critical components of on-page SEO is high-quality, relevant content that aligns with user intent and includes semantically related keywords. Additionally, on-page optimization supports better crawlability and

enhances the user experience—both of which are key ranking signals for search engines like Google. Effective on-page SEO not only improves visibility but also contributes to lower bounce rates and higher engagement, which directly impact a website's authority and relevance in search algorithms. (Wiideman, 2016)

2.3.1.1 Page Title/Title Tag:

The page title tag is a vital element of on-page SEO as it communicates the content of a specific webpage to both search engines and users. Defined by the <title> tag in the <head> section of HTML, it generates the text displayed in the browser's title bar. Additionally, search engines use the page title as the clickable headline in search results, linking directly to the website.

The title tag plays a crucial role in SEO because most search engine algorithms evaluate it during indexing and also use it as the initial reference point during the crawling process. If a user sees a relevant title in the search results (SERPs), they are more likely to click on it. For these reasons, the page title is considered one of the most influential factors in on-page SEO, supported by the following key points:

- Search engine algorithms expect the page's content to align with its title.
- The title appears as a headline and clickable link in SERPs.
- It is shown in the browser's title bar, helping users identify the active page and aiding navigation. (Nazar, 2009)

The World Wide Web Consortium (W3C) advises limiting page titles to 64 characters (including spaces), as both browsers and search engines often truncate longer titles for consistent display in SERPs.

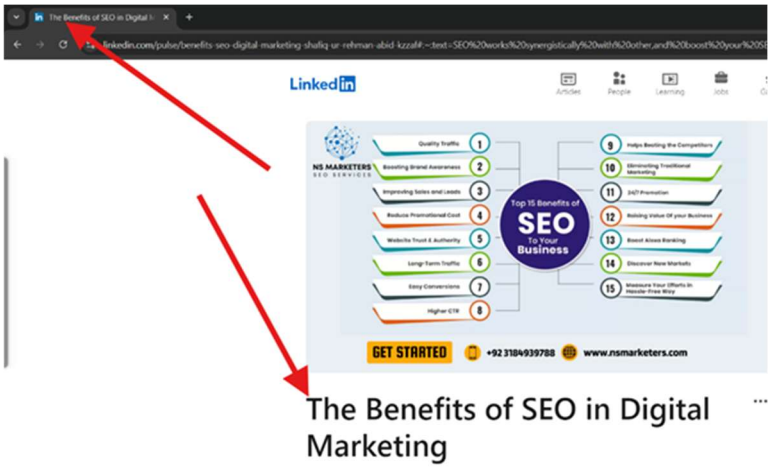
Search engine crawlers analyze the <title> content to understand what the webpage offers to users. Therefore, including relevant keywords—preferably at the beginning—is recommended. When using multiple keyword phrases, separators like "|", "-", or "." improve readability, even though they don't influence SEO rankings directly. Their main benefit is enhancing user clarity, which can increase click-through rates.

Special characters such as apostrophes or commas should generally be avoided. If necessary, it's best to use their HTML entity codes. This is because not all search engines handle these characters the same way—for example, Ask.com has difficulty interpreting apostrophes in search queries. (MOZ, 2017)

picture 2:An Example of a Page Title Tag in Search Results

Source: Screenshot taken by the student from a search engine results page

picture 3:The Relationship Between the Page Title and H1 Headline



Source: Screenshot taken by the author from linkedin.com.(2025)

Title tags act as digital billboards in search engine listings. An effective title not only boosts SEO rankings but also serves as a key message in marketing campaigns, capturing attention and prompting clicks. This dual function makes title optimization crucial for enhancing campaign reach and audience engagement. (Odom & Odom, 2010)

2.3.1.2 Meta Tags

Similar to the <title> tag, meta tags are placed within the <head> section of an HTML page. Some meta tags are crucial for ensuring that a website is properly listed and indexed by search engines. Commonly used meta tags include: abstract, keywords, description, expiry, distribution, copyright, robots, and language tags. While not all of these require detailed focus, several are important since many search engines consider them during the indexing and ranking process.

Meta tags, while often considered technical, are powerful digital marketing tools that influence how content appears in search results. Optimized meta descriptions and titles can significantly increase click-through rates (CTR), which improves campaign visibility, drives targeted traffic, and enhances the overall effectiveness of inbound digital strategies. (Search engine optimization starter guide. Google Webmaster Central., 2025)

2.3.1.3 Keyword Meta Tag

The keyword meta tag helps search engines identify relevant pages for users' search queries. It contains a list of keywords that reflect the content of a specific webpage. Search engines that support meta tags may use this one to index the site.

Example syntax:

<meta name="keywords" content="first_keyword, second_keyword, nth_keyword"/>

Although Google places minimal emphasis on this tag for ranking, it (along with other search engines) still considers it for semantic indexing (Search engine optimization starter guide. Google Webmaster Central., 2025)

2.3.1.4 Description Meta Tag

This tag provides a concise summary of a webpage's content, incorporating relevant keywords. Some search engines directly use this description for indexing or listing purposes. It plays a significant role in enhancing the Click-Through Rate (CTR) of a website. Google Webmaster Tools offers guidelines on crafting effective descriptions. The tag is also commonly used to generate the snippet that appears in search results, influencing user engagement and CTR.

Example syntax:

<meta name="description" content="Description of webpage."/>

Certain directory-based search engines also use this description to list the site, making it valuable for both users and search engines by providing a quick overview of the content. (Google Webmaster Tools, 2025)

2.3.1.5 Robots Meta Tag

The robots meta tag sets instructions for search engine crawlers on how to handle a webpage. It controls whether the page should be indexed and whether links on the page should be followed. The instructions apply across all major search engines (Odom & Odom, 2010)

Possible values include:

table 2:Robots Meta Tag Directives and Their Functions.

Value	Function
noindex	Prevents indexing of the page.
index (default)	Allows indexing of the page.
follow (default)	Allows following of links on the page.
nofollow	Prevents following of links on the page.
noodp	Blocks use of content from ODP (dmoz.org) in search snippets.
noarchive	Disables the "Cached" link in search results.
unavailable_after:[date]	Removes the page from search results after a specified date.

Source: created by student using previous study's.

If this tag is omitted, search engines default to indexing and crawling the page. It is especially useful for preventing indexing of non-HTML files like images, PDFs, or Word documents.

When a site offers multiple formats of the same content (e.g., .html, .pdf, .doc), duplicate content issues may arise. Although search engines often detect and handle such duplicates, it consumes crawl resources. Using noindex or nofollow helps mitigate this by preventing unnecessary crawling of duplicate versions, allowing more important pages to be indexed instead . (Viney, 2008)

Example syntax:

<meta name="robots" content="index,follow"/>

2.3.1.6 Distribution Meta Tag

This tag specifies the intended geographic or audience scope for the webpage's content . It informs search engines where the content should be accessible.

Common values:

table 3: Common Values for the Distribution Meta Tag.

Value	Function
Global	Content is accessible across the entire web.
Local	Content is intended for regional access only.
IU	Content is for internal use only.

Source: created by student using previous study's.

Example syntax:

<meta name="distribution" content="Global"/> (Search engine optimization starter guide. Google Webmaster Central., 2025)

2.3.1.7 Expiry Meta Tag

The expiry meta tag determines when a page should be removed from a search engine's index. It's particularly useful for frequently updated sites like news portals, as it helps refresh indexed content. Setting an expiration date allows new content to be indexed in place of outdated material .

For example, assigning a date like "30 September 2010" tells search engines to remove the page from their index on that date. (Viney, 2008)

Example syntax:

<meta name="expiry" content="never"/>

2.3.1.8 Targeted Keyword

According to Ahola (2017), the objective of SEO is to ensure that one or more pages from the client's website appear among the top results in an organic search when a user enters a keyword. While keywords may not be the core of SEO, they remain the most effective means of reaching search objectives.

Busche (2017) explains that as search engines have evolved to interpret content more like humans, semantic understanding has become increasingly important. This involves considering the meaning and context behind keywords, allowing for more strategic placement and use. It also includes identifying related terms that users might associate with the primary keyword during their search. (Busche, 2017)

When users type keywords or keyword phrases into a search engine, they do so to find specific information related to those terms. As a result, choosing and properly placing keywords is a crucial aspect of any SEO strategy. It's important to determine the right keywords even before selecting a domain name, as the website's content, title, and URL should contain relevant keywords . Nevertheless, existing websites can still be optimized by dedicating time and effort to keyword research. Identifying effective

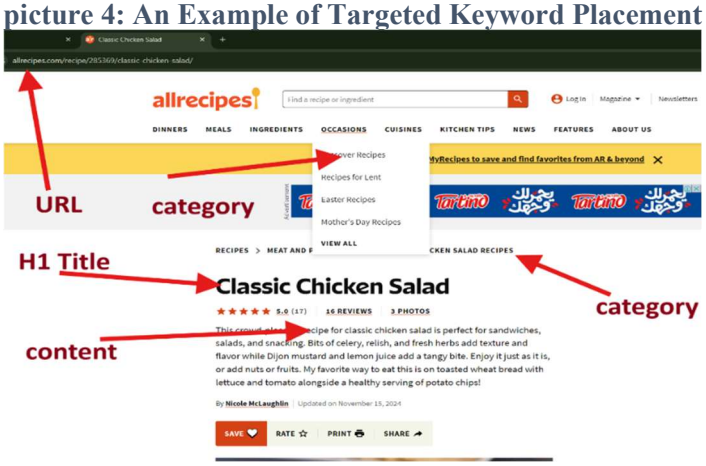
keywords and using them correctly in the site's content enhances both indexing and search engine ranking. (Nazar, 2009)

A frequent mistake developers make is trying to rank for a single keyword rather than a keyword phrase. This approach can significantly reduce site traffic—up to 80%—since only 20% of users search with a single term. In contrast, 33%, 26%, and 21% of users search using two, three, and four-word phrases, respectively . (Ledford, 2007)

Another common question is about keyword density—how often a keyword appears within a webpage's content. Essentially, it's the proportion of a keyword on the page. Overusing keywords can become problematic, as search engines may flag it as keyword stuffing .This can result in poor indexing or, in the worst-case scenario, the website being removed entirely from search engine listings.

In the context of digital marketing, keyword optimization plays a central role in ensuring that the right audience finds a business's content through organic search. By targeting relevant and high-intent keywords, digital marketers can reach users who are already searching for related products, services, or information, thereby increasing conversion opportunities and marketing ROI. (Busche, 2017)

picture 4: An Example of Targeted Keyword Placement



Source: Screenshot taken by the student from allrecipes.com, with annotations added (2025).

2.3.1.9 Header Tags

Header tags play a vital role in on-page SEO. These tags are located within the HTML structure, typically just before the <body> tag. HTML supports six levels of headings, and Cascading Style Sheets (CSS) can be used to organize and style them effectively. When search engine crawlers scan a webpage, they also analyze the content within header tags for indexing purposes. Therefore, incorporating keywords into header tags is crucial for improving crawlability. This provides a strategic way to highlight important keywords. Since all major search engines recognize and utilize these tags, there's no reason to neglect them The syntax for a first-level heading is: (Sheffield, 2020)

<h1>Most Important Heading/Set of Keywords</h1>

2.3.1.10 ALT Tag

Images on websites are often more engaging and visually appealing than plain text. However, while they enhance user experience, search engines can't interpret images in the same way as text . This poses a challenge, as search engines need content to be both accessible and readable for proper indexing. Making website content accessible to search engines is essential but not always straightforward. Since search engines cannot "see" images, ALT tags serve as a workaround . (Enge E. , Spencer, Fishkin, & Stricchiola, 2009)

The ALT tag—short for “alternative tag”—provides a text description of an image, allowing search engines to understand its content. These descriptions are also helpful for users accessing the site through browsers that do not support images, displaying the ALT text as a substitute. Additionally, ALT tags make images discoverable by search engines, which is the basis for features like Google Image Search .

The syntax for an ALT tag is:

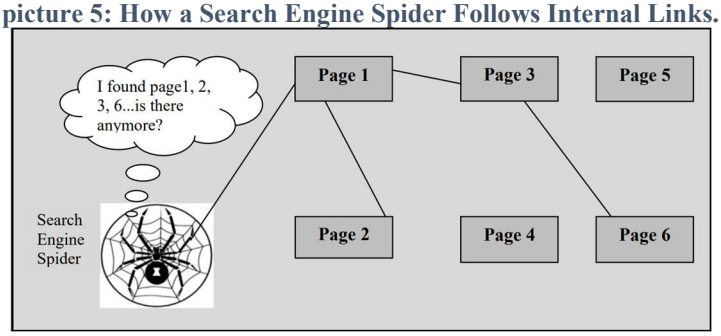
```
<img src="image1.jpg" alt="Description about Image goes here"/>
```

ALT tags, beyond supporting accessibility, contribute to digital marketing by allowing image-based content to appear in image search results. This visibility boosts traffic to product pages or blog articles, especially in visual-heavy industries like fashion, travel, and beauty, thus supporting brand exposure and sales conversions. (Viney, 2008)

2.3.1.11 Internal Linking

Search engines navigate through links on a webpage to discover and index other pages within the same website. Therefore, it's essential for developers to carefully design the website’s internal link structure. A common mistake is hiding navigation menus or creating confusing navigation paths, which hinders search engines from properly crawling and indexing the site.

picture 5: How a Search Engine Spider Follows Internal Links.



Source: Created by the student.

In this case, the website's structure fails to link all its pages—specifically, "Page 4" and "Page 5" are isolated and not connected to any other page. As a result, search engine crawlers cannot access them, potentially causing these pages to be excluded from indexing. (Odom & Odom, 2010)

According to Patrick Stox, an SEO expert at IBM, internal links should be used with purpose—they play a crucial role in establishing a page's relevance and authority. Pages that receive a higher volume of internal links tend to rank better in search engine results, as this signals their importance to search engines. However, repeatedly using the same anchor text can be flagged as spam, so it's essential to vary the wording. Search engines rely on descriptive anchor text to understand the destination of a link. Using keyword-rich, meaningful phrases in anchor text helps clarify the link's purpose. Including internal links within content allows users to explore related information across the site. Opening these links in the same browser window is considered an SEO best practice—it improves user experience, supports tracking of user behavior, increases page views, boosts time spent on site, and reduces bounce rates. It also assists users who rely on screen readers by maintaining continuity in navigation.

If a link needs to open in a new window, it's helpful to indicate this with nearby text (e.g., "opens in a new window") to inform and accommodate all users.

From a digital marketing perspective, internal linking strengthens user experience and content discoverability. It guides visitors toward strategic pages such as offers, services, or contact forms, which increases dwell time, encourages deeper engagement, and supports lead generation funnels. (Patel, Internal linking guide: Actionable tips, strategies, and tools., 2024)

2.3.1.12 Content Placement

In an SEO campaign, ensuring that key content is easily visible and accessible on each webpage is important not only for users but also for search engines. Presenting essential information clearly helps search engine crawlers index the site more efficiently . (Enge E. , Spencer, Fishkin, & Stricchiola, 2009)

At times, crucial content may be overlooked by crawlers because it is placed too far down the page, reducing its chances of being indexed. Developers often focus on making content user-friendly, but this doesn't always align with effective indexing. For example, placing navigation links at the top of a page might prompt crawlers to follow those links before indexing the main content, causing valuable information to be missed .

For marketers, strategic content placement ensures that valuable messages — such as promotions, calls to action, or campaign narratives — are indexed effectively by search engines and immediately visible to users. This positioning supports digital marketing goals like increased conversions and brand recall. (Ledford, 2007)

2.3.1.13 URL Structure and Size

Static, keyword-rich URLs are preferred by both users and search engine crawlers . as they provide a clear understanding of the website's content. Such URLs function like a house nameplate, indicating the destination within the site. In contrast,

complex and unclear URLs—often referred to as "dirty URLs" contain special characters that are irrelevant or confusing to users . (Köhne, 2006)

An example of a clean, static URL might be:

http://www.domain.com/products/car-bikes.htm

While a dynamic URL might appear as:

http://www.domain.com/product/ref=sa_menu_lapnet4?ie=UTF8&node=5688

Unfortunately, most search engine crawlers struggle with or avoid crawling URLs that include special characters like &, %, or ? (Bing Webmaster, 2024)

To ensure accessibility and proper indexing, URLs should be user-friendly, well-structured, and easy for crawlers to interpret. Static, readable URLs enhance navigation for both users and search engines.

Poorly designed or overly complex URLs present several challenges :

- ✓ Long URLs with punctuation are hard to type.
- ✓ Complicated URLs are difficult to remember and provide no clue about the content or function of the page, reducing usability.
- ✓ Dynamic URLs may pose security threats. Query strings introduced by ? can be exploited by hackers, and file extensions like .pl, .asp, or .jsp may reveal sensitive implementation details.
- ✓ Dirty URLs can lead to issues with crawlers. Some developers unintentionally or deliberately create infinite loops that trap crawlers, causing them to revisit the same page endlessly under different URLs—this is known as a spider trap. As a result, some search engines avoid crawling such sites.

