

به نام خالق دانایی و توانایی

وزارت علوم، تحقیقات و فناوری
مرکز اطلاعات و مدارک علمی ایران

جلد سوم: مستندات درس

مجری:

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مرداد ۱۳۸۳

تقديم به:

بزرگ آموزگاران زندگيم؛ پدر و مادرم
که وجودم وامدارشان است

تقديم به:

خواهرم سعادت به پاس حمايتهاي بي‌دريغش

□ چکیده

این گزارش مشتمل بر مستندات کامل درس سواد اطلاعاتی به شرح زیر است:

- طرح درس؛
- پرسشنامه آزمون درس؛
- درسها؛
- تمرینهای درس؛
- منابع درس؛
- وب سایت منابع اطلاعات درس.

📌 تقدیر و سپاس

الفبای پژوهش را مدیون جناب آقای سیروس علیدوستی هستم، از ایشان بی نهایت سپاسگزارم. اجرای این پژوهش مدیون پشتیبانی مادی و معنوی ریاست محترم مرکز، جناب آقای دکتر حسین غریبی است، از زحمات و حمایت ایشان بی نهایت سپاسگزارم. از جناب آقای قاسمی که نظارت این طرح را بر عهده داشتند، کمال تشکر را دارم. از همکاریهای صمیمانه جناب آقای مهندس مهرداد نوروزی اقبالی بی نهایت سپاسگزارم.

مریم نظری

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۱. طرح درس

۱. اطلاعات درس

نام دانشگاه:

نام درس: سواد اطلاعاتی

کد درس: —

تعداد واحد: ۳ (۱ واحد نظری - ۲ واحد عملی)

۲. مشخصات مدرس

نام و عنوان:

نشانی پستی:

نشانی الکترونیکی:

تلفن:

دورنگار:

۳. مخاطبان:

دانشجویان دوره‌های کارشناسی ارشد و دکتری

تحصیلات: حداقل دارای مدرک کارشناسی در یکی از رشته‌های دانشگاهی هستند

مشخصات:

سن: ۲۱ سال به بالا

پیشینه فرهنگی: تمام فرهنگها و اقلیتهای موجود در ایران

توانایی کار با موشواره، صفحه کلید، و ...

آشنایی با یک جستجوگر (browser)

پیشنیازها:

داشتن درکی اولیه از جستجو در صفحات وب

۴. توصیف درس و محتوای کلی آن

بقا در عصر اطلاعات نیازمند فراگیری دانش و مهارتهایی است تا افراد بتوانند به تشخیص نیاز اطلاعاتی، جابایی، ارزیابی و استفاده مؤثر اطلاعات بپردازند. ضرورت برخورداری از این توانمندیها برای دانشجویان دوره‌های تحصیلات تکمیلی که قرار است در آینده به عنوان محققان، مدرسان و مدیرانی کارآمد در سازمانها و مؤسسه‌های مختلف در جامعه ایفای نقش نمایند، بیش از سایر حوزه‌ها محسوس است. این درس قصد دارد با آموزش توانمندیهای سواد اطلاعاتی به دانشجویان دوره‌های تحصیلات تکمیلی به تربیت دانش‌آموختگانی باسواد اطلاعاتی بپردازد.

توصیف درس

باسواد اطلاعاتی به فردی اطلاق می‌شود که:

- یک نیاز اطلاعاتی را تشخیص، تعیین، و تبیین می‌کند؛
- پرسشهایی که مبین نیاز اطلاعاتی باشند، تنظیم می‌کند؛
- منابع اطلاعات مناسب و مرتبط با نیاز اطلاعاتی را شناسایی می‌کند؛
- استراتژیهای جستجوی متناسب با نیاز اطلاعاتی طراحی می‌کند؛
- اطلاعات را به صورت منتقدانه‌ای ارزیابی و آنالیز می‌کند؛
- اطلاعات به دست آمده از انواع منابع اطلاعات را با دانش موجود خود تلفیق و ادغام می‌کند؛

- اطلاعات به دست آمده را به شکل اخلاقی و مسئولانه‌ای برای حل موقعیت، نیاز، یا پرسش موردنظر بکار می‌گیرد؛
- براساس آنچه فراگرفته است، پرسشهای جدیدی خلق می‌کند.
- در مجموع، دانشجویان پس از فراگیری این درس می‌توانند به ارزش اطلاعات پی ببرند و در زندگی شخصی، شغلی، و دانشگاهی خود تصمیمهای آگاهانه و مبتنی بر اطلاعات بگیرند. به این ترتیب که دانش آموخته باسواد اطلاعاتی، به اطلاعات موجود در منابع مختلف اطلاعات در زمینه‌های (context) گوناگون به شکل مؤثری دسترسی می‌یابد، و پس از ارزیابی، سازماندهی، تلفیق اطلاعات به دست آمده، آنها را به شکل مسئولانه و اخلاقی مورد استفاده قرار می‌دهد و با توجه به اینکه ماهیت این درس با فراگیری و ارزیابی اطلاعات سروکار دارد، یادگیری تمام عمر را میسر می‌سازد.

محتوای این درس در مجموع در پنج بخش مجزا قابل تعریف است:

- تشخیص نیاز به اطلاعات و ماهیت و گستره
- دسترسی مؤثر به اطلاعات موردنیاز
- ارزیابی منتقدانه اطلاعات و منابع آنها و گنجاندن اطلاعات منتخب در پایه دانشی و سیستم ارزشی
- استفاده مؤثر از اطلاعات
- آشنایی با و درک مباحث اقتصادی، قانونی، و اجتماعی مربوط به دسترسی و استفاده مسئولانه و اخلاقی از اطلاعات

