به نام خداوند جان و خرد

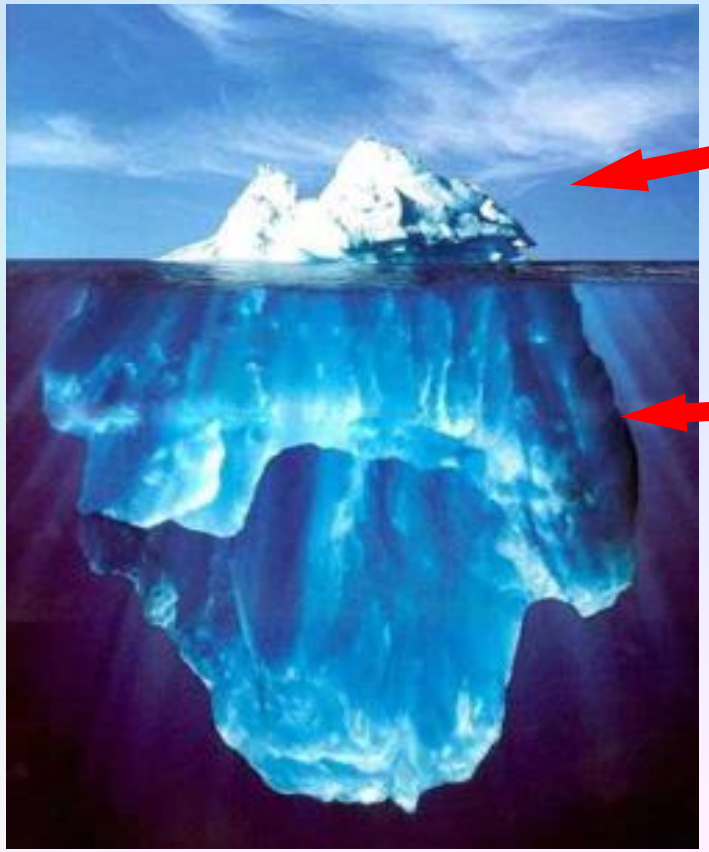
مبانی روش‌های جستجو (مقدماتی)

خدیجه احمدزاده

دکترای کتابداری و اطلاع‌رسانی پزشکی

چرا برای جستجو در اینترنت به تکنیک نیاز داریم؟

- جستجو در اینترنت و وب یعنی یافتن سوزن در انبار کاه به حجم بیش از ۹۰۵۸۰۴۴۶۵۱ صفحه (وب مرئی)



وب مرئی

۹۰۵۸۰٤٤٦٥١ صفحه

وب نامرئی

بزرگی وب

- نمایه گوگل در ۱۹۹۸ (شروع گوگل) شامل ۲۶میلیون صفحه بود.
- در سال ۲۰۰۰ به یک میلیارد رسید
- در سال ۲۰۰۸ از تعداد url های منحصر به فرد نمایه شده در گوگل از مرز ۱٬۰۰۰٬۰۰۰٬۰۰۰٬۰۰۰ گذشته است.

- منبع: وبلاگ رسمی گوگل ۲۰۰۸/۷/۲۵

شما چگونه در اینترنت جستجو میکنید؟

احتمالاً به یک سایت جستجو همچون گوگل میروید، عبارت مورد نظر را وارد کرده و با فشردن دکمه اینتر، کار تمام است.

این راه اشتباه نیست اما اگر بخواهید دانش بهینه سازی را بیاموزید بهتر است روش درست جستجو را بیاموزید.

شما یاد میگیرید تا بهترین و دقیقترین نتایج جستجو را بدست آورید و از دریافت اطلاعات زاید و بی ارزش جلوگیری کنید.

موتور جستجو ؟؟؟

برنامه نرم افزاری که با استفاده از کلید واژه به جستجو منابع اطلاعاتی اینترنت پرداخته و فهرستی از مدارک حاوی آن کلید واژه را ارائه میدهد.