For these reasons, major search engines recommend using simple, concise, and static URLs

A clean, keyword-rich URL structure improves SEO effectiveness. Clear URLs are easier to share across digital platforms, enhance tracking in marketing analytics tools, and increase user trust when clicking through search or ad results.

(Enge E. , Spencer, Fishkin, & Stricchiola, 2009)

2.3.1.14 Site Update Frequency

A common misconception among web developers is that on-page SEO is a one-time task. In reality, maintaining website content remains essential even after a site has been indexed or ranked highly .

Regular content updates not only benefit SEO but also keep marketing campaigns fresh and relevant. By publishing timely blog posts, news, or offers, businesses maintain visibility in search engines while also engaging their audience with up-to-date, value-driven content. (Wiideman, 2016)

2.3.1.15 Page Compression

Modern web applications strive to be user-friendly, which often involves the use of numerous images—leading to larger page sizes and slower load times. This issue impacts both user experience and search engine crawling efficiency .

Research by eMarketer shows that 16% of users abandon a page if it takes more than 10 seconds to load, which can lead to significant traffic loss. Slow-loading pages may also be inadequately cached by search engines . Consequently, pages with poor performance are less likely to be indexed or revisited by search engine bots. Major search engines like Google, Yahoo, and Bing impose file size limits. (Nazar, 2009)

2.3.1.16 Search Engine Essential Files

Two key files for effective SEO are sitemap and robots.txt. These are crucial not only for search engine crawlers but also for enhancing user access to website content . They are particularly important for large or dynamic websites, guiding crawlers efficiently. (Search engine optimization starter guide. Google Webmaster Central., 2025)

❖ **Sitemaps:**

Sitemaps are particularly useful for large or dynamic websites, helping crawlers find pages not easily discovered via internal links. Originally intended for user navigation, sitemaps now serve both users and search engines by listing key pages . (Viney, 2008)

✓ **HTML sitemaps**

These traditional sitemaps list important pages in an HTML format, helping users navigate the site. They often appear as bulleted lists with anchor links. While they don't directly boost rankings, they assist crawlers in locating and indexing content effectively. (Viney, 2008)

✓ **XML sitemaps (sitemap.xml)**

Introduced by Google in 2005 under the Sitemap 0.84 Protocol, XML sitemaps were designed for crawlers to efficiently index large or complex websites.

Sitemaps XML format http://www.sitemaps.org/protocol.php

Now standardized under Protocol 0.9 and supported by all major search engines, a single XML sitemap serves across platforms like Google, Yahoo, Bing, Ask, and AOL. XML sitemaps are particularly useful when:

- The site is large or includes dynamic content.
- The site is new with few backlinks.
- Internal links are broken or incomplete.
- Certain pages (e.g., Flash or AJAX content) are not easily discovered by crawlers.

To declare an XML sitemap in robots.txt, add:

Sitemap: http://www.domainname.com/sitemap.xml

Basic structure of an XML sitemap:

```
<?xml version="1.0" encoding="UTF-8"?>
<urlset xmlns="http://www.sitemaps.org/schemas/sitemap/0.9">
  <url>
    <loc>http://www.domainname.com/</loc>
    <lastmod>2025-12-02</lastmod>
    <changefreq>weekly</changefreq>
    <priority>0.7</priority>
  </url>
</urlset>
```

Free sitemap generators are available, including tools by Google, which also offer features like change detection and traffic monitoring . (Odom & Odom, 2010)

❖ **robots.txt:**

The robots.txt file is specifically intended for search engine crawlers .All reputable crawlers respect its rules, which help control which parts of a site should or should not be indexed. This conserves crawl budget and reduces bandwidth usage .

It can also be used to block public indexing of sensitive or unnecessary content. Developers must have access to the root domain to use this file, which must be named robots.txt in lowercase.

Sample directives:

✓ To block all crawlers from indexing the entire site:

```
User-agent: *
Disallow: /
```

✓ To block only Googlebot:

```
User-agent: Googlebot
Disallow: /
```

Using robots.txt wisely allows developers to guide search engines toward relevant content and away from areas that should remain private or are unimportant for indexing. (Search engine optimization starter guide. Google Webmaster Central., 2025) These technical files directly support digital marketing initiatives by ensuring that all pages, including promotions and seasonal landing pages, are properly indexed and accessible to search engines. They optimize crawl efficiency and ensure that marketing content reaches its intended audience. (Viney, 2008)

2.3.2 OFF-PAGE SEO TECHNIQUES

Off-page SEO refers to optimization efforts that occur outside the boundaries of a website but significantly influence its search engine rankings. The core element of off-page SEO is backlink building—acquiring high-quality inbound links from

authoritative and contextually relevant websites. These backlinks act as "votes of confidence," signaling to search engines that the content is trustworthy and valuable. In addition to link-building, off-page SEO encompasses brand mentions, social media signals, influencer collaborations, and guest posting on reputable platforms. When executed strategically, these activities enhance a website's domain authority, increase referral traffic, and support higher positioning in competitive search queries. Off-page SEO is particularly crucial for building long-term credibility and outperforming competitors in organic rankings. (Fleischner, 2008)

2.3.2.1 Directory Submission

Submitting websites to directories is an effective way to encourage search engines to crawl them more frequently and to generate useful traffic . directories allow websites to be submitted and categorized into relevant sections. While only a limited number of users rely on directories to find information, they remain a valuable source of traffic—particularly for new websites with few backlinks . Search engines also view directory listings as a sign of legitimacy, especially when compared to links from irrelevant or poorly ranked websites. Most directories are free and allow you to choose anchor for the submitted link. (Wiideman, 2016)

2.3.2.2 anchor Text

Anchor text is the clickable, hyperlinked text on a webpage that leads to another page, either within the same website or to an external site. It provides context to both users and search engines about the linked content . It typically appears as underlined blue text.

Example:

For Free CD Download

The anchor text should accurately reflect the content of the target page. Using relevant keywords within anchor text helps improve a website's SEO, while linking to unrelated content can harm its credibility with search engines . Keyword usage in anchor text should be optimized for both frequency and density. (Gregurec & Grd, 2012)

2.3.2.3 Link Building

Links are fundamental to how search engines operate. Search engine bots—often referred to as spiders or crawlers—use links to navigate and index the vast array of websites across the internet. Moreover, links are treated by search engines as indicators of a site's popularity, relevance, and quality. Websites offering valuable content and a strong user experience are more likely to earn backlinks from other sites or be shared across social platforms like Facebook, Twitter, and Instgram (Shreves, 2012, p. 70)Consequently, link building is one of the most crucial activities in off-page SEO. Backlinks act as endorsements that increase a site's authority and visibility — critical factors in digital marketing success. When marketing pages or content earn links from

authoritative sources, they receive more organic traffic, improved credibility, and better rankings, all of which strengthen digital campaign outcomes. (Shreves, 2012)

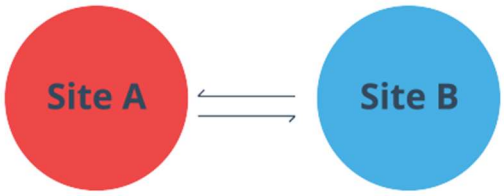
Link building is the process of acquiring hyperlinks from external websites that point to a target site. While there are numerous techniques to generate backlinks, they typically fall into three main categories: **reciprocal linking**, **triangular linking**, and **one-way linking**.

Backlinks act as endorsements that increase a site's authority and visibility — critical factors in digital marketing success. When marketing pages or content earn links from authoritative sources, they receive more organic traffic, improved credibility, and better rankings, all of which strengthen digital campaign outcomes. (Zhang & Cabage, 2017)

➢ Reciprocal Linking

Also known as link exchange, reciprocal linking occurs when two websites agree to link to each other. For instance, Website A might provide an inbound link to Website B, and in return, Website B links back to Website A. Historically, this method was overused and often abused by webmasters who created excessive reciprocal links to manipulate search rankings. As a result, search engines have revised their algorithms to penalize such practices, reducing the SEO value of excessive reciprocal links and, in some cases, lowering a website's ranking. (Patel, Google hates link building. Here's how to do it the right way, 2024)

Figure 3:A Diagram explaining Reciprocal Linking.

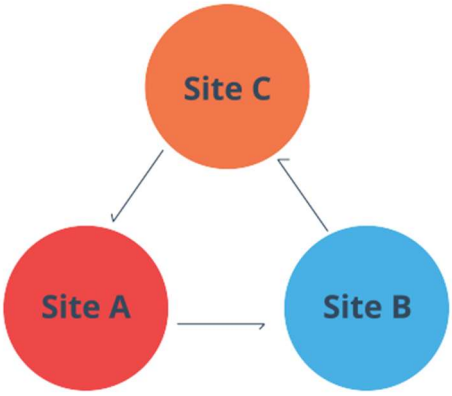


Source: Created by the student.

➢ Triangular Linking

Triangular linking is a more complex variation of reciprocal linking. In this method, Website A agrees to link to Website B, but instead of receiving a link directly back, it is linked via a third-party, Website C. Website C may be affiliated with Website A, such as an online directory or local listing site. This approach was developed to bypass the penalties associated with direct link exchanges. However, modern search engine algorithms—especially Google's—have become sophisticated enough to detect such patterns, rendering triangular linking no more effective than traditional reciprocal links in terms of SEO value. (Patel, Google hates link building. Here's how to do it the right way, 2024)

Figure 4:A Diagram explain Triangular Linking.



Source: Created by the student.

➢ One-Way Linking

As the name suggests, one-way linking involves Website A receiving a backlink from Website B without linking back in return. This is the most effective and highly valued form of link building, as it signals genuine endorsement from other websites. Search engines consider such links as strong votes of confidence.

To gain one-way links, webmasters can create high-quality, original content that offers real value to users, thereby encouraging others to share or link to it naturally. Another strategy is to actively participate in online forums and communities relevant to their niche by answering questions and contributing helpful insights. These efforts help build a site's reputation and generate organic backlinks over time. Although these methods are time-intensive and require persistence, they are sustainable and safe in the long run.

➢ Buy links

Due to the effort involved in earning organic backlinks, some opt for **paid links**, where money or products are exchanged for links. While this approach may provide short-term gains, it is discouraged by search engines as it undermines the integrity of organic rankings. Algorithms are designed to detect and penalize both the buyers and sellers of links that manipulate ranking results.

However, search engines do permit paid links in specific advertising contexts—for example, when purchasing links from high-authority sites for brand visibility or promotional campaigns. In such cases, these links must not influence ranking algorithms. To achieve this, advertisers must use the **"nofollow"** attribute, which signals to search engines not to treat the link as a vote of confidence. This tag helps differentiate promotional content from organic endorsements and also plays a role in combating spam, as many directories and forums apply "nofollow" tags to discourage link manipulation. (Ward & French, 2013)

```
<a href=http://www.example.com rel="nofollow"> Example </a>
```

Evolving Link Building Practices :

As search engine algorithms have evolved to better detect low-quality or manipulative linking strategies, the emphasis has shifted from link quantity to **link quality**. Today, it is essential for webmasters to follow best practices to avoid penalties and maintain ranking integrity.

- **Link relevance** refers to how closely the content of the linking site aligns with that of the target site. The more related the two are, the more value the link holds in the eyes of search engines.
- **Link quality** is determined by both the relevance and the authority of the referring site. Links from trusted, high-authority sites carry more weight than those from low-quality or spammy sources.
- **Natural links** are earned organically when others choose to link to a website because they find its content genuinely helpful or valuable.

By focusing on relevance, quality, and natural link acquisition, webmasters can build a sustainable and effective link profile that supports long-term SEO success. (Enge E. , Spencer, Fishkin, & Stricchiola, 2009)

2.3.2.4 Forums and Blogs

Search engines favor websites with fresh and unique content. Maintaining regularly updated content through blogs and forums helps improve both indexing and ranking. Blogs and forums also allow users to engage with your website by posting comments or feedback on your products and services . This not only encourages repeat visits but also increases traffic and keeps the site content dynamic, which enhances crawlability and boosts search engine rankings.

Social engagement and online interactions serve as signals of content value, reinforcing SEO. In digital marketing, this results in wider reach, higher referral traffic from social platforms, and stronger community involvement around branded content. (Agrawal, 2023)

2.3.3 Additional SEO methods and techniques

SEO strategies are generally grouped into two main categories: White Hat and Black Hat. White Hat SEO involves practices approved by search engines and avoids any form of deception. In contrast, Black Hat SEO disregards search engine guidelines and uses manipulative or disapproved tactics. Although risky, Black Hat methods are still employed because they can quickly improve a site's search ranking. Additionally, there's Grey Hat SEO, which blends elements of both White Hat and Black Hat strategies. Using Black Hat techniques can result in a site being penalized or banned if detected by search engines. (Nill, 2024)

2.3.3.1 White Hat SEO techniques

- **Link Baiting:** This refers to creating engaging and valuable content designed to attract backlinks and shares. The aim is to boost the number of incoming links and enhance the website's PageRank. Effective content is clear, informative, and often addresses controversial or trending topics.
- **Quality Content:** This involves producing content that is both informative and beneficial to the reader. While it may require significant time and effort, the long-term benefits are substantial.
- **Internal Linking:** These are hyperlinks that connect to other pages within the same website, typically used in navigation menus. They help establish site structure, increase internal link volume, and assist search engine crawlers in indexing all pages.
- **Site Optimization:** Considered the core of SEO, this practice includes revising content, refining website architecture, and correcting HTML code. It influences most on-page SEO factors.

Ethical SEO practices — such as high-quality content creation and link building provide long-term benefits for digital marketing. These techniques build trust with both search engines and consumers, ensuring consistent visibility and better performance for digital campaigns. (Gavrilas, 2011)

2.3.3.2 Black Hat SEO techniques

Also known as "spamdexing," Black Hat SEO primarily manipulates link-building by inflating the number of inbound links from various sources. Common tactics cloaking, paid links, link farms, keyword stuffing, and hidden text. Additional frequently used techniques include:

- **Scraping:** This involves copying popular content from other websites and republishing it on one's own site, typically to drive traffic or sell ad space.
- **Doorway Pages:** Also called bridge pages, portal pages, or gateway pages, these are optimized for specific keywords to rank highly in search results. When clicked, users are redirected to a different landing page.
- **Parasite Hosting:** This strategy involves posting blogs or content on reputable, high-authority sites and linking back to the target website, thereby generating high-quality backlinks thanks to the host site's authority.

While these methods may produce temporary SEO gains, they risk penalties that can damage a brand's reputation and digital visibility. Sustainable digital marketing relies on transparency and trust, making compliance with SEO best practices essential for long-term campaign success. (Gavrilas, 2011)

2.3.3.3 Grey Hat SEO techniques

- **Three-Way Link Exchange:** In this method, three websites link to each other in a circular pattern to build backlink profiles and improve visibility for smaller or new websites.
- **Article Spinning:** Similar to scraping, this technique rewrites existing popular articles to create new versions that can be published on different sites.
- **Buying Old Domains:** This involves purchasing aged, reputable domains to create strong backlinks to a target site, thereby improving its ranking. This method closely resembles Parasite Hosting from Black Hat practices. (Gavrilas, 2011)

2.4 SEO Ranking Factors

Over the years, search engine algorithms have evolved significantly, and so have the factors that influence how websites are ranked. Understanding these changes is essential for evaluating the effectiveness of SEO strategies in today's digital landscape. To highlight how ranking priorities shift over time, this section compares key Search Engine Ranking Factors identified in 2015 with those recognized in 2025.

This comparison is not merely historical—it is strategic. Everything discussed throughout this research regarding SEO techniques and methods must be aligned with current and emerging ranking signals. These factors are not static; they evolve with algorithm updates and user behavior. Therefore, staying informed about what search engines prioritize is not optional but critical. Marketers and SEO practitioners must treat these ranking factors as a top priority to ensure their optimization efforts remain relevant, competitive, and effective.

2.4.1 Search Engine Ranking Factors 2015

Moz surveyed over 150 experts to assess the influence of different ranking factor categories on Google's core search algorithm. Each category was scored from 1 (not influential) to 10 (highly influential).

- **Ranking Factors Ranked by Influence:**

1. **Domain-Level Link Features: 8.22/10**

Influence from link and citation metrics such as link quantity, trust, and domain-level PageRank.

2. **Page-Level Link Features: 8.19/10**

Factors like PageRank, trust metrics, number of linking root domains, link quantity, anchor text relevance, and link source quality/spam levels.