محتوای کلی درس

۵. روش ارائه درس

حل مسئله

آموزش مبتنی بر منابع

آموزش مبتنی بر پروژه

۶. هدفها و خروجیها

- | | | |
|--|--|-----------------------|
| <p>هدف</p> <p>نیاز به اطلاعات را تشخیص دهند و ماهیت و گستره آن را تعیین کنند.</p> | <p>نیاز به اطلاعات را تبیین و تعریف نمایند.</p> <p>طیف متنوعی از منابع بالقوه اطلاعات را شناسایی کنند.</p> <p>هزینه و سود حاصل از کسب اطلاعات را تعیین کنند.</p> <p>ماهیت و گستره اطلاعات موردنیاز را مجدداً مورد ارزیابی قرار دهند.</p> | <p>خروجیها</p> |
| <p>هدف</p> <p>به اطلاعات موردنیاز به شکل مؤثر و کارآمدی دست یابند.</p> <p>شیوه‌ها و سیستمهای بازبازی اطلاعات مناسبی را برای دسترسی به اطلاعات موردنیاز موردبررسی و کنکاش قرار دهند.</p> <p>استراتژی(های) جستجویی را شکل دهی و اجرا کنند که به صورت مؤثری طراحی شده‌اند.</p> | <p>اطلاعات را به صورت پیوسته یا online یا با شیوه‌های شخصی خاص خود بازبازی کنند.</p> <p>در صورت لزوم استراتژی(های) جستجو را اصلاح کنند.</p> <p>اطلاعات و منابع آنها را استخراج، ثبت، و مدیریت کنند.</p> | <p>خروجیها</p> |

هدف	اطلاعات و منابع آنها را به صورت منتقدانه‌ای ارزیابی کنند و اطلاعات منتخب را در پایه دانشی و سیستم ارزشی خود بگنجانند.
خروجیها	■ ایده‌های اصلی مستخرج از اطلاعات گردآوری شده را تلخیص کنند. ■ ملاک مشخصی را برای ارزیابی اطلاعات و منابع آنها بکار گیرند. ■ ایده‌های اصلی را برای ساخت مفاهیم جدید ترکیب کنند. ■ برای تعیین ارزش افزوده، تضادها، یا سایر ویژگیهای منحصربه‌فرد اطلاعات، دانش جدید را با دانش قبلی مقایسه کنند. ■ تعیین کنند که آیا دانش جدید تأثیری بر سیستم ارزشی شخصی آنها دارد و گام‌هایی برای ایجاد سازگاری میان تفاوتها بردارند. ■ درک و تفسیر خود را از اطلاعات از طریق مباحثه با دیگر افراد، متخصصان موضوعی، و /یا همکاران اعتباریابی نمایند. ■ تعیین کنند که آیا پرسش نیاز به اصلاح دارد.
هدف	به صورت انفرادی یا به عنوان عضوی از یک گروه، اطلاعات را برای انجام هدفی خاص، به صورت مؤثر مورد استفاده قرار دهند.
خروجیها	■ اطلاعات جدید و قبلی را برای برنامه‌ریزی و خلق محصول یا عملکردی ویژه بکاربرند. ■ فرایند توسعه برای محصول یا عملکرد را واریس کنند. ■ محصول یا عملکرد را به شکل مؤثری با دیگران به تبادل بگذارند.
هدف	بسیاری از مباحث اقتصادی، قانونی، و اجتماعی مربوط به بهره‌گیری از اطلاعات را درک کنند و به صورت اخلاقی، قانونی به اطلاعات دسترسی یابند و [از آنها] استفاده کنند.
خروجیها	■ بسیاری از مباحث اخلاقی، قانونی، و اجتماعی - اقتصادی پیرامون اطلاعات و فناوری اطلاعات را درک کنند. ■ قوانین، مقررات، سیاستهای سازمانی، و آداب مربوط به دسترسی و استفاده از منابع اطلاعات را دنبال نمایند. ■ به خاطر استفاده از منابع اطلاعات برای مرادۀ محصول یا عملکرد قدردانی کنند.

۷. توانمندیهای مورد انتظار

- تعیین نیاز اطلاعاتی و حدود آن
- آنالیز پرسش پژوهش و نیاز اطلاعاتی
- استفاده از انواع ابزارها و سیستمهای بازیابی اطلاعات
- جایابی و دسترسی به انواع منابع اطلاعات
- ارزیابی ساختار و محتوای انواع منابع اطلاعات
- استفاده مؤثر و مسئولانه از انواع منابع اطلاعات
- ثبت و مدیریت مؤثر اطلاعات و منابع آنها
- تلفیق اطلاعات و تولید اطلاعات جدید

۸. روشها و ملاکهای ارزشیابی

شرکت فعال در کلاس

انجام تکالیف درسی

تهیه یک راهیاب

انجام پروژه درسی

آزمون پایان ترم

روشهای

ارزشیابی

ملاکهای

ارزشیابی

■ شرکت فعال در کلاس = ۵٪ = ۱

■ انجام تکالیف درسی = ۴۰٪ = ۸

■ انجام پروژه درسی = ۲۰٪ = ۴

■ تهیه یک راهیاب = ۱۵٪ = ۳

■ آزمون پایان ترم = ۲۰٪ = ۴

■ شرکت فعال در کلاس

مشارکت فعال در کلاس از ملزومات اساسی این درس به حساب می‌آید و در صورت غیبت، مسئولیت انجام تکالیف و سایر فعالیتهای کلاسی برعهده دانشجو خواهد بود. شرکت فعال در کلاس، علاوه بر مشارکت در بحث و گفتگوهای کلاسی، تکمیل و تحویل «فرم محصولات مشارکت دانشجو در کلاس» در تاریخی که برای آن مقرر شده است را نیز دربرمی‌گیرد.

■ انجام تکالیف و پروژه درسی

به دلیل وجود ارتباط سلسله‌وار میان تکالیف و پروژه درسی در نظر گرفته شده در این درس، تمام تکالیف و پروژه درسی باید در تاریخ و زمان مقرر در برنامه به مدرس تحویل داده شوند. به ازای اولین روز تأخیر ۵٪ نمره و به ازای هر روز تأخیر پس از روز اول ۱٪ از نمره مقرر کاسته خواهد شد.