موتورهای جستجو، موتورها یا روباتهایی هستند که صفحات وب را می پیمایند و صفحات جدید را پیدا می کنند. این روباتها صفحات وب را می خوانند و تمام یا قسمتی از متن را در یک بانک اطلاعاتی یا فهرستی که شما امکان دستیابی به آن را داشته باشید قرار می دهند هیچکدام از آنها تمام شبکه را پوشش نمی دهند ولی بعضی از آنها واقعاً بزرگ هستند.

موتورهای جستجو چگونه کار می‌کنند؟

- هر موتور جستجو دارای یک crawler یا spider یا robot است
- کار خزنده دنبال کردن پیوندها، فروگذاری صفحه‌ها، و گرفتن اطلاعات برای تجزیه وتحلیل و نمایه سازی وب است

چالش موتورهای جستجو در رفع نیاز کاربر

- اکثر عبارات جستجو کوتاه، غیرحرفه‌ای بوده و اصلاح نمی شوند.
- متوسط طول عبارت جستجو: ۲/۳۵ واژه
- ۸۰ درصد جستجوها عملگر ندارند
- ۷۸ درصد جستجوها اصلاح نمی شوند
- ۸۰ درصد کاربران فقط صفحه اول نتایج را می بینند

منبع: M. Henzinger، http://www.tcnj.edu/~mmmartin/CMSC485/Papers/Google/icde.pdf

چگونه نتیجه ها را به بهترین نتیجه ها محدود کنیم؟

استفاده از عملگرهای منطقی:

AND

OR

NOT

NEAR

“”

()

?و *

BOOLEAN LOGIC

A British mathematician named George Boole (1815-1864) developed an algebraic system of logic that is now widely used in computer and electronic systems including database searching.

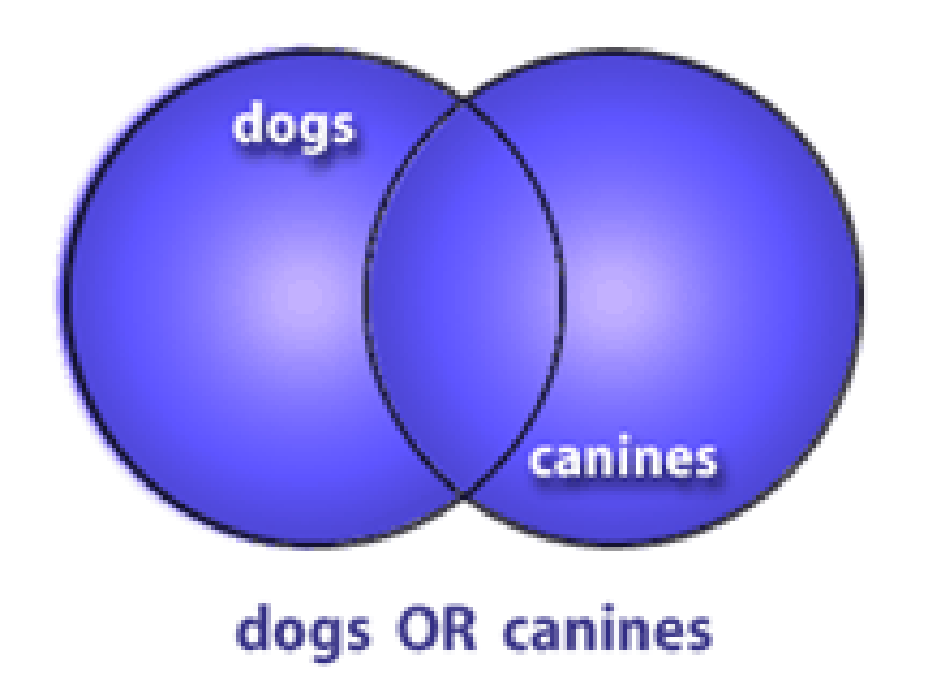
While Boole's algebraic system can be complex, a very simple form of Boolean Logic is used for searching most bibliographic databases.

LOGIC OF BOOLEAN

- ***OR*** will search for articles containing any of the terms we chose.

  Use OR to combine synonyms, alterative spellings or related items
- ***AND*** will search for articles which contain all of the terms we have chosen.

OR



Only one (**NOT both**) of the terms are in the results

'OR' will retrieve the record if both are included.