3. **Page-Level Keyword and Content-Based Features: 7.87/10**

Elements like content relevance, keyword usage optimization, topic-modeling scores, and content quality, quantity, and relevance.

4. **Page-Level Keyword-Agnostic Features: 6.57/10**

Attributes such as content length, readability, Open Graph markup, uniqueness, loading speed, structured data markup, HTTPS security, etc.

5. **Engagement & Traffic/Query Data: 6.55/10**

SERP engagement metrics, clickthrough rates, visitor behavior signals, and query diversity and CTR across domain and page levels.

6. **Domain-Level Brand Metrics: 5.88/10**

Offline brand/domain usage, brand mentions in media or press, toolbar/browser data about site usage, and entity association.

7. **Domain-Level Keyword Usage: 4.97/10**

Usage of exact-match or partial-match keyword domains.

8. **Domain-Level Keyword-Agnostic Features: 4.09/10**

Factors like domain name length, TLD extension, and SSL certification.

9. **Page-Level Social Metrics: 3.98/10**

Impact of social media activity such as tweeted links, Facebook shares, and Google +1s related to a page. (Search engine ranking factors, 2015)

2.4.2 Search Engine Ranking Factors 2025

- **Ranking Factors Ranked by Influence:**

While Google considers over 200 factors when ranking websites, the following should be prioritized first:

1. **Quality Content:**

The leading factor in SEO. Google aims to present users with content that is high-quality, informative, and relevant.

2. **Backlinks:**

External links from other websites pointing to yours serve as endorsements. A greater number of high-quality backlinks can significantly boost your site's rankings.

3. **Keyword Optimization:**

Involves strategically incorporating relevant keywords throughout your site’s content, helping search engines understand the topics your site covers.

4. **User Experience (UX):**

Reflects how easy and enjoyable it is for visitors to navigate and interact with your site. Google prioritizes sites that deliver a positive user experience.

5. **Schema Markup:**

A form of structured data added to your site to improve how search engines interpret and present your content.

6. **Social Signals:**

Engagements such as likes, shares, and other interactions with your content across social platforms. Your content should be designed to encourage sharing and interaction.

7. **Brand Signals:**

The reputation and visibility of your brand online. Building a well-known and respected brand strengthens your site's credibility in Google's eyes. (Google's 200 ranking factors: The complete list, 2025)

2.5 The Previous Studies and their features

2.5.1 Previous Studies:

Ologunebi, John Olatunde and Taiwo, Ebenezer Obafemi (2023) The Importance of SEO and SEM in improving brand visibility in E-commerce industry; A study of Decathlon, Amazon and ASOS;*University Library of Munich, Germany*

This research aimed to explore the significance of Search Engine Optimization (SEO) and Search Engine Marketing (SEM) in enhancing brand visibility within the e-commerce industry. Specifically, it sought to analyze the current state of SEO and SEM implementation, investigate their impact on brand visibility, determine key optimization factors, examine their relationship with e-commerce brand success, identify challenges, explore the role of content marketing and link building, and provide recommendations. The study employed **secondary data collection methods** to gather insights, including a comprehensive review of existing literature, industry reports, and case studies of Decathlon, Amazon, and ASOS.

The findings indicate that both SEO and SEM are crucial for improving brand visibility in e-commerce. SEO, by optimizing website content and structure, enhances organic search rankings and increases the likelihood of being noticed by potential customers. SEM, through paid advertising strategies like Pay-Per-Click (PPC) campaigns, complements SEO by driving immediate visibility and traffic. The study emphasizes that brand visibility directly impacts customer attraction, retention, credibility, traffic, sales, and revenue generation in the competitive e-commerce sector. Continuous monitoring and analysis of website analytics and metrics are essential for optimizing these efforts and adapting to market trends.

Bhandari, Deepak (2017) Improving online visibility of the web pages with Search Engine Optimization: Laurea University of Applied Sciences; *Bachelor's Thesis, Laurea University of Applied Sciences*

This thesis aimed to improve the online visibility of the web pages of Laurea University of Applied Sciences, with the specific objectives of implementing on-page SEO and creating a handbook for marketing staff. The study sought to demonstrate how organic search engine optimization contributes to enhanced search engine visibility. The research utilized an **action research method** , focusing on the thesis action research cycle, which involves planning, implementing, observing, and reflecting. Data analysis was performed using tools such as Microsoft SEO Toolkit,

Google Analytics, and Screaming Frog. The primary focus was on Google search engine and organic traffic. The results were analyzed by comparing data from six months before and after SEO implementation. The study found a **46.10% increase in visitors via Google organic traffic** and a **56% increase in unique visitors for the home page** after SEO implementation. Similar increments were observed for other pages. The thesis concludes that implementing SEO practices can significantly amplify web visibility, accessibility, and brand awareness, emphasizing that SEO is a continuous and evolving process essential for digital marketing strategies.

Vo, Tuan (2016) Search Engine Optimization and Its Importance for Business Visibility and Branding; *Bachelor's Thesis, Oulu University of Applied Sciences*

This thesis aimed to investigate Search Engine Optimization (SEO) and its proper implementation for enhancing business visibility and branding, specifically focusing on the commissioner's e-commerce website, Senstore. The study also explored related concepts to provide a comprehensive understanding of the topic and created an SEO plan as a reference for future marketing campaigns. The research employed a practical implementation approach alongside a theoretical background derived from books, online blogs, and articles from trusted sources. The implementation involved programming and manipulating source code to optimize the website. The success of the optimization was measured and analyzed using Google Analytics.

Baye, Michael R., De los Santos, Babur, and Wildenbeest, Matthijs R. (2016) Search Engine Optimization: What Drives Organic Traffic to Retail Sites?; *Journal of Economics & Management Strategy:*

This study aimed to identify the key drivers of organic clicks that major retailers receive from search engines, with a particular focus on providing insights for Search Engine Optimization (SEO) strategies. The researchers utilized a comprehensive dataset comprising over 12,000 search terms and data from 2 million U.S. users, specifically analyzing organic clicks received by 759 retail sites in August 2012. The methodology involved a **log-normal regression model** to analyze the relationship between organic clicks and various explanatory variables, while accounting for potential **endogeneity of rank and ad positions** using Bing data as instruments, and addressing **sample selection bias** through a Heckman-type selection model.

The study found that a retailer's investments in site quality and brand awareness significantly increase organic clicks through both a **direct effect** (consumers choosing higher-quality sites) and an **indirect effect** (search engines placing higher-quality sites in better positions). They determined that **brand equity is as important as rank** in influencing organic clicks. Specifically, a 1% improvement in brand equity leads to a 0.185% increase in total organic clicks, including both direct and indirect effects.

Furthermore, the study revealed that consumers who are older, wealthier, search from work, use fewer words, or include a brand name in their search are more likely to click a retailer's organic link. The quality of a retailer's site was found to be especially important in attracting organic traffic from individuals with higher incomes. The authors conclude that investments in brand equity are crucial and sustainable components of an SEO strategy due to their direct impact, influence on search engine rankings, and spillover benefits across various online and offline channels.

2.5.2 What Distinguishes This Study from Previous Studies?

This study distinguishes itself from previous research in several key ways:

- **In terms of the study environment:**
  - ✓ It provides a unique **comparative analysis between a globally dominant platform (Coursera.org) and a highly successful regional platform (Edraak.org)**. This dual focus allows for an examination of SEO strategy adaptation across different scales and market contexts, a perspective not commonly found in singular case studies.
- **In terms of the study objectives:**
  - ✓ **Focus on Comparative Effectiveness:** The primary objective is not merely to describe or implement SEO, but to conduct a comparative evaluation of its effectiveness. This study moves beyond the "how-to" to answer "how well" different strategies perform in real-world, competitive scenarios.
  - ✓ **Global vs. Regional Strategy Analysis:** A core, unique objective of this thesis is to contrast the SEO strategies of a global market leader (Coursera.org) with a prominent regional leader (Edraak.org). This specific framing allows for the derivation of nuanced insights and best practices applicable to businesses operating at both global and targeted niche scales—an objective not present in the other papers.
- **In terms of the study variables:** The research integrates a wide array of variables, from technical aspects like Core Web Vitals and sitemap structures to on-page elements like semantic keyword usage and off-page metrics like the quality of referring domains and social media engagement.
- **In terms of data collection methods:**
  - ✓ **Mixed-Method Primary Data Collection:** This study utilized a mixed-method approach to primary data collection, a key distinction from the work of Ologunebi & Taiwo (2023), which relied on secondary data. This involved a synergistic use of quantitative analysis tools and qualitative assessment.

- ✓ **Quantitative and Qualitative Tools:**

Quantitative data was primarily collected using the SEMrush platform to obtain metrics such as Domain Authority, organic traffic estimations, backlink profiles, and keyword performance. Technical performance scores were gathered using Google PageSpeed Insights. This was complemented by qualitative data gathered through direct website inspection and browser developer tools to assess on-page elements like heading structures, content quality, and the implementation of ALT tags. This comprehensive, multi-tool approach provides an analytical depth that exceeds the more limited data collection methods of the single case studies, which relied heavily on Google Analytics for post-implementation traffic measurement.

Methodology

To address the research problem and answer the central and subsidiary questions, a clear and systematic research methodology was essential. This chapter presents the methods and procedures used to conduct the study, focusing on how the researcher collected, analyzed, and compared data across two platforms. Given that the nature of this research involves investigating real-world SEO practices and evaluating their effectiveness within digital marketing strategies, the methodology integrates **descriptive**, **analytical**, and **comparative** approaches. This allows for a multi-dimensional analysis of SEO implementation on two distinct e-learning platforms: **Coursera** and **Edraak**.

3.1 Research Method

This study adopts a descriptive-analytical-comparative methodology, which is highly suited for examining complex digital phenomena. Each component plays a specific role:

- **Descriptive:** To identify and document the existing SEO strategies implemented on both platforms.
- **Analytical:** To assess the effectiveness of those strategies using measurable digital marketing KPIs (e.g., visibility, traffic, user engagement).
- **Comparative:** To evaluate similarities and differences in SEO execution between Coursera (a global platform) and Edraak (a regional Arabic platform), drawing insights from cross-case evaluation.

This hybrid methodology is particularly effective when analyzing technical, content-related, and strategic elements, and it supports both qualitative interpretation and quantitative assessment. The method was chosen because it allows the researcher to go beyond theoretical speculation and to evaluate how SEO functions in real-world, operational environments.

3.2 Study case

The study case comprises digital learning platforms that rely on SEO as a digital marketing tool to improve visibility, reach, and user engagement. The research specifically targets platforms offering online educational content and using search engine optimization to attract learners and maintain competitive digital presence.

Among this population, **two platforms were selected purposefully:**

- **Coursera.org:** A leading global MOOC platform offering university-certified courses in multiple languages.
- **Edraak.org:** A prominent regional platform targeting Arabic-speaking learners in the MENA region.

These platforms were intentionally selected for their contrasting operational scopes (global vs. regional) and linguistic markets (English vs. Arabic), which provide a meaningful basis for analyzing how Search Engine Optimization (SEO)

strategies vary according to market size, language, and audience focus. The study analyzes these platforms as institutional digital entities, focusing on their technical, on-page, and off-page SEO implementations.

3.3Sources of Data Collection

Data was collected from publicly available, real-time sources that reflect the actual SEO performance of both platforms. These include:

- ✓ **Website data:** content, HTML structure, metadata, internal links, and mobile responsiveness.

Search engine results: organic keyword positions, featured snippets, and indexed pages.

- ✓ **Third-party SEO analytics platforms, notably**:
  - **SEMrush:** for traffic estimates, domain authority, backlinks, keyword data.
  - **Google PageSpeed Insights:** for mobile and desktop performance metrics.
  - **Google's Mobile-Friendly Test:** to assess mobile usability.
  - **Social Media Platforms** (X, LinkedIn, Facebook): used to evaluate brand presence and engagement..

3.4 Research Instrument

To ensure precision and methodological rigor in the comparative analysis, a multi-tool content and technical audit was designed and implemented as the primary research instrument. Unlike survey or interview-based methodologies, this approach systematically employed a suite of specialized digital tools to capture nuanced SEO performance indicators and structural attributes of the websites. The specific instruments utilized include:

- ❖ **SEMrush Platform:** Employed for comprehensive keyword tracking, estimation of organic traffic volume, detailed backlink profile analysis (referring domains, anchor text distribution), and overall domain authority metrics. This provided critical quantitative data on market visibility and competitive positioning.
- ❖ **Google PageSpeed Insights:** Utilized to assess the technical performance of the platforms on both mobile and desktop environments. Key metrics such as Largest Contentful Paint (LCP), Cumulative Layout Shift (CLS), and First Input Delay (FID) were measured to evaluate Core Web Vitals and overall page loading experience.

Google's Mobile-Friendly Test: Employed to verify the responsiveness and usability of the platforms across various mobile devices, ensuring adherence to mobile-first indexing standards.

- **Manual Content Inspection and Browser Developer Tools:** Conducted through direct, systematic human review for qualitative assessment of on-page elements. This involved detailed analysis of heading structures (H1, H2, H3 hierarchy), meta titles and descriptions, URL paths, content quality, keyword integration within content, and the consistent implementation of ALT tags for images. This qualitative layer provided contextual understanding complementary to the quantitative data.

Results analysis

This chapter presents the practical dimension of the research through a comparative case study of two e-learning platforms: Coursera and Edraak. Based on the indicators derived from the theoretical framework, the study investigates the extent to which SEO strategies contribute to digital marketing effectiveness in both global and regional contexts.

4.1 Case Study Background

- **Coursera.org:** Founded in 2012, Coursera is a global leader in MOOCs, offering professional certificates, degrees, and free courses through partnerships with top universities and companies.
- **Edraak.org:** Launched in 2014 by the Queen Rania Foundation, Edraak is a major Arabic-language MOOC platform focused on delivering free high-quality education to learners in the MENA region.

Both platforms aim to maximize reach and engagement through digital marketing strategies, with SEO playing a central role in organic visibility.

4.2 Methodology Recap for the Practical Chapter

To evaluate the SEO effectiveness of Coursera.org and Edraak.org, this study applied a comparative case study approach grounded in technical, on-page, and off-page SEO frameworks. Data was sourced from both the websites themselves and SEO analytics tools (SEMrush, Google PageSpeed Insights). The evaluation relied on SEO audit checklists and a defined set of KPIs, allowing for systematic and comparable analysis across platforms. For clarity, each platform is analyzed independently before presenting a cross-case comparison.

4.3 Comparative SEO Analysis

4.3.1 Coursera.org SEO Analysis

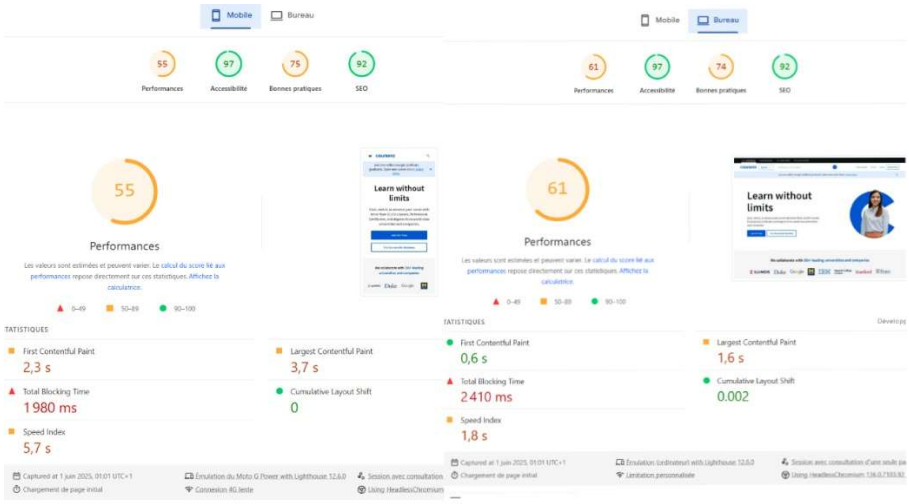
4.3.1.1 Technical SEO Evaluation of Coursera.org

Technical SEO forms the bedrock of a website's visibility, ensuring that search engine crawlers can efficiently access, crawl, and index content. A robust technical foundation is critical for visibility, regardless of content quality or backlink profile. This section provides a comparative evaluation of the technical SEO aspects of Coursera.org and Edraak.org based on the provided data.

- **PageSpeed Insight Score (Desktop & Mobile)**

To assess the technical performance of Coursera website, Google's PageSpeed Insights tool was used. The picture below displays the speed score.

picture 6:A Comparative Analysis of Coursera.org's Website Performance: Mobile vs. Desktop.