دانشجویان می‌توانند تا یک هفته پس از تحویل تکالیف از سوی مدرس به آنها برای اصلاح و بازنگری آنها جهت ارتقای نمره مربوط به آن اقدام کنند. در این صورت لازم است دانشجویان متقاضی این امر با مدرس هماهنگی لازم را به عمل آورند.

■ تهیه یک راهیاب

قبل از تهیه راهیاب، موضوع پیشنهادی دانشجو باید به تأیید مدرس برسد. بنابراین پس از انتخاب موضوع موردعلاقه خود، درباره آن با مدرس مشورت و پس از تأیید وی برای شروع کار اقدام کنید.

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۱۰. سرفصلهای درس

ضرورت و فلسفه فراگیری درس سواد اطلاعاتی

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 - ۲-۱. اهمیت
 - ۳-۱. ظهور عصر اطلاعات
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 - ۳-۲. جریان اطلاعات قبل و بعد از ظهور عصر اطلاعات
 - ۱-۳-۲. تحول پدیده اطلاعات
 - ۴-۲. اهمیت درک جریان اطلاعات
 - ۵-۲. ضرورت درک جریان اطلاعات
 - ۱-۵-۲. پاسخ به نیازهای اطلاعاتی

نیاز اطلاعاتی

۱. چرا به اطلاعات نیاز داریم؟
۲. عوامل مؤثر بر نیاز اطلاعاتی
۳. انواع نیازهای اطلاعاتی
 - ۱-۳. نیازهای اطلاعاتی حین تحصیل
 - ۲-۳. نیازهای اطلاعاتی پس از تحصیل
۴. اهمیت سواد اطلاعاتی برای دانشجویان
۵. راههای تشخیص نیاز اطلاعاتی
۶. ملزومات تشخیص و تعیین نیاز اطلاعاتی
 - ۱-۶. بهره‌گیری از اطلاعات
 - ۲-۶. درک ساختار عمومی و جاری اطلاعات
 - ۳-۶. درک سازمان مراکز اطلاعات

سازمان کتابخانه‌ها و مراکز اطلاعات

۱. مفهوم
۲. انواع
۳. نحوه سازماندهی منابع کتابخانه‌ها

۳-۱. استفاده از سیستمهای رده‌بندی علوم

۳-۲. استفاده از سرعنوانهای موضوعی

۳-۳. تقسیم‌بندی کتابخانه‌ها به بخشهای مختلف

۴. منابع جایابی کتابخانه‌ها و مراکز اطلاعات

۴-۱. راهنماها

۵. ابزار بازیابی منابع اطلاعات کتابخانه‌ها و مراکز اطلاعات

۵-۱. کتابها (برگه‌دان، فهرستهای پیوسته)

۵-۲. ادواریها (کاردکس، فهرست فرهنگی)

۵-۳. سایر منابع (فهرستهای فرهنگی)

۵-۴. منابع اطلاعات دیگر کتابخانه‌ها (فهرستگانها)

تشخیص و تعیین نیاز اطلاعاتی

۱. فرایند تعیین نیاز اطلاعاتی

۱-۱. گفتگو و مشورت با گروههای هم‌تا، متخصصان، و متبحران (راهنماها و منابع کمکی)

۱-۲. مراجعه به منابع عمومی اطلاعات (دایره‌المعارفها، واژه‌نامه‌ها، دستنامه‌ها)

۱-۳. مراجعه به منابع جاری (روزنامه‌ها، مجلات و نشریات جاری، مقالات سمینارها و کنفرانسها، پایان‌نامه‌ها،

گزارش طرحهای پژوهشی، کتابهای موجود در کتابخانه)

۱-۴. مطالعه دقیق نیاز اطلاعاتی

۱-۴-۱. نیاز اطلاعاتی موردنظر چیست؟

۱-۴-۲. حجم اطلاعات موردنیاز

۱-۴-۳. نوع منابع اطلاعات

۱-۵. نوشتن هر آنچه راجع به موضوع موردنظر خود می‌دانید

۱-۵-۱. تهیه لیستی از دانسته‌ها

۱-۵-۲. بیان موضوع

۱-۵-۳. استفاده از واژگانی برای فرمولبندی نیاز اطلاعاتی

۱-۵-۴. انتخاب کلیدواژه‌های جستجو

۱-۶. محدودسازی و تعیین دقیق موضوع

۱-۶-۱. استفاده از محدودکننده‌ها (محتوا، چارچوب)

۱-۶-۲. استفاده از دیگر عوامل مؤثر بر تعیین نیاز اطلاعاتی

دسترسی به منابع اطلاعات

الف. منابع اطلاعات و ابزارهای بازیابی اطلاعات

۱. جریان شکل‌گیری منابع اطلاعات و ابزارهای بازیابی اطلاعات

۱-۱. انواع منابع اطلاعات

۱-۱-۱. منابع اطلاعات ردیف اول

۱-۱-۲. منابع اطلاعات ردیف دوم

۱-۱-۳. منابع اطلاعات ردیف سوم

ب. استراتژیهای جستجو

۱. جستجوی منابع الکترونیکی
 - ۱-۱. بولینهای جستجو
 - ۲-۱. جستجوی عبارتی
 - ۳-۱. کوتاهسازی
 - ۴-۱. جستجوی آزاد
 - ۵-۱. جستجوی موضوعی
۲. جستجوی منابع چاپی
 - ۱-۲. برگهدان
 - ۲-۲. فهرست فرهنگی
 - ۳-۲. کاردکس
۳. امکان‌سنجی سایر روشها و خدمات موجود
 - ۱-۳. امانت بین کتابخانه‌ای
 - ۲-۳. خدمات تحویل مدرک
 - ۳-۳. خدمات و منابع رایگان
 - ۴-۳. منابع خارجی