What does OR do to the amount of records retrieved?

USING OR

"OR" groupings contain terms for the same idea/concept and are usually put in parenthesis

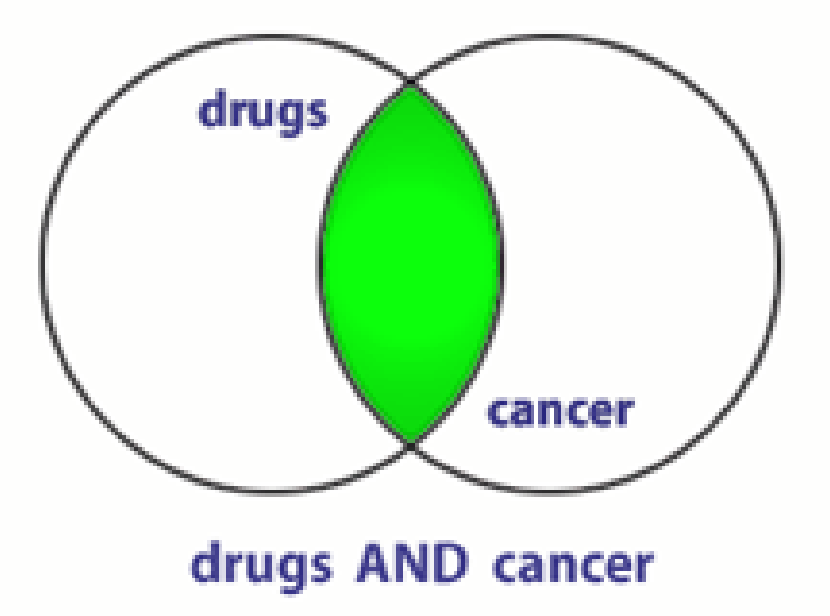
(term OR term OR term)

where all terms are difference ways of representing the same concept

(faculty OR teachers OR professors)

(students OR learners OR pupils)

AND



BOTH terms included in any results.

If a record has only one of the two terms, it will not be retrieved.

If the record has neither term, it will not be retrieved.

What does this do to the amount of records retrieved?

USING AND

"AND" groupings contain terms for different ideas/concepts and can combine OR groupings

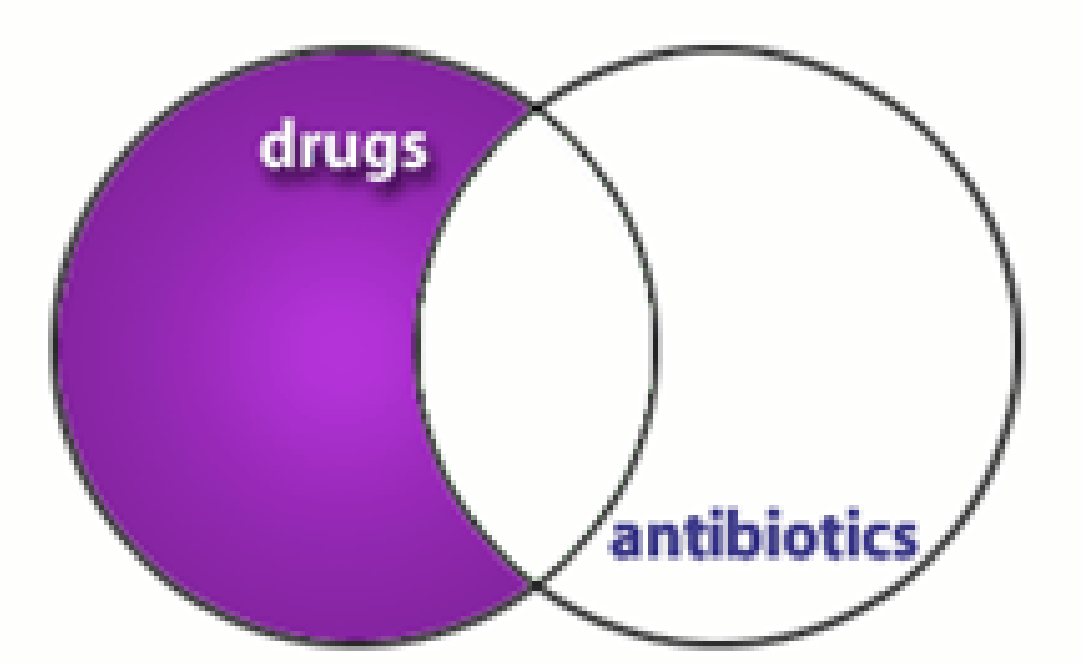
Term AND (Term OR Term) where each represents a different concept