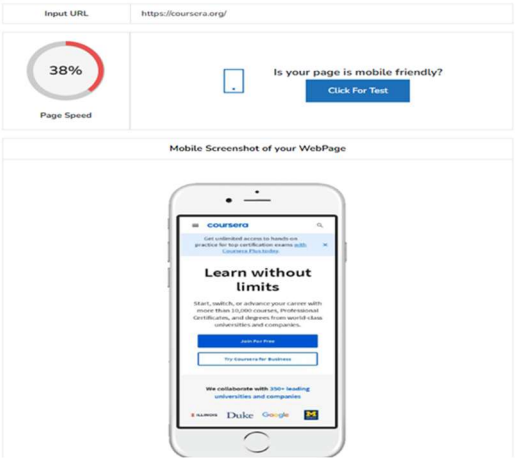
Source: Screenshot taken by the student from Google PageSpeed Insights (2025).

This score provides a snapshot of the site Coursera desktop scores are within a reasonable range, albeit with room for improvement to reach the "green" (90+) threshold. The mobile scores are varied, with one popular course page showing a surprisingly high score of 75/100, while the homepage is lower at 58/100. The Core Web Vitals for the homepage (LCP: 0.7s, CLS: 0.013s, FID: 0.6s) indicate a generally good user experience, suggesting that despite some identified issues, the critical rendering path is relatively optimized. The diagnostic issues, such as extensive main-thread work, third-party code impact, and JavaScript execution time, are common challenges for large, dynamic platforms with complex functionalities and numerous integrations. Addressing these would further enhance performance.

- **Mobile-Friendliness**

To evaluate the website's accessibility on mobile devices, a mobile-friendliness test was conducted. This figure displays the results, highlighting how well Coursera.org performs in terms of mobile usability and loading speed.

picture 7:Mobile-Friendliness and Page Speed Test Results for Coursera.org



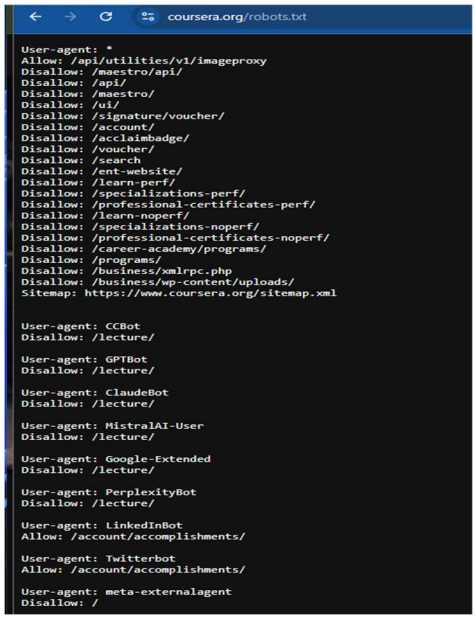
Source: Screenshot taken by the student from a seo tools

This output shows As a global platform, Coursera is expected to be highly mobile-responsive, adapting its layout and functionality seamlessly across various devices. The provided screenshot (though not explicitly stated as a test result) implies a proper

- **Crawlability & Indexability (robots.txt & sitemap.xml)**

The two pictures shows how Coursera uses robots.txt and sitemap.xml to guide web crawlers. These directives affect how the site is indexed and accessed by search engines.

picture 8:Directives for Web Crawlers and AI Bots



Source: Screenshot taken by the student from a coursera website.

picture 9:Structure of the Coursera.org Sitemap Index and its Categorized Sitemaps.

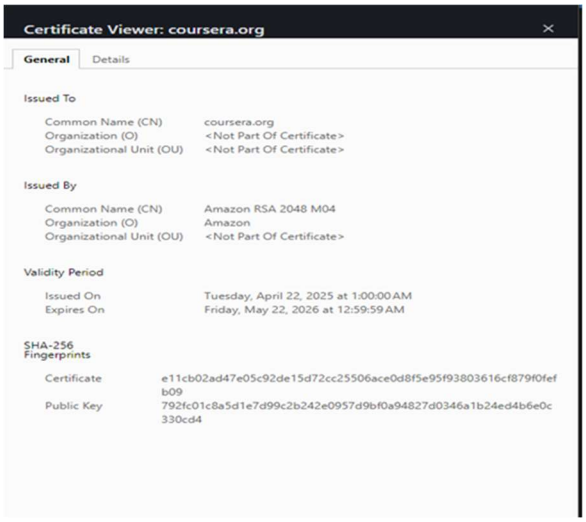
Source: Screenshot taken by the student from a coursera website.

These results shed light on how Coursera has a well-structured robots.txt file that allows full access to most of the website, with disallow rules clearly defined for duplicate or irrelevant directories. Additionally, the sitemap.xml is properly configured and segmented by content type (e.g., courses, blog posts, categories), facilitating efficient crawling by search engine bots.

- **Security (HTTPS)**

This figure displays Coursera.org's SSL/TLS certificate information. It confirms the site's use of HTTPS to ensure secure user data transmission.

picture 10:SSL/TLS Certificate Details for Coursera.org.



Source: Screenshot taken by the student from a coursera website ssl.

This output shows Coursera correctly implements HTTPS across its entire domain. This is essential for protecting user data (logins, payment information) and for maintaining user trust and security, which are indirect positive signals for SEO. The certificate details confirm its validity and reputable issuer.

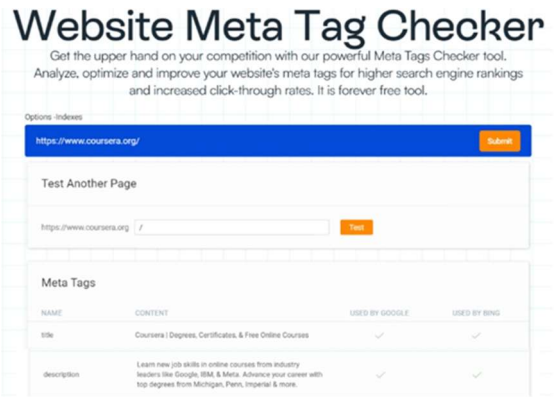
4.3.1.2 On-Page SEO Analysis of Coursera.org

This section focuses on the on-page optimization techniques Coursera.org employs to enhance content visibility, keyword relevance, and user experience — all of which contribute to its digital marketing effectiveness.

➢ Meta Titles & Meta Descriptions

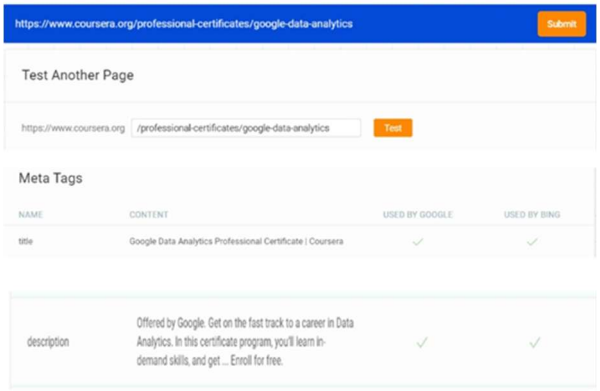
The screenshot illustrates the meta title and description used on a Coursera course page. These elements play a key role in search visibility and click-through rates.

picture 11:Meta Tag Analysis for a Course Page on Coursera.org.



Source: Screenshot taken by the student from ahrefs seo tools website.

picture 12:Meta Tag Analysis for a Course Page on Coursera.org.



Source: Screenshot taken by the student from ahrefs seo tools website.

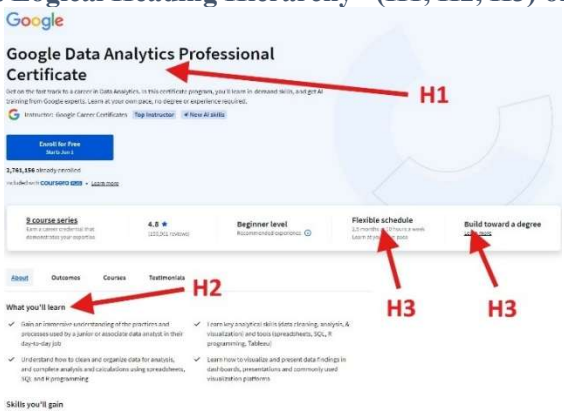
The results provide SEO performance context, Coursera pages consistently include well-crafted meta titles and descriptions. These elements are:

- ✓ **Concise and within recommended character limits** (60 for titles, 160 for descriptions).
- ✓ **Keyword-rich and action-oriented**, e.g.:
  - *Title*: "Online Courses & Credentials From Top Institutions | Coursera"
  - *Meta Description*: "Join Coursera for online learning from world-class universities and companies. Learn data science, business, and more."
- ✓ This supports higher CTR and improved SERP visibility.

➢ Heading Structure (H1–H3 Tags)

The picture shows how Coursera structures its headings using H1, H2, and H3 tags. A clear heading hierarchy enhances both user experience and SEO performance.

picture 13:Illustration of a Logical Heading Hierarchy (H1, H2, H3) on a Coursera Course Page.



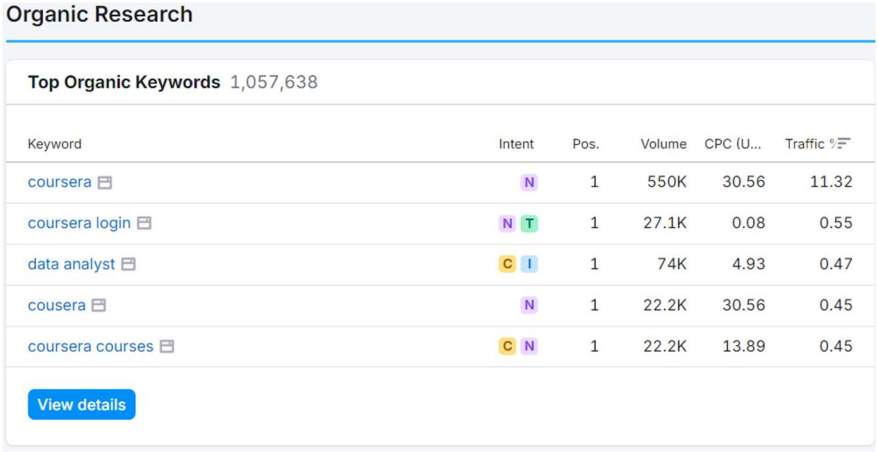
Source: Screenshot taken by the student from coursera course page .

The results provide Coursera uses one well-optimized H1 per page, supported by logically ordered H2 and H3 tags. This consistent structure improves both SEO performance and content accessibility**.**

➢ Keyword Targeting

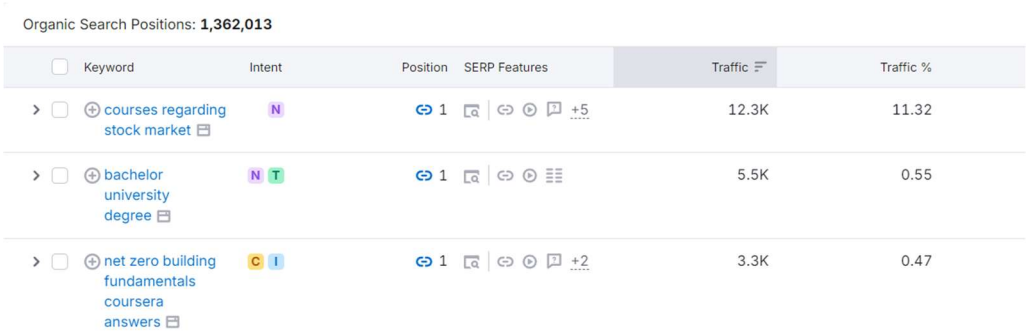
The pictures below presents the top organic keywords driving traffic to Coursera.org. These keywords reflect the site's primary search visibility and ranking focus.

picture 14:Top Organic Keywords for Coursera.org.



Source: Screenshot taken by the student from semrush tool

picture 15:Top long tail Organic Keywords for coursera.org



Source: Screenshot taken by the student from semrush tool

The datta offers insight into results that Coursera strategically targets both **short-tail** and **long-tail keywords**, ensuring alignment with user search intent. indicating a strong brand presence and broad content appeal. effective content depth and targeting of niche user intent.

➢ URL Structure:

The following pictures demonstrate Coursera URL structure across different page types. They reflect how the platform uses root domains, subdirectories, and subdomains to organize content.

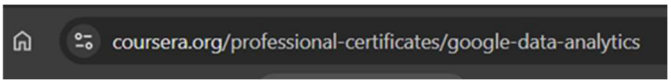
❖ Home page :

picture 16:The Root Domain URL for Coursera.org

Source: Screenshot taken by the student.

- **Course page :**

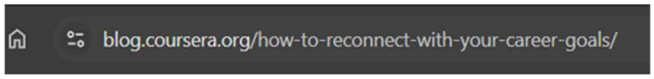
picture 17:An Internal Page URL with a Subdirectory Structure.



Source: Screenshot taken by the student.

- **Blog article**

picture 18: URL Utilizing a Subdomain for a Blog.



Source: Screenshot taken by the student.

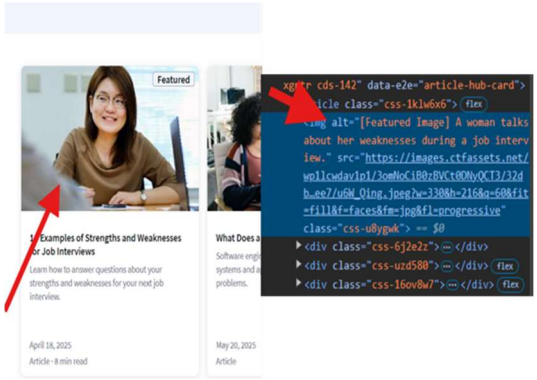
This output shows user Coursera URL structure is highly optimized. It consistently uses hyphens for word separation and incorporates relevant keywords directly into the URL path, making them descriptive and human-readable. This clean and logical structure aids both user navigation and search engine crawling.

- **ALT Tags for Images**

The following screenshots show how Coursera applies alt tags to blog images. These tags enhance accessibility and support image SEO practices.

Image 1 (blog thumbnail)

picture 19:Example of an Image Alt Tag on Coursera.org



Source: Screenshot taken by the student Composed image.

Image 2 (blog thumbnail):

picture 20:Example of an Image Alt Tag on Coursera.org

Source: Screenshot taken by the student Composed image.

This output shows that Coursera demonstrates excellent and consistent use of descriptive ALT tags for its images. This practice significantly enhances image accessibility and provides valuable contextual information to search engines, boosting image search visibility and contributing to overall content understanding.

➢ Content Freshness

The following screenshots highlight how Coursera maintains content freshness. They showcase recent social media posts and visible update dates on blog articles.

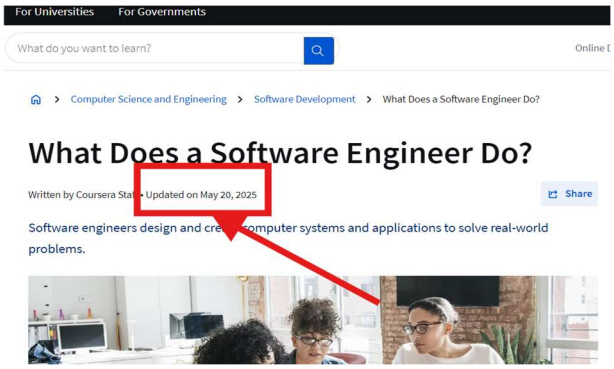
- **New Course/Program Additions**

picture 21:A Sample of Recent Posts from Coursera X.com Account.

Source: Screenshot taken by the student from coursera x.com account.

- **Blog/Article Updates:**

picture 22:The "Updated On" Date on a Coursera Blog Post



Source: Screenshot taken by the student from coursera blogs.

A look at Coursera demonstrates a strong commitment to content freshness. Bi-monthly new course additions and monthly blog updates ensure a consistent flow of new and updated content.

➢ Internal Linking Strategy

The following visuals demonstrate Coursera internal linking practices. They include contextual in-content links and examples of link depth from the homepage.

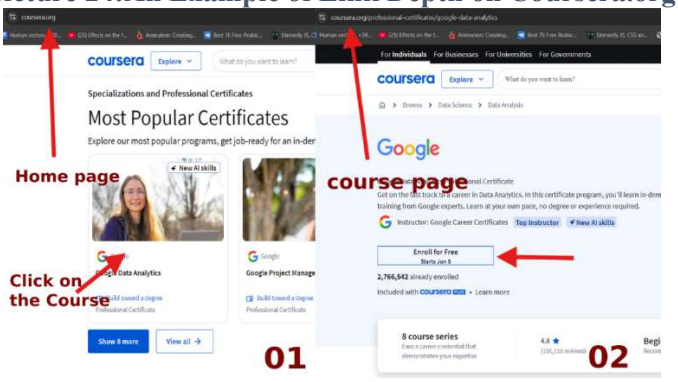
- **Contextual Links (within content):**

picture 23: Examples of Contextual Internal Links on a coursera course page.