ارزیابی منابع اطلاعات

۱. ارزیابی اطلاعات
 - ۱-۱. تاریخ نشر
 - ۲-۱. تعداد ویرایشها
 - ۳-۱. عنوان و نوع منبع
 - ۴-۱. مخاطبان
 - ۵-۱. کیفیت پوشش
 - ۶-۱. محتوا
 - ۷-۱. اعتبار پدیدآورنده(گان)
 - ۸-۱. متناسب بودن اطلاعات
 - ۹-۱. سبک نگارش
 - ۱۰-۱. نوع نشریه
۲. ارزیابی منابع اطلاعات
 - ۱-۲. منابع چاپی
 - ۲-۲. منابع الکترونیکی

استفاده مؤثر و مسئولانه اطلاعات

۱. مدیریت اطلاعات
 - ۱-۱. استخراج، ثبت و سازماندهی اطلاعات
 - ۲-۱. یادداشت‌برداری
 - ۳-۱. طراحی سیستم مدیریت اطلاعات

۲. حقوق مالکیت معنوی

۲-۱. شیوه‌های ارجاع‌دهی

۳. تلفیق اطلاعات برای تولید دانش جدید

۳-۱. ارائه

۳-۲. تولید گزارش

۳-۳. تولید مقاله

۳-۴. تولید کتاب

۳-۵. تولید پوستر

۳-۶. تولید بروشور

۳-۷. تولید الکترونیکی

۲. پرسشنامه آزمون درس

به نام خالق دانایی و توانایی

آزمون

درس سواد اطلاعاتی برای دوره‌های تحصیلات تکمیلی

تکمیل این پرسشنامه: چرا؟

دوست عزیز،

پرسشنامه حاضر دربرگیرنده عباراتی در خصوص توانمندیهای سواد اطلاعاتی است. سواد اطلاعاتی به مجموعه تواناییهایی اطلاق می‌شود که فرد می‌تواند به واسطه آنها نیاز به اطلاعات را تشخیص دهد و پس از جابجایی و ارزیابی اطلاعات موردنیاز، آنها را برای هدف مشخصی مورد استفاده مؤثر و مسئولانه قرار دهد و با یادگیری نحوه یادگیری به «فراگیری تمام‌عمر» و «خودراهبر» تبدیل شود و خود را با تغییرات سریع عصر اطلاعات همگام سازد.

برای تأیید ضرورت فراگیری این توانمندیها و کیفیت ارائه آن لازم بود تا این درس هر چند برای دوره‌ای فشرده مورد آزمون و ارزیابی قرار گیرد. بدین منظور یک آزمون و مجموعه تمرینهایی طراحی شده‌اند؛ آزمون در دو مرحله اجرا خواهد شد - قبل و بعد از کارگاه - تا از این طریق میزان سواد اطلاعاتی فراگیران قبل و بعد از آموزش این درس اندازه‌گیری شود و مجموعه تمرینها هم برای اندازه‌گیری میزان پیشرفت سواد اطلاعاتی فراگیران پس از ارائه هر بخش از توانمندیهای سواد اطلاعاتی ارائه خواهند شد.

تکمیل دقیق این پرسشنامه، کمک می‌کند تا تصمیم آگاهانه‌ای در خصوص ضرورت گنجاندن چنین درسی در برنامه تحصیلی دوره‌های تحصیلات تکمیلی گرفته شود. بنابراین سپاسگزار خواهم شد اگر با انتخاب گزینه مناسب میزان آشنایی یا برخورداری خود را از توانمندیهای مندرج در پرسشنامه مشخص فرمایید.

مقابل هر پرسش چهار گزینه قرار دارد که مفهوم آنها به قرار زیر است:

زیاد: تجربه و برخورداری کامل از توانمندی مطرح شده

متوسط: برخورداری نسبی از توانمندی مطرح شده

کم: آشنایی کم یا برخورداری کم از توانمندی مطرح شده

اصلاً: عدم آشنایی یا برخورداری از توانمندی مطرح شده

با سپاس و احترام - مریم نظری

نام و نام خانوادگی:	جنس: زن ☐ مرد ☐	مقطع تحصیلی:
دانشگاه محل تحصیل:	رشته تحصیلی:	

کد	توانمندیهای سواد اطلاعاتی	زیاد	متوسط	کم	اصلاً
۱	توانایی تشخیص نیاز به اطلاعات				
۲	توانایی تعیین و تبیین موضوع پروژه درسی یا پایان نامه				
۳	توانایی طراحی پرسشهای پژوهش				
۴	بهره‌گیری از منابع اطلاعات عمومی برای افزایش پایه دانشی خود در زمینه موضوع مورد نظر				
۵	آشنایی با و درک نحوه سازماندهی منابع اطلاعات کتابخانه‌ها و مراکز اطلاعات				
۶	آشنایی با سیستمهای طبقه‌بندی علوم				
۷	آشنایی با روند تولید دانش مثلاً مقاله یک دایره‌المعارف				
۸	آشنایی با فرمتهای مختلف اطلاعات مانند چاپی، الکترونیکی، دیداری و شنیداری				