heart attack AND smoking

Diabetes AND exercise

Cancer AND (treatment OR therapy)

NOT



Excludes any results containing the term

Records containing both will not be retrieved.

What does NOT do to the amount of records retrieved?

USING NOT

"NOT" statements are usually put last and can contain an "OR" grouping; they are often used to get rid of a common subgroup

Students NOT dental

Diabetes NOT juvenile

استفاده از “کوتیشن”

برای جستجوی عبارتی خاص بصورت کامل (نه بصورت کلمات جدا از هم) بایستی آن عبارت را در داخل کوتیشن (" ") قرار داد .

"سواد سلامت"	“Health Literacy”
"سبک زندگی"	“Life style”
"کیفیت زندگی“	“Quality of Life”

عملگر ؟ و *

*Truncation: این تکنیک به ما امکان می‌دهد که با وارد کردن بخشی از یک کلیدواژه بتوانیم مشتقات مختلف آن را نیز در فرآیند جستجو بازیابی کنیم.

Child*

(Child, Children, Childhood, Childish)

?Wildcard:

جایگزینی به جای حروف کلمات

t?phoid

جستجوی ترکیبی با استفاده از پرانتز

این تکنیک یکی از مهم‌ترین تکنیک‌های جستجو می‌باشد که به وسیله آن می‌توان تا حدود زیادی از بازیابی موارد غیر مرتبط در محیط وب جلوگیری کرد. در این روش می‌توان از همه عملگرهای جستجو که در بالا گفته شده یک‌جا استفاده کرد و آن‌ها را با همدیگر ترکیب نمود.

- 4+2 *6
- (4+2) *6
- 4 + (2*6)

PUTTING THEM TOGETHER

1. Identify the concepts (Parse the question)
2. List specific terms for each concept
3. Put the terms for each concept in an OR statements within parentheses
4. Combine OR statements with AND
5. Add any NOT statements to the end

CREATING A BOOLEAN SEARCH

QUESTION: Is Vitamin C helpful in treating the flu?

1. Identify concepts and list terms

Concept 1 Influenza	Concept 2 Vitamin C	Concept 3 Treatment	Concept 4 helpfulness
Influenza	Vitamin C	Treatment	Outcome
Flu	Ascorbic acid	Therapy	Recovery
	Orange Juice	Management	Success

STEP 2

1. Make your OR statements, one per concept
1. (influenza OR flu OR orthomyxovirus)
2. (vitamin C OR ascorbic acid OR ascorbate)
3. (treatment OR therapy OR management)
4. (outcome OR recovery OR success)

STEPS 3 AND 4

1. 3. Put “AND” between each of the OR statements
2. (influenza OR flu) AND (vitamin C OR ascorbic acid OR orange juice) AND (treatment OR therapy OR management) AND (outcome OR recovery OR success)

3. 4. Consider any NOT statements you might want to add.

4. Note: NOT isn’t used very often

EXAMPLE

- Emergency treatment in motor vehicle accident for pedestrian

PARSING A BOOLEAN SEARCH

(emergency OR acute OR critical) AND (treatment OR therapy OR management OR care) AND (motor vehicle accident OR car crash) NOT (pedestrian OR walking)

1. What are the four concepts?
2. What terms are used for each concept?
3. Which three concepts must be included in all records found?
4. Which concept must not be included in any record found?