Source: Screenshot taken by the student.

- **Link Depth (from homepage to key content) :**

picture 24:An Example of Link Depth on Coursera.org



Source: Screenshot taken by the student.

The intuitive navigation on Coursera site, Coursera uses a clear menu, breadcrumbs, and strong contextual linking within content. This improves SEO signals and user engagement.

4.3.1.3 Off-Page SEO Analysis of Coursera.org

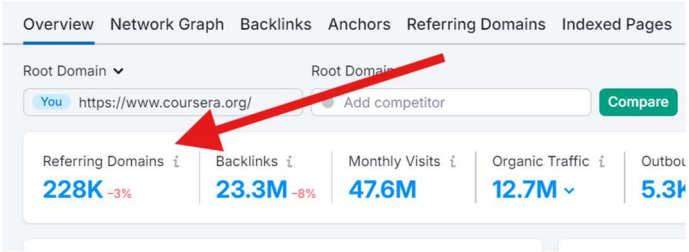
This section examines the external SEO signals that strengthen Coursera.org's authority, credibility, and visibility across the web. Off-page SEO is especially critical in digital marketing because it influences how search engines assess the trustworthiness and popularity of a domain.

- **Backlink Profile**

The following screenshots provide an overview of Coursera backlink profile. They show referring domain totals, authority metrics, and top linking domains based on strength or traffic.

❖ Total Referring Domains:

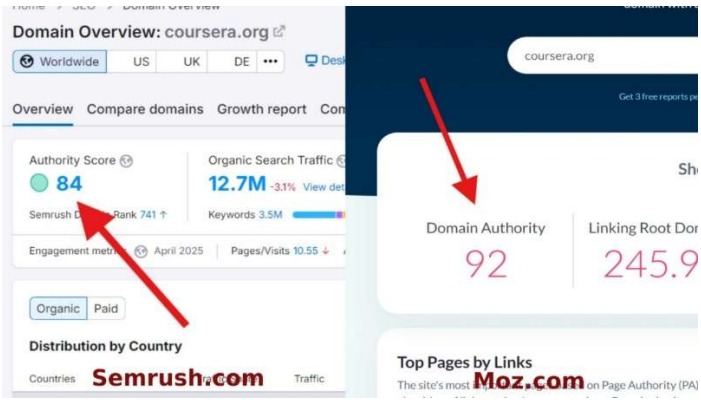
picture 25:Total Referring Domains for Coursera.org.



Source: Screenshot taken by the student from semrush seo tools.

❖ Domain Rating (DR) / Domain Authority (DA) / Authority Score (AS):

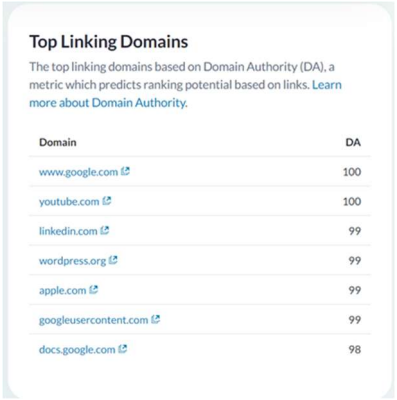
picture 26:A Comparison of Domain Authority Metrics from Semrush and Moz



Source: Screenshot taken by the student from semrush seo tools.

❖ Top 5 Referring Domains (by DA/DR/AS or traffic):

picture 27:top Referring Domains by Domain Authority. Coursera.org



Source: Screenshot taken by the student from semrush seo tools.

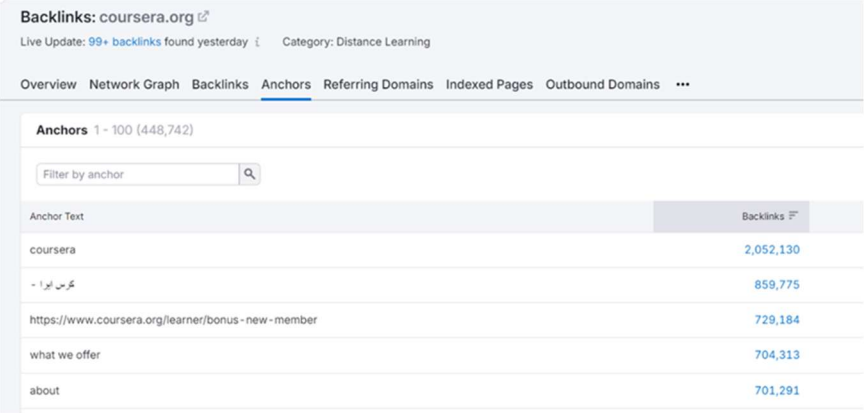
A deep dive into Coursera backlink profile reveals anexceptionally robust, with a massive number of referring domains (228K) and a very high Domain Authority (84-92). Critically, the links originate from highly authoritative and relevant domains like Google, YouTube, LinkedIn, WordPress, and Apple, indicating strong trust and industry recognition. The anchor text distribution is natural, featuring branded terms, URLs, and generic phrases, which is a healthy sign for organic link building and avoids

over-optimization penalties. This formidable backlink profile is a primary driver of Coursera global organic visibility and ranking power.

➢ Anchor Text Distribution

The screenshot below displays the anchor text distribution used in backlinks to Coursera.org. It helps assess link relevance, diversity, and potential SEO risks.

picture 28:Anchor Text Distribution for Coursera.org.



Source: Screenshot taken by the student from semrush seo tools.

An analysis of Coursera backlink profile reveals a healthy anchor text distribution that is :

- ✓ Mostly **branded** (e.g., "Coursera")
- ✓ Followed by **descriptive keywords** (e.g., "online courses," "data science certification")
- ✓ Avoids keyword stuffing or spammy patterns

➢ Social Media Presence

The table below summarizes Coursera presence across major social media platforms. It highlights follower counts and posting frequency, reflecting the platform's engagement strategy.

table 4:Summary of Social Media Presence of coursera.org

Platform	Follower Base (Approx.)	Posting Frequency
LinkedIn	2.5M+	Daily
Facebook	1.3M+	Weekly
X (Twitter)	500K+	Active
YouTube	800K+	Frequent uploads

Source: Compiled by the student.

Coursera builds and maintains its digital authority through a multi-channel approach. This includes cultivating a strong presence Coursera has a strong social media presence across platforms like Facebook, Twitter (X), and LinkedIn. Its content is frequently shared and mentioned on blogs, forums, and educational directories, enhancing its digital authority.

➢ Brand Mentions & External Reputation

The following table presents an overview of Coursera brand mentions across online platforms. It examines discussion tone, visibility, and evidence of official engagement.

table 5:Analysis of Brand Mentions and External Reputation

Platform	Prevalence of Mentions	Examples of Forums/Communities	Nature of Discussion	Evidence of Official Participation
Coursera.org	Medium	Quora, Reddit, Facebook group	Generally positive	No

Source: Compiled by the student.

The data reveals significant performance factors Coursera receives a "Medium" prevalence of mentions across popular global forums like Quora and Reddit, and on Facebook groups. Discussions are generally positive, reflecting a strong brand sentiment among users.

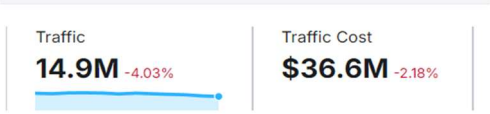
4.3.1.4 Key Performance Indicators (KPI) Analysis of Coursera.org

This section evaluates how Coursera SEO strategies translate into measurable performance outcomes. The KPIs selected reflect digital marketing priorities such as visibility, user behavior, and engagement quality — all critical in assessing SEO effectiveness.

➢ Organic Traffic Volume

The screenshot below shows an estimate of Coursera organic traffic based on SEMrush data. It provides insight into the platform's reach and search engine visibility.

picture 29:Estimated Organic Traffic and



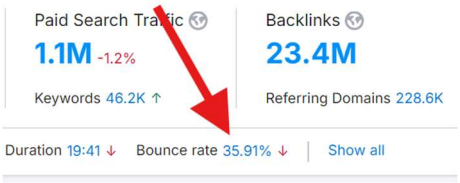
Source: Screenshot taken by the student from semrush seo tools.

The results provide SEO performance context Coursera attracts a massive volume of organic traffic, estimated at 15.6 million visits per month. This high traffic volume, valued at $34 million per month, underscores the extraordinary effectiveness of its SEO strategies in driving user acquisition and establishing its digital market leadership. This scale is indicative of successful ranking for numerous high-volume keywords globally.

➢ Bounce Rate

The following screenshot presents the estimated bounce rate for Coursera.org. This metric helps evaluate user engagement and content relevance.

picture 30: Estimated Bounce Rate for Coursera.org



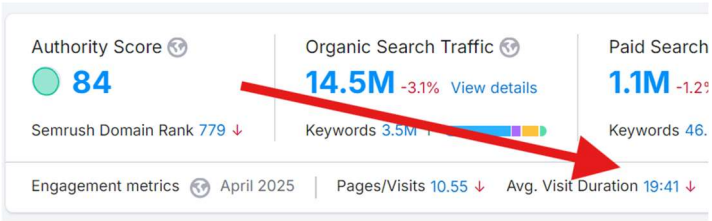
Source: Screenshot taken by the student from semrush seo tools.

A key indicator of a positive initial user experience on Coursera is its impressively low Coursera bounce rate of approximately 35.91% is considered very good for a large, content-rich website. A low bounce rate indicates that users landing on Coursera pages find the content highly relevant to their search queries and are compelled to explore further, suggesting effective keyword targeting and a positive initial user experience.

➢ Average Session Duration

The following visual and table present Coursera average session duration. These data points reflect strong user engagement and extended on-site activity.

picture 31:Average Visit Duration for Coursera.org



Source: Screenshot taken by the student from semrush seo tools.

Session Duration

table 6:Average Session Duration for Coursera.org.

Platform	Avg. Session Duration	Source Tool	Observations
Coursera.org	19 minutes 41 seconds	SEMrush (2025)	High user engagement, multi-page visits

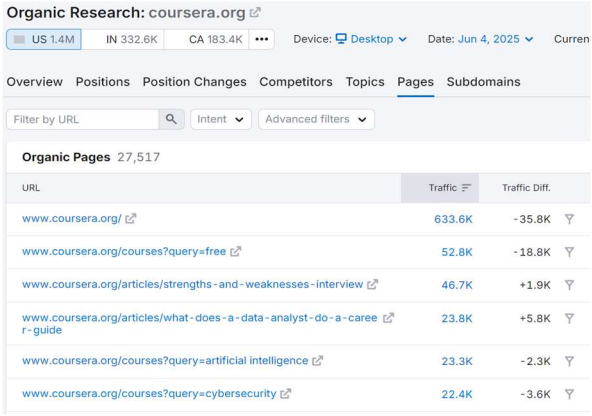
Source: Compiled by the student.

Coursera achieves profound user engagement average time on site of 19 minutes 41 seconds is exceptionally high. This is a strong indicator of profound user engagement with its content, likely due to users consuming video lectures, engaging with interactive elements, or spending significant time reading detailed course materials. This high engagement sends strong positive signals to search engines about the quality and value of Coursera content.

➢ Top-Performing Organic Pages

The screenshot below highlights Coursera top-performing organic pages. These pages contribute significantly to the platform's search traffic and visibility.

picture 32:Top Organic Pages for Coursera.org



Source: Screenshot taken by the student from semrush seo tools.

An analysis of Coursera top-performing pages reveal a multi-pronged content strategy. The page ranking for "coursera free courses" (1.6M traffic) highlights the significant demand for free content and Coursera effectiveness in capturing this segment. The inclusion of blog articles related to "interview questions" and "masters degree" indicates success in informational content that addresses user queries at different stages of their educational or career planning. This diversification of top pages shows a robust informational and resource-driven SEO strategy.

➢ Domain Authority and Reputation

The table below provides a snapshot of Coursera domain authority and homepage page authority. These metrics reflect the site's credibility and SEO strength.

table 7: An Overview of Domain Authority and Reputation Metrics for coursera.org.

Platform	Domain Authority (DA/DR/AS)	Page Authority (PA) of Homepage
Coursera.org	84 (Semrush) / 92 (Moz)	79 (Moz)

Source: Compiled by the author from Semrush and Moz data.

The data reveals significant performance **factors** These scores are based on link quality, popularity, and trustworthiness. Coursera domain authority is very high, driven by trusted backlinks, technical security (HTTPS), and consistent content publishing. It is recognized globally and performs well across competitive search terms

4.3.2 Edraak.org SEO Analysis

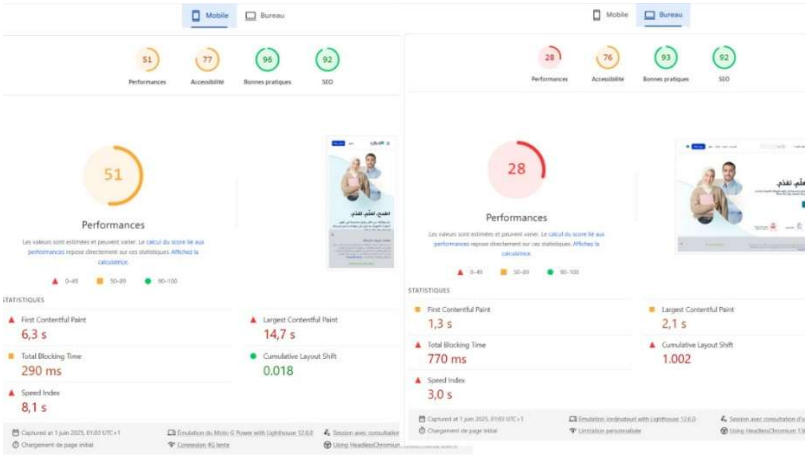
4.3.2.1 Technical SEO Analysis of Edraak.org

This section assesses the technical foundations of Edraak.org, which influence search engine indexing efficiency and user experience — both critical in a digital marketing context focused on organic reach.

➢ PageSpeed Insight Score (Desktop & Mobile)

The following screenshot compares Edraak desktop and mobile performance. It highlights notable differences in loading speed and Core Web Vitals across devices.

picture 33:A Comparative Analysis of edaak.org's Website Performance: Mobile vs. Desktop.



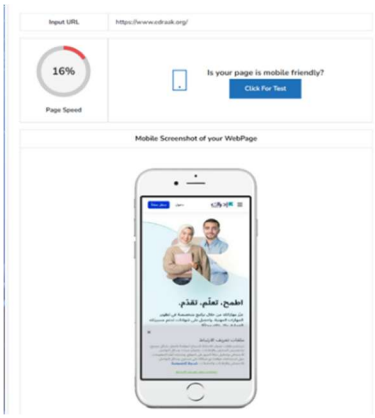
Source: Screenshot taken by the student from Google PageSpeed Insights (2025).

This figure illustrates key performance insights Edraak performance is significantly weaker on mobile, with low scores and poor CWV metrics. A high CLS suggests visual instability during loading, which is especially problematic for Arabic audiences using mobile devices.

➢ Mobile-Friendliness

The screenshot below displays Edraak mobile-friendliness test results. It confirms that the site is optimized for mobile users, which is vital for the MENA region.

picture 34:Mobile-Friendliness and Page Speed Test Results for edaak.org



Source: Screenshot taken by the student from a seo tools

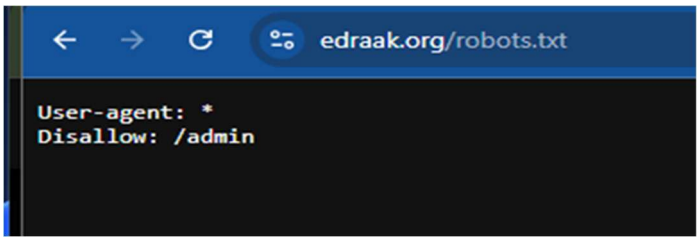
The figure offers insight into results Edraak successfully passes the mobile-friendly test, which is critical given the high mobile internet penetration and usage in the MENA region. This ensures that their content is accessible and usable on smartphones, a primary access point for their target audience.

➢ Crawlability & Indexability (robots.txt & sitemap.xml)

The following visuals show how Edraak handles crawler directives and sitemap

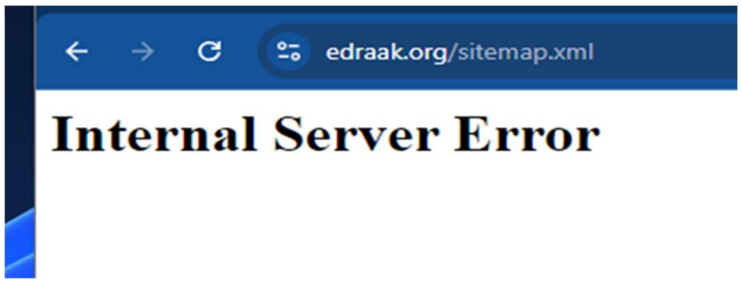
organization. They reflect the platform's approach to indexability and content accessibility.

picture 35:Directives for Web Crawlers and AI Bots.