کد	توانمندیهای سواد اطلاعاتی	زیاد	متوسط	کم	اصلا
۹	آشنایی با انواع منابع اطلاعات دست اول، دوم، و سوم				
۱۰	آشنایی با نحوه یافتن متخصصان موضوع پژوهش خود در سطح ملی، و بین‌المللی				
۱۱	آشنایی با تزاروسها و سرعنوانهای موضوعی				
۱۲	بهره‌گیری از سایر مکانیزمهای دسترسی به اطلاعات مانند تحویل مدرک، امانت و..				
۱۳	آشنایی با سیستمها و ابزارهای جایابی و بازیابی اطلاعات				
۱۴	آشنایی با ساختار وب جهانگستر				
۱۵	آشنایی با ساختار پایگاههای اطلاعات				
۱۶	آشنایی با کاردکس نشریات و کارکرد آن				
۱۷	آشنایی با فهرستگانها و کارکرد آنها				
۱۸	آشنایی با ساختار فهرستهای کتابخانه‌ای مانند برگه‌دان، فهرستهای الکترونیکی				
۱۹	استفاده از فهرستهای چاپی کتابخانه				
۲۰	استفاده از فهرستهای الکترونیکی کتابخانه				
۲۱	تعیین کلیدواژه‌های تحقیق و واژه‌های اعم، اخص، و هم‌ارز آنها				
۲۲	آشنایی با عملگرهای مختلف جستجو مانند بولین، کوتاه‌سازی، و ...				
۲۳	طراحی استراتژیهای مختلف جستجو				
۲۴	آشنایی با موتورهای مختلف جستجو و کارکرد آنها				
۲۵	بهره‌گیری از موتورهای مختلف جستجو برای بازیابی اطلاعات موردنیاز				
۲۶	طراحی سیستمی الکترونیکی برای سازماندهی اطلاعات بازیابی شده				
۲۷	طراحی سیستمی کاغذی برای سازماندهی اطلاعات بازیابی شده				
۲۸	درک اجزای مختلف یک استناد (Citation)				
۲۹	استخراج و تلخیص اطلاعات موردنیاز از منابع اطلاعات گردآوری شده				
۳۰	ارزیابی منابع اطلاعات چاپی				
۳۱	ارزیابی منابع اطلاعات الکترونیکی				
۳۲	ارزیابی محتوایی اطلاعات				
۳۳	آشنایی با مسائل اخلاقی و حقوقی بهره‌گیری از اطلاعات				
۳۴	آشنایی با سیستمهای ارجاع‌دهی				
۳۵	استفاده از سیستم ارجاع‌دهی معتبر و یکسان				
۳۶	بهره‌گیری از دانش قبلی برای تولید دانش جدید				
۳۷	آشنایی با سیستمهای مستندسازی روند پژوهش				
۳۸	استفاده از سیستمهای مستندسازی روند پژوهش				
۳۹	تولید اطلاعات حاصل از پروژه‌های درسی، شغلی، و ...				
۴۰	استفاده از فناوریهای اطلاعات برای تولید محصولات علمی				
۴۱	آشنایی با رسانه‌ها و قالبهای مختلف نشر اطلاعات				
۴۲	انتشار اطلاعات حاصل از پژوهش از طریق رسانه و در قالبی مناسب				

۳. درسها

۴. تمرینهای درس

۱. کتابخانه مؤسسه یا سازمان شما چه نوع کتابخانه‌ای به حساب می‌آید؟ لطفاً برخی از ویژگیهای آن را - مانند نوع منابع، مخاطبان، موضوع و محور کار، و ... را ذکر بفرمایید.

۲. حوزه کار یا تخصص شما چیست؟ فکر می‌کنید منابع تخصصی حوزه فعالیت شما در کدام رده(های) علوم جای می‌گیرند؟

۳. موارد زیر شماره‌های بازیابی تعدادی کتاب هستند. با توجه به نوع سیستم طبقه‌بندی، نظم و موضوع آنها را ذکر بفرمایید (برای نشان دادن نظم و چینش این موارد از سیستم کدگذاری ۱، ۲، ۳، و ... استفاده بفرمایید).

DA 156/1 .A5 .C8 1998 V.3 C.2	C 351 .F6 .D9 2000	200/1 2 .A5 .G12 1994 V.2	LB 878 .E5 .L3 2002	LB 878/1 .E5 .L2 2002	M 146 .W8 .H7 2003 C. 3	M 146/2 .W81 .J7 2003 C. 2	200/12 .A52 .G12 1995	200/12 .A511 .G12 1995	AC 155 .D11 .S5 2000
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										کد
										موضوع

۴. در سرعنوانهای موضوعی به چه نوع واژگانی می‌توان دست یافت؟

۵. دایره‌المعارفها، کتابشناسیها، منابع آماری، و نشریات به ترتیب در کدام بخش از کتابخانه نگهداری می‌شوند؟

۶. برای اجرای یک تحقیق در جستجوی سیاهه‌ای از مراکز اطلاعات و کتابخانه‌های تخصصی حوزه کار خود هستیم، چه منابعی در این زمینه یاریگر هستند؟

❁ ۷. در جستجوی پاسخ به این پرسش هستیم که آیا نشریه‌ای با عنوان «اندیشه نو» در کشور منتشر شده است یا خیر؟ چه منابع و راهکارهایی را برای این منظور توصیه می‌کنید؟

❁ ۸. در جستجوی کتابهایی هستیم که در حوزه موضوعی «فناوری اطلاعات» در کشور منتشر شده‌اند. چه منابع و راهکارهایی را برای این منظور توصیه می‌کنید؟

❁ ۹. پس از جستجو در منابع اطلاعات کتابی با عنوان «موج سوم» دست یافته‌ایم. حال در جستجوی کتابخانه(های) دارنده این منبع هستیم، چگونه می‌توان به این اطلاعات دست یافت؟

❁ ۱۰. در جستجوی کتابها و مقالاتی هستیم که در حوزه موضوعی «روشهای جستجو در اینترنت» اخیراً در کشور منتشر شده‌اند، چگونه می‌توان به این اطلاعات دست یافت؟

❁ ۱۱. به نشریه‌ای با عنوان در کتابخانه دست یافته‌ایم، چه دوره(ها) و شماره(ها)یی از این نشریه در کتابخانه موجود است؟

❁ ۱۲. در جستجوی کتابهای موجود در کتابخانه در زمینه «روش تحقیق» هستیم، چگونه می‌توان به این اطلاعات دست یافت؟

کاربرگ (راه‌یاب) پژوهش

نام و نام خانوادگی: موضوع پروژه:
مقطع تحصیلی: رشته تحصیلی: نام دانشگاه:

طرح موضوع / مسئله / نیاز اطلاعاتی

.....
.....
.....
.....
.....

منابعی که برای مطالعه اولیه باید به آنها مراجعه شود

◀ افراد

.....
.....

◀ دایره‌المعارفها

.....
.....

◀ واژه‌نامه‌ها

.....
.....

◀ تزاروسها

.....
.....

◀ مقالات روزنامه‌ها

.....
.....

◀ مقالات نشریات و مجلات

.....
.....

◀ سازمانها

.....
.....