فیلدهای یک مقاله

عنوان (Title)

نویسنده (Author)

نام مجله(Journal)

تاریخ نشر(Year)

کلیدواژه(keyword)

چکیده(Abstract)

Journal Name

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ORIGINAL ARTICLE

Readability Characteristics of Consumer Medication Information for Asthma Inhalation Devices

Title

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Abstract

Purpose. Successful control of asthma relies heavily on patient adherence to prescribed inhalation therapies. Many patients are unable correctly and, therefore, do not reap the full therapeutic benefits. The purpose of this study was to assess the readability and related of Consumer Medication Information (CMI) for all prescription asthma inhalation devices currently available in the United States identified all brand-name ($n = 18$) and generic ($n = 2$) asthma inhalation devices currently available in the United States. English lang obtained from pharmaceutical manufacturers of each identified product. The CMI from these products was evaluated for readability characteristics, including reading grade level using the Fry formula, text point size, dimensions (length and width), diagrams, and directions. *Results*. The mean Fry readability of the CMI was at grade level 8.2 ± 1.5 (range = 5–11), while the average text point size was 9.2 ± 2.2 (range = 6–12). The mean length of the pages on which the CMI was printed was 33.7 ± 21.5 cm, while the average width of pages was 12.9 ± 9.5 cm. There was an average of 6.2 ± 3.6 (range = 2–12) illustrations per CMI, while a device overview diagram was included in 14 (70%). Eleven ($n = 11$) instructions included detailed step-by-step diagrams to supplement directions. *Conclusions*. Overall, most CMI for prescription inhalers is presented with a reading difficulty level, text size, diagrams, and instructions that make it suboptimal for patient education. Prescription inhaler manufacturers should consider revising their CMI to comply with generally accepted guidelines preparing patient education information.

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Keywords asthma, inhalation device, patient education, readability

Keyword

INTRODUCTION

Asthma affects over 20 million Americans (1). Despite ne availability of effective medications for long-term man-gement asthma, morbidity remains high. Exacerbations of sthma are a primary contributor to morbidity, mortality, and ost of illness in both in-patient and outpatient settings (2). uccessful control of asthma relies heavily on patient ad-erence to prescribed inhalation therapies. However, many atients do not use inhalers correctly and, therefore, do not eap the full therapeutic benefits (3–5). Of the estimated $25 illion spent annually on inhalers, it is thought that some $5 $7 billion is wasted because of improper inhaler use by atients (6).

Because health professionals are often unfamiliar with the orrect method for using each specific inhaler device (7–), a patient's instruction on proper inhaler technique is fre-uently limited to information contained in the "Consumer Medication Information" (CMI) included with each prescrip-on (10). Reliance on patient learning via the CMI is prob-matic, however, as patients must read and understand the MI, but almost half of American adults have either lim-ed or marginal literacy skills (11, 12). Further, reading abil-ited educational attainment (14–16)—are at particularly high risk of having limited or marginal health literacy skills (17).

Although the readability demands of web-based asthma education materials (18, 19), written pediatric asthma management plans for families (20), and a specific metered-dose inhaler brochure (21) have been found to exceed the literacy abilities of most American adults, no studies have examined the reading difficulty of the instructions for patients included in the CMI that accompanies prescription inhalers. To address this gap, we assessed the readability and related characteristics of the CMI for all prescription asthma inhalation devices currently available in the United States.

METHODS AND MATERIALS

Identification of Asthma Inhalation Devices

We searched Epocrates R_x Pro (version 7.02) to identify all brand-name ($n = 18$) and Micromedex to locate all generic ($n = 2$) inhalation devices currently available in the United States. Fourteen ($n = 14$) of the asthma inhalation devices

PUBMED FIELD TAGS

http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helppubmed.section.pubmedhelp.Search_Field_Descrip

[au] = author

[ti] = title

[tw] = textword

[tiab] = title and abstract

[mh] = medical subject heading

[dp] = date of publication

[la] = language

[gr] = grant number

[ta] = journal name

[ad] = affiliation

COMBINING FIELD SEARCHES

Multiple field searches can be combined using Boolean logic.

Find a 2005 article by an author named Hubble about ankle fractures.

Combine with AND:

- 2005 in date/year field
- Hubble in author field
- Ankle fractures in title field

2005[dp] AND Hubble[au] AND ankle fractures[ti]