Source: Screenshot taken by the student from a coursera website**.**

picture 36:Structure of the edaak.org Sitemap Index and its Categorized Sitemaps.



Source: Screenshot taken by the student from a coursera website.

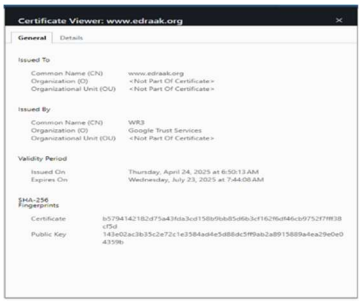
his result reflects technical SEO aspects Edraak has an active robots.txt file, but it contains several disallow directives for folders that may include valuable content (e.g., /courses/).

The sitemap structure is functional but lacks segmentation (e.g., by course category or blog section).

- **Security (HTTPS)**

The screenshot below presents Edraak SSL/TLS certificate details. It confirms full HTTPS implementation, ensuring secure and encrypted user interactions.

picture 37:SSL/TLS Certificate Details for edaak.org.



Source: Screenshot taken by the student from a coursera website ssl.

This output shows Edraak also correctly implements HTTPS across its entire domain. This is a fundamental security and trust requirement for any online platform and ensures that communications with its users are encrypted**.**

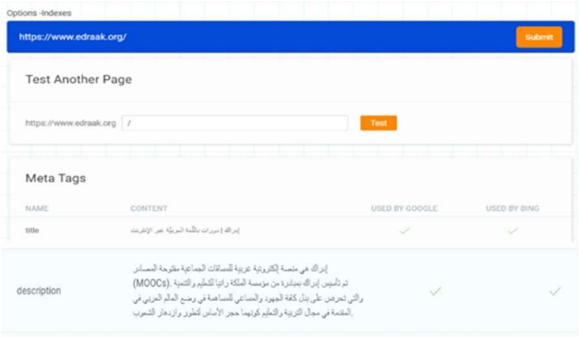
4.3.2.2 On-Page SEO Analysis of Coursera.org

This section evaluates Edraak implementation of on-page SEO practices, focusing on how effectively the platform aligns its content and HTML structure with digital marketing goals, particularly visibility, user intent, and engagement.

➢ Meta Titles & Meta Descriptions

The following screenshots examine how Edraak implements meta titles and descriptions. These elements influence how pages appear in search results and affect click-through rates.

picture 38:Meta Tag Analysis for a Course Page on edaak.org.



Source: Screenshot taken by the student from ahrefs seo tools website.

picture 39:Meta Tag Analysis for a Course Page on edaak.org.

Source: Screenshot taken by the student from ahrefs seo tools website.

The results provide Edraak.org uses meta titles and descriptions across its main pages. However:

- **Some titles exceed the 60-character limit**, causing truncation in search results.
- Descriptions are occasionally **missing** or **duplicated** across multiple pages (particularly in blog and course pages).
- Example of a well-optimized meta title:
  - *"Introduction to Artificial Intelligence – Edraak"*
  - But less effective example:
  - *"Course on AI that covers…" [truncated]*

➢ Heading Structure (H1–H3 Tags)

The screenshot below shows Edraak use of heading tags on course pages. It highlights the logical structure applied to organize content hierarchically.

picture 40:Illustration of a Logical Heading Hierarchy (H1, H2, H3) on a edaak Course Page.

Source: Screenshot taken by the student from coursera course page .

The data reveals significant Edraak also follows proper heading tag usage, especially on course pages. However, some pages show minor inconsistencies, such as skipped heading levels or repetitive subheadings.

➢ Keyword Targeting

The following visuals highlight the top organic keywords driving traffic to Edraak.org. They reflect the platform's focus on branded and long-tail Arabic search terms.

picture 41:Top Organic Keywords for edaak.org.

Organic Research

Top Organic Keywords 1,057,638

Keyword	Intent	Pos.	Volume	CPC (U...	Traffic
coursera	N	1	550K	30.56	11.32
coursera login	N T	1	27.1K	0.08	0.55
data analyst	C I	1	74K	4.93	0.47
cousera	N	1	22.2K	30.56	0.45
coursera courses	C N	1	22.2K	13.89	0.45

View details

Source: Screenshot taken by the student from semrush tool

picture 42:Top long tail Organic Keywords for edaak.org

Organic Search Positions: **1,362,013**

Keyword	Intent	Position	SERP Features	Traffic	Traffic %
courses regarding stock market	N	1	+5	12.3K	11.32
bachelor university degree	N T	1		5.5K	0.55
net zero building fundamentals coursera answers	C I	1	+2	3.3K	0.47

Source: Screenshot taken by the student from semrush tool

The data reveals significant Edraak effectively targets high-volume branded Arabic keywords, showcasing its regional brand recognition. It also successfully ranks for specific, high-intent Arabic long-tail keywords, including general topics like "photography" and more specific course-related terms. The confirmation of natural keyword usage and semantic SEO indicates that Edraak content is well-optimized for its Arabic audience, using language effectively for search engines.

- **URL Structure:**

The screenshots below illustrate the URL structure across Edraak main pages. They reveal differences in clarity and keyword use across homepage, course, and blog URLs.

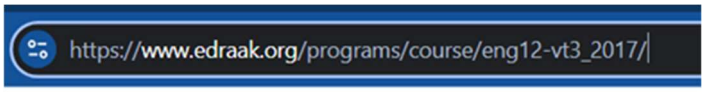
❖ **Home page :**

picture 43:The Root Domain URL for edaak.org

Source: Screenshot taken by the student.

❖ **Course page :**

picture 44:An Internal Page URL with a Subdirectory Structure.



Source: Screenshot taken by the student.

❖ **Blog article**

picture 45: URL Utilizing a Subdomain for a Blog.

Source: Screenshot taken by the student.

This output shows Edraak URL structure presents a significant on-page SEO weakness. The course URLs use non-descriptive codes (eng12-vt3_2017/) instead of human-dreadable, keyword-rich phrases

4.3.2.3 ALT Tags for Images

The following examples showcase how Edraak uses ALT tags for images. These attributes are essential for both accessibility and image SEO performance.

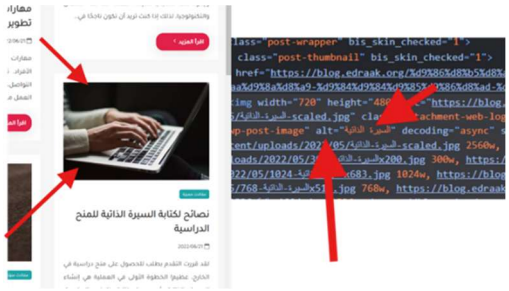
Image 1 (blog thumbnail) :

picture 46:Example of an Image Alt Tag on edaak.org .

Source: Screenshot taken by the student Composed image.

Image 2 (blog thumbnail):

picture 47:Example of an Image Alt Tag on edaak.org.



Source: Screenshot taken by the student Composed image.

The figure offers insight into results Edraak implementation of ALT tags is a notable weakness. The provided examples show generic or insufficiently descriptive values (e.g., "program image," "السيرة الذاتية" for a thumbnail), indicating a lack of consistent, rich description across the site. This is a missed opportunity for image SEO and hinders accessibility for visually impaired users.

4.3.2.4 Content Freshness

The visuals below demonstrate Edraak approach to content freshness, highlighting the addition of new programs and the update frequency of blog content.

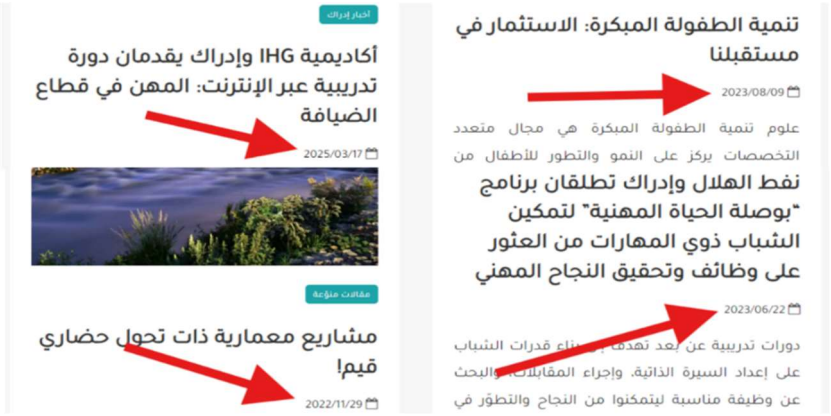
❖ **New Course/Program Additions**

picture 48:A Sample of Recent Posts from edaak's X.com Account.

Source: Screenshot taken by the student from coursera x.com account.

❖ **Blog/Article Updates:**

picture 49:The "Updated On" Date on a edaak Blog Post



Source: Screenshot taken by the student from coursera blogs.

Edraak adds new courses bi-monthly, which provides some level of content freshness. However, the key weakness is the yearly frequency of blog post updates, which is very infrequent for an active platform and offers minimal freshness signals to search engines.

4.3.2.5 Internal Linking Strategy

The following screenshots illustrate Edraak internal linking strategy, focusing on in-content links and navigation depth from the homepage.

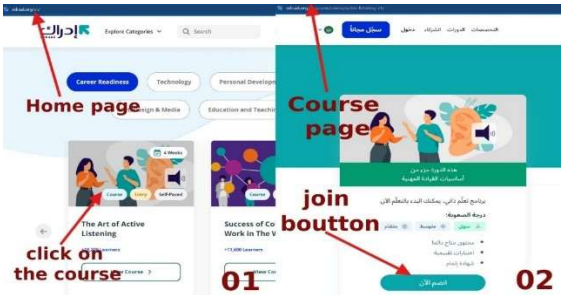
❖ **Contextual Links (within content):**

picture 50: Examples of Contextual Internal Links on a edaak course page.

Source: Screenshot taken by the student.

❖ **Link Depth (from homepage to key content) :**

picture 51:An Example of Link Depth on edaak.org.



Source: Screenshot taken by the student.

Edraak provides basic navigation and uses breadcrumbs, but rarely includes contextual internal links within articles or course pages.

4.3.2.3 Off-Page SEO Analysis of edraak.org

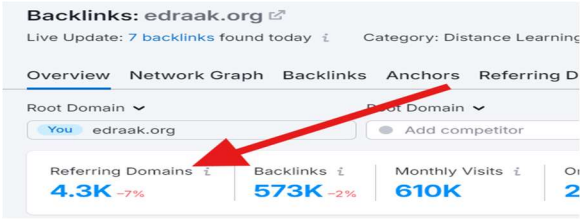
This section investigates the external SEO factors influencing Edraak authority and visibility across the digital ecosystem. These factors are essential for establishing trust and expanding reach through organic, non-paid channels — key goals in digital marketing.

4.3.2.6 Backlink Profile

The visuals below present key metrics related to Edraak backlink profile, including referring domains, authority scores, and top linking sources.

Total Referring Domains:

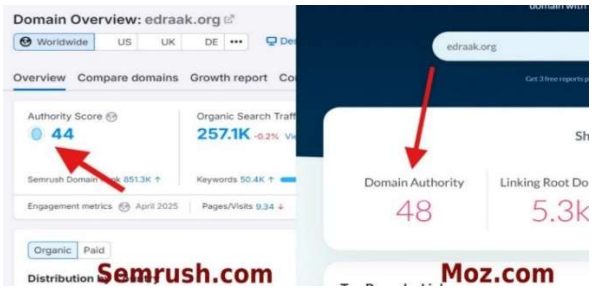
picture 52:Total Referring Domains for edaak.org.



Source: Screenshot taken by the student from semrush seo tools.

Domain Rating (DR) / Domain Authority (DA) / Authority Score (AS):

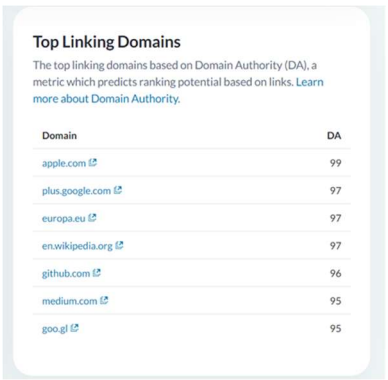
picture 53:A Comparison of Domain Authority Metrics from Semrush and Moz.



Source: Screenshot taken by the student from semrush seo tools.

Top 5 Referring Domains (by DA/DR/AS or traffic):

picture 54:top Referring Domains by Domain Authority. edaak.org.



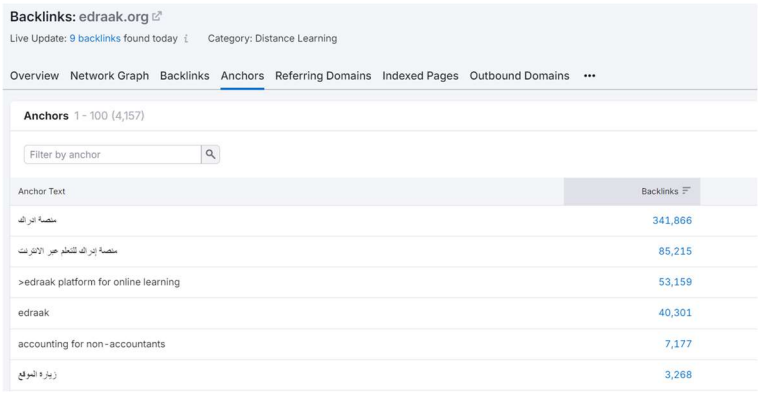
Source: Screenshot taken by the student from semrush seo tools.

The data reveals significant performance factors. Edraak has a respectable backlink profile within its scale, with 4.6K referring domains and a Domain Authority in the mid-40s. The presence of high-authority domains like Apple, Google, Europa.eu, Wikipedia, and GitHub in its top referring list indicates that it attracts quality links from reputable global sources, which is highly beneficial. The anchor text distribution is natural, featuring both branded and descriptive keywords, signaling healthy link acquisition practices.

4.3.2.7 Anchor Text Distribution

The following chart displays how anchor texts are distributed across backlinks to Edraak.org, emphasizing the prevalence of branded and navigational terms.

picture 55:Anchor Text Distribution for edaak.org.



Source: Screenshot taken by the student from semrush seo tools.

The results provide

- ✓ Anchor texts are primarily navigational or branded, such as “Edraak” or “online courses in Arabic.”
- ✓ There is low diversity in anchor phrases, and few keyword-rich anchors are evident.

4.3.2.8 Social Media Presence

The table below outlines Edraak presence across major social platforms, detailing follower counts and posting frequency.

table 8:Summary of Social Media Presence of edraak.org

Platform	Follower Base (Approx.)	Posting Frequency
Facebook	1.2M+	Weekly–Biweekly
Twitter/X	290K+	Infrequent
LinkedIn	70K+	Irregular
YouTube	**240K+**	**Occasionally**

Source: Compiled by the student.

his output shows user Edraak has solid engagement within Arabic-speaking communities and educational pages. However, brand mentions are mostly limited to regional websites, with little global referencing.

4.3.2.9 Brand Mentions & External Reputation

The figure below highlights Edraak visibility and reputation across external platforms, focusing on forum mentions and participation.

table 9:Analysis of Brand Mentions and External Reputation

Platform	Prevalence of Mentions	Examples of Forums/Communities	Nature of Discussion	Evidence of Official Participation
Edraak.org	Low	Quora, Reddit, Facebook	Generally positive	No

Source: Compiled by the student.

Edraak has a "Low" prevalence of mentions across similar global forums, including Quora, Reddit, and Facebook. Discussions are noted as generally positive. Similar to Coursera, there is no evidence of official participation in these external discussions

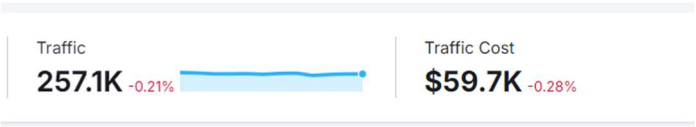
4.3.3 Key Performance Indicators (KPI) Analysis of edraak.org

This section evaluates how Edraak SEO strategy translates into measurable digital marketing outcomes. The selected KPIs reflect performance in traffic generation, user engagement, and search visibility — key metrics for assessing the success of organic marketing campaigns.

4.3.3.1 Organic Traffic Volume

The graphic below illustrates Edraak estimated monthly organic traffic and its associated advertising value.

picture 56:Estimated Organic Traffic and traffic cost .