◀ سایتهای اینترنتی

.....
.....

تهیه نقشه ذهنی

تبیین مسئله / تعیین نیاز اطلاعاتی

طراحی پرسشهای پژوهش

تعیین چارچوب و حدود پژوهش

◀ زمانی

◀ مکانی

◀ جامعه

◀ موضوع / رشته / دیدگاه

تحلیل یا آنالیز پرسشها

◀ پرسش اول

معلوم	مجهول	نوع اطلاعات موردنیاز	منابع اطلاعات مناسب

◀ پرسش دوم

معلوم	مجهول	نوع اطلاعات موردنیاز	منابع اطلاعات مناسب

تعیین کلیدواژه‌ها

مسئله پژوهش	
کلیدواژه‌ها	
املاهای متفاوت	
مترادفها	
موضوعهای عامتر	
موضوعهای خاصتر	
موضوعهای هم‌ارز	

انتخاب منابع و ابزارهای بازیابی اطلاعات

◀ منبع / ابزار اول:

◀ علت انتخاب:

◀ منبع / ابزار دوم:

◀ علت انتخاب:

◀ منبع / ابزار سوم:

◀ علت انتخاب:

◀ منبع / ابزار سوم:

◀ علت انتخاب:

◀ منبع / ابزار چهارم:

◀ علت انتخاب:

ارزیابی منابع اطلاعات چاپی	
	اعتبار نویسنده
	اعتبار ناشر
	تاریخ نشر
	تعداد ویرایشها
	مخاطبان
	هدف
	پوشش
	سبک نگارش
	نوع منبع
	مناسب بودن اطلاعات با نیاز

ارزیابی منابع اطلاعات وب

الف. برای ارزیابی عنوان صفحه به URL آن نگاه کنید:

- ◀ آیا صفحه یا سایت شخصی است؟ ~ or %, or users, members, or people ☐
- ◀ از چه domain ای استفاده شده است؟ ☐ com ☐ org/net ☐ edu ☐ gov/mil/US ☐ non-US ☐ سایر _____ .
- ◀ ناشر سایت یا صفحه کیست؟
- ◀ آیا میان نام ناشر و نام سایت همخوانی وجود دارد؟
- ◀ نام ناشر یا domain آن چیست؟

ب. نگاهی به محدوده صفحه بیاندازید:

- ◀ چه کسی صفحه را نوشته است؟ email ☐ نام ☐
- ◀ تاریخ نشر: آیا به اندازه کافی جاری است؟
- ◀ میان محتوای صفحه و ادعاهای مطرح شده تناسب وجود دارد؟ (اگر پیوند مفیدی دیده نمی‌شود به کمک دکمه back به URL صفحه قبل مراجعه نمایید).
- ◀ آیا مباحث مطرح شده حالت تصادفی دارند؟

پ. کیفیت منابع استفاده شده و کیفیت مستندسازی سایت یا صفحه را بررسی کنید:

- ◀ آیا مستندسازی کامل صورت پذیرفته است؟ (در صورت استفاده از منابع دست دوم آیا ارجاع آن قید شده است؟)
- ◀ پیوندهایی به منابع بیشتر در حوزه موضوعی موردنظر صفحه وجود دارد؟ و آیا این پیوندها فعال هستند؟
- ◀ دیدگاه یا نقطه‌نظر خاص دیگری در سایت یا صفحه دیده می‌شود؟

ت. نظر دیگران راجع به سایت چیست؟

- ◀ چه کسانی از این سایت استفاده می‌کنند؟
- ◀ تعداد: _____ دیدگاههای آنان: _____
- ◀ آیا صفحه موردنظر جایگاه خوبی در یک راهنما یا directory دارد؟
- ◀ مانند: <http://lii.org> یا <http://infomine.ucr.edu> یا <http://about.com>
- ◀ پدیدآورنده سایت یا صفحه را در google بیابید. آیا نام وی در این موتور جستجو اضافه شده است؟ بلی ☐ خیر ☐
- ◀ صفحه موردنظر برای چه منظوری روی وب قرار گرفته است؟ آگاهی‌رسانی، ارائه داده و اطلاعات ☐ توضیح و تشریح ☐ متقاعدسازی ☐ فروش ☐ تبلیغ ☐ به اشتراک گذاشتن ☐ سایر ☐
- ◀ آیا صفحه موردنظر به اندازه نشریاتی خوب و معتبر است که می‌توان از آنها مقاله یا سایر انتشارات غیر رایگان را بازایی کرد؟

ارزیابی وب سایتها

با توجه به اینکه احتمال درج هرگونه مطلبی به صورت پیوسته (online) وجود دارد، ارزیابی منتقدانه اطلاعاتی که از طریق وب بازیابی می‌شوند، ضروری است. وب سایتها معمولاً تلفیقی از اطلاعات، سرگرمی، و تبلیغ هستند و همین امر تشخیص اعتبار وب سایتها را قدری دشوار می‌سازد. برای این منظور داشتن ملاکهای علمی و پرسیدن مجموعه‌ای از پرسشها درباره وب سایت موردنظر تا حد بسیار زیادی راهگشا خواهد بود و از این طریق شانس شما برای دسترسی به اطلاعات معتبرتر افزایش می‌یابد.