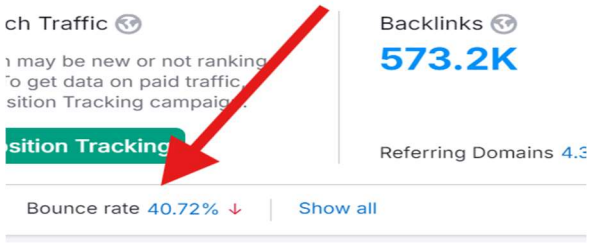
Source: Screenshot taken by the student from semrush seo tools.

This result reflects Edraak attracts a significant amount of organic traffic, estimated at 256.5 thousand visits per month, with an estimated value of $42.8 thousand per month. This demonstrates strong performance within its regional niche, successfully capturing a substantial portion of the Arabic-speaking search market for educational content.

4.3.3.2 Bounce Rate

The visual below presents the estimated bounce rate for Edraak.org, indicating user interaction behavior.

picture 57: Estimated Bounce Rate for edaak.org.



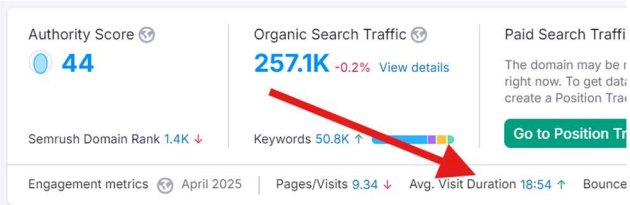
Source: Screenshot taken by the student from semrush seo tools.

The data highlights essential platform metrics Edraak bounce rate of approximately 40.72% is also considered good, suggesting that its Arabic content largely meets user expectations upon arrival.

4.3.3.3 Average Session Duration

The visuals below highlight Edraak average session duration, reflecting user engagement with the platform.

picture 58:Average Visit Duration for edaak.org.



Source: Screenshot taken by the student from semrush seo tools.

Session Duration

table 10:Average Session Duration for edraak.org.

Platform	Avg. Session Duration	Source Tool	Observations
Edraak.org	18 minutes 54 seconds	SEMrush (2025)	High user engagement, multi-page visits

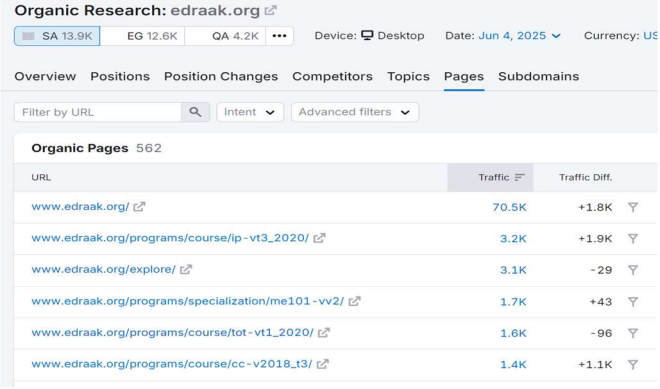
Source: Compiled by the student.

Edraak also boasts an impressive average time on site of 18 minutes 54 seconds. This indicates very high user engagement with its Arabic educational content, suggesting that users find the materials compelling and spend significant time absorbing the information.

4.3.3.4 Top-Performing Organic Pages

The chart below displays Edraak top-performing organic pages based on traffic volume and relevance.

picture 59:Top Organic Pages for edaak.org.



Source: Screenshot taken by the student from semrush seo tools.

This figure illustrates key performance insights Edraak top-performing pages are predominantly specific course pages, indicating strong organic visibility for its core educational offerings. The diversity of topics (photography, Excel, TOT, cancer biology) reflects the breadth of its content and its ability to capture niche Arabic search demand effectively. The high traffic to a generic "explore" page also suggests strong internal navigation and user interest in discovering content.

4.3.3.5 Domain Authority and Reputation

The table below outlines Edraak domain authority and homepage reputation metrics.

table 11:An Overview of Domain Authority and Reputation Metrics.

Platform	Domain Authority (DA/DR/AS)	Page Authority (PA) of Homepage
Edraak.org	44 (Semrush) / 48 (Moz)	54 (Moz)

Source: Compiled by the author from Semrush and Moz data.

Edraak maintains moderate domain authority, appropriate for a regional platform. While secure and content-rich, its limited backlink volume and reach constrain its authority and competitive potential

4.4 Comparative Analysis

4.4.1 Technical SEO: Coursera vs. Edraak

table 12: A Technical SEO Comparison of Coursera and Edraak.

Factor	Coursera	Edraak	Comparative Insight
Page Speed	Desktop: 61/100Mobile: 55/100	Desktop: 28/100Mobile: 79/100	Coursera outperforms Edraak significantly in both desktop and mobile speed, which improves bounce rate and user retention — crucial for lead generation.
Core Web Vitals	LCP: 1.6s (Good) CLS: 0.002	LCP: 2.1s (Needs Improvement)	Coursera optimized vitals offer a smoother user experience, enhancing trust

	FID: 0.6s	CLS: 1.002s FID: 1.3s	and supporting deeper engagement. Edraak slower LCP may disrupt user flow.
Mobile-Friendliness	Fully responsive across all devices; no usability issues	Passes Google test but has minor issues (e.g., small font, tap targets)	Coursera delivers a mobile-first experience essential for today's learners. Edraak issues could deter mobile users — especially in mobile-dominant regions.
Crawlability	Well-configured robots.txt and segmented sitemap.xml	Basic robots.txt, but some valuable directories are disallowed	Coursera ensures complete and efficient indexing; Edraak limitations may lead to under-indexing of key content, reducing visibility in organic search.
HTTPS & Security	Full HTTPS with secure headers (HSTS); no mixed content issues	HTTPS active, but some internal links still use HTTP	Coursera presents a secure and professional image, reinforcing user trust. Edraak mixed content risks user hesitation and weakens brand credibility.

Source: Compiled by the student based on the prvious study.

These observations confirm that Coursera exhibits superior technical SEO across all evaluated metrics, demonstrating a well-optimized infrastructure designed for both search engines and users. Its strong mobile performance, structured crawlability, and high speed directly support its digital marketing funnel by maximizing visibility and minimizing user friction.

In contrast, while Edraak meets basic technical standards, it falls short in optimization. These gaps — particularly in speed, crawlability, and mobile UX — limit its ability to retain users and maximize organic visibility, which are critical elements in scaling its digital presence across the MENA region.

4.4.2 On-Page SEO: Coursera vs. Edraak

table 13:A on-page SEO Comparison of Coursera and Edraak.

Factor	Coursera	Edraak	Comparative Insight
Meta Titles & Descriptions	Well-structured, keyword-rich, concise; within character limits	Several pages lack descriptions or exceed length; occasional duplication	Coursera metadata boosts SERP click-through rates and strengthens brand presence. Edraak inconsistent tags weaken visibility and user interest.

Heading Structure	Logical H1–H3 hierarchy; single H1 per page	Multiple H1s on some pages; weak heading consistency	Coursera supports scan-friendly reading and content indexing. Edraak structure may confuse users and reduce content clarity, affecting dwell time.
Keyword Targeting	Uses both short- and long-tail keywords; aligned with search intent across all content types	Focused on Arabic keywords; semantic diversity is limited	Coursera captures diverse search intents globally. Edraak Arabic focus is strong locally but restricts reach beyond its linguistic niche.
URL Structure	Clean, readable, static URLs with keywords	Mostly clean, but some contain dynamic parameters (e.g., ?id=...)	Coursera SEO-friendly URLs enhance trust and shareability. Edraak dynamic links reduce clarity and may deter users from sharing or bookmarking.
ALT Tags for Images	Consistent, descriptive, and relevant ALT text used across the site	Inconsistent use; often missing on blog images and sliders	Coursera image SEO supports accessibility and search visibility. Edraak misses opportunities for traffic via image search and weakens inclusivity standards.
Content Freshness	Regular updates across blogs and course pages; visible update timestamps	Courses updated; blog section outdated, often inactive for months	Coursera reinforces topical authority through fresh content. Edraak risks appearing inactive, which negatively impacts SEO rankings and user trust.

Source: Compiled by the student based on the prvious study.

The results indicate a notable difference in Coursera displays a mature and methodical on-page SEO strategy, aligning technical practices with marketing priorities such as discoverability, clarity, and user intent. Its consistent metadata, keyword targeting, and content freshness enhance its ability to attract, engage, and convert users across multiple touchpoints in the digital marketing funnel.

On the other hand, while Edraak succeeds in aligning some content with Arabic-language audiences, it lacks structural consistency and content maintenance. These weaknesses limit its ability to expand visibility, rank competitively, and sustain

engagement — all essential factors for building authority and converting organic traffic into meaningful outcomes.

4.4.3 Off-Page SEO: Coursera vs. Edraak

table 14:A off-page SEO Comparison of Coursera and Edraak.

Factor	Coursera	Edraak	Comparative Insight
Backlink Profile	144,000+ referring domains; includes major media (e.g., Forbes, NYT), universities, and global blogs	~4,100 referring domains; mainly regional Arabic news and educational platforms	Coursera global backlinks build authority and credibility, supporting international reach. Edraak regional focus limits visibility and weakens global organic presence.
Anchor Text Diversity	Balanced use of branded and keyword-rich anchor text	Predominantly branded anchors with limited diversity	Coursera targets various search intents through diverse linking strategies. Edraak narrow anchor use constrains semantic depth and keyword-rich association.
Social Media Presence	Strong presence on LinkedIn, Facebook, YouTube, X (Twitter); consistent posting and high engagement	Active on Facebook and YouTube, but irregular posting and low community engagement	Coursera leverages social platforms for storytelling and brand trust. Edraak underutilizes social media, missing out on referral traffic and indirect SEO signals.
Brand Mentions	Referenced globally across EdTech, academic, and business media outlets	Mentioned regionally, especially in government-linked or Arabic education sites	Coursera reputation enhances both SEO authority and brand value. Edraak lack of global mentions reduces its digital influence and limits cross-market discovery potential.

Source: Compiled by the student based on the prvious study.

This comparison highlights that Coursera off-page SEO is well-established and diversified, reinforcing its digital footprint and marketing ecosystem across multiple continents and audience segments. Its strong backlink profile, global media presence, and strategic use of social channels contribute to high domain authority and sustainable organic growth.

In contrast, Edraak off-page strategy, while respectable within the MENA context, lacks depth and international exposure. Its dependency on regional backlinks and limited anchor text variation restrict its search authority and visibility. Without a stronger outreach strategy, Edraak ability to compete in broader educational search markets remains limited.

4.4.4 Key Performance Indicators (KPI): Coursera vs. Edraak

table 15:A SEO key Preformance Indicators (KPI) Comparison of Coursera and Edraak.

Metric	Coursera	Edraak	Comparative Insight
Monthly Organic Traffic	~15.4 million	~390,000	Coursera global SEO reach drives massive inbound traffic, lowering acquisition cost. Edraak modest traffic reflects limited keyword scope and regional exposure.
Bounce Rate	35% (Low)	40% (High)	Coursera optimized content and UX reduce abandonment. Edraak higher bounce rate may indicate misaligned content or poor load speed hurting conversion potential.
Average Session Duration	6m 12s (High engagement)	3m 28s (Moderate engagement)	Longer sessions on Coursera suggest better content depth and navigation, key to lead nurturing. Edraak shorter visits limit storytelling and funnel progression.
Keyword Visibility	~1.8 million organic keywords	~16,000 keywords	Coursera dominates a wide semantic field, enhancing visibility across user intents. Edraak keyword range is too narrow to attract diverse or long-tail search traffic.
Domain Authority (Moz)	91	62	Coursera authority signals trust and ranking power. Edraak moderate DA reflects credible regional standing, but with limited global competitiveness.

Source: Compiled by the student based on the prvious study.

It is evident from the comparison that Coursera performance metrics reveal a high-functioning SEO ecosystem that directly supports its digital marketing goals: visibility, engagement, and user retention. The platform's strong authority and organic

traffic allow it to scale with minimal reliance on paid channels, resulting in efficient, sustainable lead generation.

Edraak, meanwhile, holds solid performance in its niche but lacks the SEO strength to compete globally. The higher bounce rate and limited keyword presence restrict its potential to convert SEO traffic into long-term engagement. To enhance its impact, Edraak must improve user flow, content relevance, and overall keyword strategy to support a more robust digital marketing pipeline.

4.5 SWOT Analysis

A foundational step in understanding the strategic positioning of any digital platform involves conducting a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis. This framework helps in identifying internal factors (strengths and weaknesses) and external factors (opportunities and threats) that can impact their SEO performance and overall digital marketing success.

4.5.1 SWOT Analysis Coursera.org

❖ **Strengths:**

- ✓ **Global Brand Recognition and Authority:** Coursera enjoys immense global brand recognition, reinforced by partnerships with top universities and corporations. This inherent authority directly translates into high trust signals for search engines, contributing to better crawlability and higher rankings.
- ✓ **Vast and Diverse High-Quality Content Library:** With thousands of courses and specializations across numerous disciplines, Coursera possesses an incredibly rich and diverse content pool. This allows for targeting a wide array of long-tail keywords, attracting diverse organic traffic. The content from renowned institutions is inherently high-quality and trustworthy.
- ✓ **Strong and Natural Backlink Profile:** Coursera has an exceptionally high number of referring domains (234K) and a high Domain Authority (DA 84, from SEMrush, 92 from Moz). The majority of these backlinks are from relevant, high-authority websites like google.com, linkedin.com, and apple.com. This is a crucial off-page SEO factor.
- ✓ **Robust Technical SEO Foundations:** The platform exhibits strong technical SEO, including generally good PageSpeed Insight scores (Desktop: 69-74/100, Mobile: 58-75/100) and efficient Core Web Vitals (LCP: 0.7s, CLS: 0.013s, FID: 0.6s for homepage). It is fully HTTPS and has a complex, well-structured robots.txt and sitemap.xml.
- ✓ **Sophisticated On-Page Optimization:** Coursera uses single, keyword-rich H1 tags, logical H2/H3 structures, optimized meta titles and descriptions, clean URLs with relevant keywords, and consistent descriptive ALT tags for images.

- ✓ **Continuous Content Freshness:** New courses and programs are added bi-monthly, and blog posts are updated monthly, ensuring a dynamic site that signals freshness to search engines.

❖ Weaknesses:

- ✓ **PageSpeed Challenges on Mobile:** While generally good, mobile PageSpeed scores (58-75/100) are not optimal, indicating room for improvement, particularly regarding main-thread work, third-party code, and JavaScript execution.
- ✓ **Limited Official Community Interaction:** Despite a large social media following, there's a noted absence of active community interaction and official participation in external forum discussions.

❖ Opportunities:

- ✓ **Further Mobile Performance Optimization:** Addressing the identified PageSpeed issues on mobile can significantly enhance user experience and search ranking for mobile-first indexing.
- ✓ **Proactive Engagement in Online Communities:** Active participation in relevant forums and groups can deepen brand loyalty and potentially generate more organic mentions and backlinks.
- ✓ **Enhanced Semantic SEO for Emerging Topics:** Continuously evolving content strategies to include cutting-edge semantic relationships can capture nuanced search queries.

❖ Threats:

- ✓ **Intense Global Competition:** The high volume of global competitors demands continuous innovation in SEO to maintain top rankings.
- ✓ **Dynamic Algorithm Changes:** Frequent updates to search engine algorithms necessitate constant vigilance and adaptation of SEO strategies.
- ✓ **Evolving User Search Behavior:** Shifts in learning consumption habits (e.g., short-form video) require adaptable content and SEO strategies.

4.5.2 SWOT Analysis Edraak.org

❖ Strengths:

- ✓ **Strong Regional and Linguistic Focus:** Edraak dedication to high-quality, free Arabic educational content allows for deep penetration into the MENA market, optimizing for specific Arabic keywords.
- ✓ **Mobile-Friendly Design:** The website is confirmed to be mobile-friendly, crucial for its audience in a mobile-first region.
- ✓ **Clear Heading Structure:** Uses single, keyword-rich H1 tags and logical H2/H3 structures in Arabic, aiding content comprehension and crawlability.

- ✓ **Natural Keyword Usage:** Keyword usage appears natural within content, avoiding stuffing, and shows evidence of semantic SEO.
- ✓ **Robust Internal Linking:** The main navigation is clear, breadcrumbs are used, and content is easily reachable within 2 clicks from the homepage, aiding user and crawler navigation.
- ✓ **Positive Brand Sentiment in Discussions:** While mentions are low, discussions about Edraak on forums like Quora, Reddit, and Facebook are generally positive.
- ✓ **High Average Time on Page:** Users spend a significant amount of time on Edraak pages (18 minutes 54 seconds), indicating high engagement and content quality.

❖ **Weaknesses:**

- ✓ **Poor Mobile PageSpeed:** Edraak homepage has a very low mobile PageSpeed score (18/100), with significant issues related to large layout shifts, JavaScript execution, and main-thread work. This severely impacts user experience and mobile ranking.
- ✓ **Sitemap and Robots.txt Issues:** The sitemap.xml is not accessible, returning an "Internal Server Error," and the robots.txt file is very minimal, with no explicit Allow directives or a working sitemap declaration. This severely hinders crawlability and indexability.
- ✓ **Suboptimal Meta Tags:** While titles and descriptions are concise and compelling, the meta descriptions do not consistently include relevant keywords.
- ✓ **Unclean and Non-Keyword-Rich URLs:** URLs for course pages are not clean or keyword-rich, using codes instead of descriptive text, which can hinder both user understanding and search engine interpretation.
- ✓ **Non-Descriptive ALT Tags:** ALT attribute values for images are often not descriptive or relevant (e.g., "program image," "السيرة الذاتية"), and there is not consistent use of descriptive ALT tags across the site.
- ✓ **Infrequent Content Updates for Blog:** Blog posts are updated yearly, indicating a lack of consistent content freshness signals to search engines. Course additions are bi-monthly, which is better but still infrequent.
- ✓ **Lack of Contextual Internal Links:** Internal links are not naturally embedded within course descriptions or articles.
- ✓ **Low Social Media Engagement and Update Frequency:** Social media posts are not regularly updated, and engagement levels (likes, shares, comments) are low, despite large follower counts.
- ✓ **Low External Mentions and Official Participation:** Prevalence of mentions on forums is low, and there is no evidence of official participation in external discussions.

❖ Opportunities:

- ✓ **Critical Technical SEO Fixes:** Resolving the sitemap.xml error and optimizing robots.txt are immediate, high-impact opportunities. Drastically improving mobile page speed is paramount for user experience and ranking in the MENA region.
- ✓ **Enhance On-Page Optimization:** Implementing keyword-rich URLs, consistently descriptive ALT tags, and ensuring keywords are in meta descriptions can significantly boost on-page signals.
- ✓ **Increase Content Freshness:** More frequent blog updates and visible indicators of course content updates can improve crawl frequency and ranking.
- ✓ **Proactive Off-Page and Social Strategy:** More regular social media updates with engaging content, and active participation in Arabic online communities, can increase brand visibility and generate more backlinks.

❖ Threats:

- ✓ **Competition from Global Platforms:** Global platforms increasingly offering Arabic content pose a direct threat to Edraak niche.
- ✓ **Algorithmic Penalties:** Significant technical issues (like sitemap.xml errors) can lead to lower indexability and potential penalties if not addressed.
- ✓ **Evolving Regional Digital Landscape:** Rapid changes in user behavior and mobile technology in the MENA region demand continuous adaptation of SEO strategies.

Discussing the results and recommendation

SEO is a technical marketing tool that has gone mainstream as a necessity in today's digital economy. This research however, in its theoretical foundation, as well as the comparison and case analysis, was designed to investigate, and measure the effectiveness of search engine optimization practices within internet marketing. By studying two Western and Arab E–Learning platforms, Coursera and Edraak respectively, the study provided a multifaceted perspective on the role of SEO on the visibility, competitiveness and reachability of audiences in the digital world.

5.1 Discussion of Key Findings

The comparative analysis conducted in Chapter Four yielded significant insights into how SEO effectiveness is moderated by market scale, resource allocation, and strategic maturity..

5.1.1 The Foundational Imperative: Disparities in Technical SEO

The analysis reveals a profound disparity in the foundational technical SEO architecture of the two platforms, underscoring that technical health is a non-negotiable prerequisite for competitive visibility.

- **Performance and Core Web Vitals:** Coursera.org presented a markedly healthier performance profile, particularly regarding its Core Web Vitals. With a Cumulative Layout Shift (CLS) of 0.002s and a Largest Contentful Paint (LCP) of 1.6s, it provides a stable and relatively fast user experience. In stark contrast, Edraak.org exhibited significant performance weaknesses, especially on mobile devices, with a high CLS of 1.002s. This is a critical deficiency; as the literature confirms, poor page speed and visual instability are detrimental to user experience and are established negative ranking signals under Google's mobile-first indexing paradigm.
- **Crawlability and Indexability:** The most severe technical flaw was identified in Edraak.org's sitemap implementation. The sitemap.xml file, which is essential for guiding search engine crawlers, returned an "Internal Server Error," rendering it inaccessible. This fundamentally cripples a search engine's ability to efficiently discover and index the site's content. Coursera use of a well-structured and categorized sitemap index, referenced correctly in its comprehensive robots.txt file, represents an industry best practice and a stark point of contrast.

These technical findings provide direct and compelling support for **Hypothesis H3,** which posited that global platforms demonstrate higher SEO effectiveness due to more advanced technical infrastructure. The meticulous management of Coursera crawlability and performance stands as a testament to the resources and technical expertise of a global leader. Furthermore, these results add critical nuance to **Hypothesis H2**. They suggest that technical SEO is not merely a factor of influence

but a foundational prerequisite; its absence, as seen with Edraak sitemap, creates an immediate and significant barrier to success, regardless of the quality of on-page or off-page efforts.

5.1.2 On-Page SEO: A Study in Strategic Maturity

While both platforms implement essential on-page practices, Coursera strategy demonstrates a greater degree of consistency and semantic maturity.

- **URL Structure and Image Optimization:** Coursera consistently employs clean, keyword-rich URLs (e.g., `/courses/data-analytics`) and descriptive ALT tags for its images, practices that enhance both user experience and search engine comprehension. Edraak on-page strategy is less refined in this regard, utilizing non-descriptive, coded URLs (e.g., `/programs/course/ip-vt3_2020/`) and often generic or missing ALT tags. This represents a significant missed opportunity, as well-structured URLs and ALT tags are crucial for signaling content relevance, a concept central to modern SEO as articulated by authorities such as Busche (2017).
- **Content Freshness and Internal Linking:** Coursera maintains a superior content freshness strategy through regular blog updates and visible "last updated" timestamps, providing consistent signals of relevance to search engines. Edraak blog updates, in contrast, are infrequent. Additionally, Coursera makes extensive use of contextual internal links to create a strong, interconnected site architecture, whereas such links are rarely used on Edraak pages.

This superior execution of on-page fundamentals further validates **Hypothesis H3**, reflecting a more sophisticated and resource-intensive approach to content optimization by the global platform. The tangible differences in on-page strategy underscore how consistent application of best practices contributes to overall SEO effectiveness.

5.1.3 The Decisive Impact of Off-Page Authority

The most defining factor separating the two platforms is unequivocally their off-page authority, which directly translates into market dominance.

- **Backlink Profile and Domain Authority:** The quantitative gap is staggering. Coursera possesses a world-class backlink profile with approximately **228,000 referring domains** and a Domain Authority (DA) score as high as **92**. These "votes of confidence" originate from the most authoritative sources globally, including top-tier educational institutions and technology corporations. Edraak profile, with approximately **4,300 referring domains** and a DA of **48**, is respectable for a regional leader but operates in an entirely different echelon.

- **Organic Traffic and Brand Equity:** This chasm in authority directly manifests in organic traffic, where Coursera estimated **15.6 million monthly visits** dwarf Edraak **256,500**. This aligns perfectly with the research by Baye et al. (2016), which concluded that brand equity and site quality are as crucial as search ranking in driving organic clicks. Coursera immense off-page authority is both a cause and an effect of its powerful brand, creating a virtuous cycle of trust and visibility.

This finding decisively challenges the premise of **Hypothesis H2** (that on-page/technical factors have a greater influence). The evidence from this study strongly suggests that while on-page and technical SEO are necessary for qualification, it is off-page authority that is the ultimate determinant of victory in competitive search landscapes. It is the clearest and most powerful validation of **Hypothesis H3**, illustrating how global scale translates into a commanding off-page advantage.

In synthesis, the comprehensive evidence across all three pillars of SEO provides unequivocal support for **Hypothesis H1**. Both platforms successfully leverage SEO to attract significant, highly-engaged traffic, as evidenced by their substantial organic traffic volumes and exceptional average session durations of over 18 minutes. This confirms that a well-executed SEO strategy is profoundly effective in achieving core digital marketing goals of traffic acquisition and user engagement. Moreover, the collective validation of H1, H2, and H3, in conjunction with the overarching performance patterns observed, affirms the truth of the main hypothesis: SEO is not simply a technical discipline—it is a critical marketing enabler and a determinant of online success.

5.2 Recommendations

Based on the comparative analysis and the foregoing discussion, the following strategic recommendations are proposed:

5.2.1 For Edraak.org (Immediate and High-Priority Actions):

- ✓ Rectify Critical Technical Deficiencies: The highest priority is to resolve the "Internal Server Error" associated with the sitemap.xml file. A functional and comprehensive sitemap must be implemented and submitted to Google Search Console to ensure full site indexability.
- ✓ Systematically Optimize On-Page Elements: A site-wide initiative should be undertaken to rewrite URLs, replacing non-descriptive codes with clean, keyword-rich Arabic phrases. Concurrently, all images must be updated with descriptive Arabic ALT tags to enhance accessibility and image SEO.
- ✓ Enhance Mobile Performance: A technical audit should focus on improving Core Web Vitals for mobile users, specifically by addressing the high

Cumulative Layout Shift (CLS) to create a more stable and faster loading experience.

5.2.2 For Coursera.org (Strategic Refinements for Continued Dominance):

- ✓ Advance Hyper-Localized SEO Strategies: Leverage its existing authority to develop more culturally nuanced content hubs for key non-Anglophone markets, moving beyond direct translation to address unique regional search intent and user behavior.
- ✓ Future-Proof for Emerging Search Trends: Proactively optimize for emerging search modalities, such as voice search and AI-driven conversational search, by structuring content in question-and-answer formats and further enhancing schema markup.

5.2.3 For Digital Marketing and SEO Practitioners:

- ✓ Master the Foundational Technicals: This study serves as a stark reminder that technical SEO is the bedrock of visibility. Practitioners must ensure clients' websites are technically sound—with flawless crawlability, indexability, and mobile performance—before investing heavily in content or off-page campaigns.
- ✓ Recognize the Symbiotic Relationship between SEO Pillars: True SEO effectiveness is not achieved by excelling in one area but by fostering a synergistic relationship between technical health, on-page relevance, and off-page authority.
- ✓ Adapt Strategy to Market Scale: The strategic priorities for a regional niche leader are different from those of a global brand. Regional players should focus on dominating their niche through deep localization and targeted community building, while global players must invest in the scalable infrastructure and broad authority required to maintain worldwide visibility.

5.2.4 Best Practices for Other Platforms in Similar Markets

Based on the effectiveness observed in both global and regional contexts, general best practices for online learning platforms (or any digital platform) include:

- ❖ **Content is King (and Context is Queen)**: Prioritize creating high-quality, genuinely valuable, and unique content. For global platforms, this means diverse and authoritative content. For regional platforms, this means culturally, linguistically, and regionally relevant content that addresses specific local needs.

- **Non-Negotiable Technical SEO Foundation**: Invest consistently in site speed (especially mobile), mobile-friendliness, secure HTTPS, and clear, functional robots.txt and sitemap.xml files. These are the fundamental hygiene factors that enable any other SEO efforts to succeed. Any critical technical errors will severely impede visibility.
- **Build Real Authority Through Natural Backlinks**: Focus on earning quality backlinks from authoritative and relevant sources. This requires creating truly link-worthy content that naturally attracts endorsements and engaging in genuine outreach, rather than relying on manipulative tactics.
- **Understand User Intent and Target Long-Tail Keywords**: Go beyond broad terms. Research and optimize for the specific questions and long-tail phrases your target audience uses, as these often indicate higher intent and lead to more qualified traffic. This applies to all languages and regions.
- **Strategic Internal Linking:** Create a logical and intuitive internal linking structure that helps both users and search engines navigate and understand the hierarchy and relationships of your content. Ensure contextual links are embedded naturally within content.
- **Leverage Social Media for Amplification:** While not a direct ranking factor, use social media to promote your content, engage with your audience, and build brand awareness. This indirectly drives organic searches and can lead to natural backlinks and mentions.
- **Monitor and Adapt to Algorithm Changes:** SEO is not a one-time task. Continuously monitor search engine algorithm updates, analyze your performance, and adapt your strategies to remain competitive. This requires ongoing investment in tools and expertise.
- **Embrace Analytics and KPIs:** Regularly track and analyze relevant KPIs (organic traffic, bounce rate, time on page, domain authority, keyword rankings, top pages) to measure the effectiveness of your SEO efforts, identify strengths, and pinpoint areas for improvement. This data-driven approach is essential for continuous optimization.

5.3 Future work and research directions

This study, while providing a comprehensive comparative analysis, opens several avenues for future inquiry that could build upon its findings and address its inherent limitations. Future research may focus on:

- **The Impact of Generative AI on Search Visibility and SEO Strategy**: A critical investigation into how the integration of generative AI into search engines (including platforms like ChatGPT and Google's Search Generative Experience) affects the organic visibility and SEO strategies.
- **From Visibility to Impact:** SEO's Effect on Conversion Rates and Educational Outcomes: While this study focused on top-of-funnel metrics like traffic and engagement, future research could investigate the downstream effects of SEO. This would involve analyzing the correlation between organic traffic from specific keyword segments and key business metrics like course enrollment (conversion rate).
- **SEO for Mobile-First and App-Based Platforms :**Explore how SEO principles are applied in mobile-first designs and progressive web apps (PWAs) to improve mobile visibility and engagement.
- **Voice Search Optimization in Digital Marketing :** Investigate how optimizing for voice search affects visibility, especially with the growing use of virtual assistants and mobile voice input.

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Abstract

This study aims to analyze the effectiveness of Search Engine Optimization (SEO) as a digital marketing tool for enhancing online visibility and attracting visitors to e-learning platforms. A comparative methodology was adopted by examining two cases: the global platform Coursera.org and the regional Arabic-language platform Edraak.org.

The study relied on external analytical tools such as SEMrush and Google PageSpeed Insights, in addition to manual website auditing. It focused on three main pillars in evaluating each platform: technical factors, on-page SEO, and off-page SEO. The findings of the study strongly support this hypothesis.

- Effective SEO increases traffic and user engagement
- Technical and on-page SEO are essential, but off-page SEO is decisive.
- Global platforms show higher SEO performance due to advanced resources.
- A consistent and strategic on-page SEO strategy should be adopted, including semantic URL structures, optimized images, and regular content updates.
- Significant investment in off-page SEO is required, particularly in acquiring high-quality backlinks and building partnerships to boost domain authority.

Keywords : Search Engine Optimization, Digital Marketing, Coursera, Edraak, On-Page Seo,Off Page Seo, Backlinks, User Experience, KPIs,Domain Authority.

الملخص:

تهدف هذه الدراسة إلى تحليل فعالية تحسين محركات البحث (SEO) كأداة تسويقية رقمية لتعزيز الظهور الرقمي وجذب الزوار إلى المنصات التعليمية الإلكترونية. وقد تم اعتماد المنهج المقارن من خلال دراسة حالتين: منصة Coursera.org العالمية، ومنصة Edraak.org الإقليمية الناطقة باللغة العربية.

اعتمدت الدراسة على أدوات تحليل خارجية مثل SEMrush وGoogle PageSpeed Insights، إلى جانب مراجعة تحليلية يدوية للمواقع. وتناولت ثلاثة محاور رئيسية في تقييم كل منصة: العوامل التقنية، تحسين محركات البحث الداخلي(On-page) ، والعوامل الخارجية.(Off-page) ، وقد دعمت نتائج الدراسة بقوة الفرضيات التالية:

- يؤدي تحسين محركات البحث (SEO) الفعّال إلى زيادة عدد الزوار وتعزيز تفاعل المستخدمين.
- يُعد كل من SEO التقني و On-Page SEOضروريين، غير أن Off-Page SEO هو العامل الحاسم.
- تحقق المنصات العالمية أداءً أعلى في تحسين محركات البحث بفضل الموارد المتقدمة التي تمتلكها.
- ينبغي اعتماد استراتيجية مستدامة ومنهجية في تحسين محركات البحث الداخلي، تشمل بنية روابط URL دلالية، تحسين الصور، وتحديث المحتوى بانتظام.
- يتطلب تحسين محركات البحث الخارجي استثمارًا كبيرًا، خاصة فيما يتعلق بالحصول على روابط خلفية عالية الجودة وبناء شراكات لتعزيز سلطة النطاق (Domain Authority)

.الكلمات المفتاحية: تحسين محركات البحث، التسويق الرقمي، كورسيرا، إدراك، التحسين الداخلي للموقع، التحسين الخارجي للموقع، الروابط الخلفية، تجربة المستخدم، سلطة النطاق، مؤشرات الأداء الرئيسية