الف. اعتبار پدیدآورنده وب سایت

(شخص یا سازمان)

- ◀ آیا سایت پدیدآورنده‌ای دارد؟
- ◀ پدیدآورنده وب سایت کیست و تا چه اندازه از شایستگی لازم برخوردار است؟
- ◀ اطلاعاتی برای تماس با پدیدآورنده یا پشتیبان سایت وجود دارد؟
- ◀ آیا پدیدآورنده در حوزه موضوعی وب سایت تخصص دارد؟ دانشجو □ استاد □ همسایه دیوار به دیوار شماس □
- ◀ آیا پدیدآورنده یک سازمان است؟ بلی □ خیر □ چه اطلاعاتی راجع به این سازمان دارید و تا چه حد با آن آشنا هستید یا می‌توانید راجع به آن کسب اطلاع کنید؟
- ◀ وب سایت متعلق به کدام کشور است؟

دقت

(اطلاعات مندرج در سایت باید اصلاح شده و دقیق باشند)

- ◀ آیا سایت موردنظر خوب ویرایش شده است؟
- ◀ آیا اشتباههای املائی و گرامری در آن به چشم می‌خورد؟
- ◀ آیا سبک نگارش محتویات وب سایت متناسب با هدف و مخاطبان آن است؟
- ◀ آیا میان اطلاعات موجود در وب سایت و دیگر اطلاعاتی که شما در خصوص موضوع موردنظر دارید ارتباطی وجود دارد و مکمل هم هستند؟ یا اینکه با دیگر منابع اطلاعات در زمینه موضوع موردنظر منافات دارد؟
- ◀ آیا پدیدآورنده راهی را برای اصلاح اطلاعات مندرج در سایت در نظر گرفته است؟ آیا پانویس، استناد یا منبعی برای این امر فراهم آورده است؟
- ◀ در صورتیکه اطلاعات تاریخی یا زندگینامه‌ای هستند، آیا تاریخ مربوط به آنها درج گردیده است؟

جاری بودن

- ◀ آیا صفحه روزآوری شده و می‌شود؟
- ◀ صفحه چه زمانی نوشته شده و آخرین تاریخ روزآوری آن چه موقعی است؟ (توجه داشته باشید که «Last Updated» الزاماً محتوایی نیست و به مفهوم اعمال هرگونه روزآوری در صفحه است مانند تغییر صفحه‌آرایی، رنگها، و ...)
- ◀ اطلاعات آن از نظر جاری بودن چگونه است؟ آیا برای رفع نیازهای اطلاعاتی شما مناسب است؟ (توجه داشته باشید که وب سیتی که مثلاً در جولای ۲۰۰۳ نوشته شده است باید دربرگیرنده اطلاعاتی از سال ۱۹۷۵ هم باشد)

محتوا

(آیا اطلاعات مندرج در وب سایت، نیازهای اطلاعاتی شما را برطرف می‌کند؟)

- ◁ اطلاعات تا چه حدی جزیی و دقیق هستند؟ اطلاعات پایه‌ای و اولیه هستند یا تخصصی؟
- ◁ آیا پوشش موضوعی آن کامل است؟ آیا اطلاعات مهم از قلم نیفتاده‌اند؟ آیا بیش از یک چشم‌انداز یا دیدگاه را دربرمی‌گیرد؟
- ◁ آیا سایت موردنظر بخشی از یک مدرک طولانی است؟ (گاهی اوقات برای دریافت اطلاعات یا تصویر کاملی، ناگزیرید به بیش از یک صفحه مراجعه کنید)
- ◁ آیا کتابشناسی یا پیوندهایی برای دسترسی به اطلاعات در زمینه موضوع موردنظر سایت وجود دارد؟ پیوندها چگونه انتخاب شده‌اند؟ آیا این منابع بیشتر مرتبط و معتبر هستند؟
- ◁ محتویات سایت در مقایسه با دیگر منابع مانند کتابها، مقالات مجلات، و سایر صفحات وب در زمینه موضوع مشابه چگونه است؟

هدف

(هدف از سایت باید شفاف و واضح باشد. توجه داشته باشید که برخی از سایتها عقاید و ادعاهایی را برای

صرفاً فروش محصولات یا متقاعدسازی مراجعان به سایت بیان می‌کنند)

- ◁ سایت حقیقتی را بیان می‌کند یا عقیده‌ای را؟
- ◁ هدف سایت چیست؟
- آگاه‌سازی □ (مانند حوادث جاری، تازه‌ها و ...)
- توضیح و تشریح □ (مانند آموزش، دستورالعمل، و ...)
- متقاعدسازی □ (مانند تلاش برای ایجاد تغییر در ذهن، فروش چیزی، و ...)
- ◁ آیا سایت بی‌طرف است و ابعاد چندگانه یک موضوع را نشان می‌دهد؟ (وجود دیدگاه صرفاً نمی‌تواند دلیلی برای کنار گذاشتن یک منبع باشد، لیکن با دقت و ملحوظ داشتن این مورد می‌توان به غیر مغرض بودن سایت پی‌برد)
- ◁ مخاطبان سایت چه کسانی هستند؟ متخصصان و محققان حوزه‌ای خاص □ دانش‌آموزان مقطع ابتدایی □ اعضای یک سازمان یا حزبی خاص □

Domain	Meaning	Example
.edu	created at a college or university	www.indiana.edu
.gov	created by an official U.S. federal agency or office	www.federalreserve.gov
.org	varies - in most cases the site was created by a nonprofit organization or an individual	www.npr.org
.com	varies - in most cases the site was created by a for-profit organization	www.amazon.com
.net	varies greatly - often indicates that the site was created by a person, group, etc. that uses an Internet service provider	www.earthlink.net
.mil	created by the U.S. military	www.usmc.mil
.in.us	created by state-supported institution of Indiana - the .us domain requires a state code as a second level domain	www.monroe.lib.in.us

◁ آیا تبلیغ هم در صفحه به چشم می‌خورد؟ در این صورت آیا این تبلیغات بر محتوای سایت هم تأثیر می‌گذارند؟

طراحی و ساختار ظاهری

(صفحه‌آرایی، تصاویر و فایل‌های رسانه‌ای انتخابی اغلب بر اعتبار حرفه‌ای وب سایت تأثیر می‌گذارند)

◁ صفحه وب چه نوع اطلاعاتی (متن، تصویر، صدا و ...) را نمایش می‌دهد و آیا این موارد از منابع معتبری با رعایت حقوق مالکیت معنوی استخراج شده‌اند؟

◁ آیا تصاویر و فایل‌های رسانه‌ای مندرج در سایت با صرف زمان اندکی رؤیت می‌شوند؟

◁ آیا اجزا و عناصر مختلف طراحی صفحه کار می‌کنند، یا برخی از تصاویر، صداها، و ... مشکل دارند؟

◁ آیا خواندن، دیدن، چاپ کردن، گوش دادن به منابع مرتبط با سایت نیازمند بهره‌گیری از نرم‌افزاری خاصی است؟ آیا می‌توان نرم‌افزار را همان جا افزود یا باید خریداری شود؟

۵. منابع درس

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۳.

درک سازمان کتابخانه‌ها و مراکز اطلاعات

3-1. The Organization of Knowledge

Introduction: How Libraries Organize Information

In order to make information available to people it must be organized in a useful way. Many people are not aware of just how difficult it is to catalog and organize large collections of information so that the information can be easily located. The difficulty in organizing information is due to the fact that cataloging and indexing are subjective acts. A librarian or indexer must determine what a specific piece of information is about and then try to anticipate all the different ways people might search for the information. People who look for information have different reasons for wanting the information and will approach searching for it in different ways. Another difficulty resides in the librarian's or indexer's interpretation of the author's intent. Trying to create a catalog record that accurately represents the author's main ideas in a meaningful way is very difficult.

Another problem for libraries is the fact that many people who seek out information are not sure exactly what they need. Many people who look for information do so with a vague idea of what they want. It often proves difficult to focus a person's information request in such a way as to match their request to the information in a book, periodical, web page, or other form of published resource.

Classification Systems

Libraries attempt to organize and shelve books about the same subject matter together. This may sound simple and rather straightforward; however, if you stop and think for a moment you will realize that most books are about more than one idea or subject. Most books cover a number of different subjects and some books cover two or three subjects in equal depth. But when it comes to placing the book on the shelf the librarian must choose one of the subjects and classify the book under that subject. Whatever decision the librarian makes will have implications for the person seeking the information.

The two major classification systems used in American libraries to organize books on library shelves are the Dewey Decimal Classification System and the Library of Congress Classification System. Both systems organize knowledge into subject categories and allow libraries to shelve similar books together. Dewey is the older of the two systems and is used mostly by public libraries and small academic libraries. The Library of Congress Classification System is used predominately by academic libraries and other libraries that have large research collections. Because this *Tutorial* is intended for Minneapolis Community & Technical College students we will start by discussing the Dewey Decimal System which is used by our library.

Dewey Decimal Classification System

The Dewey Decimal Classification System was designed by Melvil Dewey in 1876. Dewey was a librarian who worked in Boston and New York. He was very interested in creating efficient ways to organize knowledge and make it accessible to the public. Prior to Dewey's time there were few public libraries, and patrons were not allowed to go into the book stacks to look for their own books. Books had to be paged for the patron by a library staff person who knew where things were located. Most academic libraries at the time were little more than warehouses. Melvil Dewey worked to change this situation. By developing a uniform way to classify knowledge, Dewey

provided libraries with a way to systematize their work. By working to get all libraries to adopt his system Dewey hoped to provide uniform access to knowledge for all patrons. Dewey argued that if all libraries adopted the Decimal Classification System, a library patron could go into any library in the country and expect the books to be arranged in a similar uniform manner. Adoption of the Dewey Decimal Classification System also promoted opening up the book stacks to users because they could now understand how the books were arranged.

The Dewey Decimal Classification System is currently in its 21st edition. As new knowledge and disciplines come into existence, new subject categories have to be created in the system. Sometimes new subject disciplines must be forced to fit into older categories. Remember, the Dewey system was first designed in 1876, long before computers, interstate highways, nuclear power, the space program and the automobile. Each edition of the Dewey Decimal System must retain as much of the original structure as possible. If a new edition of the Dewey Decimal System changed too much it would mean that every library using the system would have to re-catalog its entire collection--and no library has the financial or human resources to accomplish such a task. The Library of Congress Classification System faces similar issues, however, because it has more categories it provides more flexibility for assigning classification numbers.

The Dewey Decimal Classification System divides all the world's knowledge into ten broad categories. Dewey based his subject arrangement of knowledge on the western academic model. As a result, the Dewey Decimal Classification System has a western world view built into the very system itself. This western bias has led to problems in the classification of knowledge from non-western cultures.

The first division of the Dewey Decimal Classification System is referred to as the First Summary, or the Ten Main Classes. The First Summary is further broken down into narrower subdivisions, referred to as the Second Summary. The Second Summary breaks down further, and so on and so on. Each subdivision classifies knowledge into more specific units.

Library of Congress Classification System

The Library of Congress Classification System was developed by the Library of Congress in Washington, DC in the early 1900's to organize the collections of the Library. The Library of Congress chose to develop its own classification system rather than use the Dewey Decimal Classification System because of the large size of its collection--the Dewey system was not considered flexible enough to meet the needs of the LC collection. Over the years most U.S. research and academic libraries, as well as some public libraries, have adopted the Library of Congress Classification System.

The Library of Congress Classification System organizes knowledge into twenty-one broad categories. The twenty-one categories (labeled A to Z, but missing I, O, W, X and Y) are further subdivided by adding one or two additional letters and a set of numbers. The first letter of a Library of Congress call number indicates the general subject area. The second letter indicates the specific subject section within the general category.

The Library of Congress Classification System, unlike the Dewey Decimal Classification System, does not attempt to divide all the world's knowledge into a comprehensive philosophical system. The Library of Congress Classification System

is based on the actual books owned by the Library of Congress and attempts to classify those books into meaningful subject categories. When you look at the Library of Congress Classification System you will notice that sub disciplines do not fit neatly within broader areas of knowledge.

EXAMPLE

In the Dewey System the subjects "Law," "Political Science," and "Economics" are all subclasses of the "Social Sciences." Dewey arranges the subjects this way because it is based on the way western society organizes knowledge. The Dewey system is based on a philosophical system, i.e., a certain way of seeing the world.

300 Social Sciences
 320 Political Science
 330 Economics
 340 Law

In the Library of Congress Classification System "Political Science" and "Law" have their own classes and "Economics" is a sub-class of "Social Science and Business." The Library of Congress system is not based on an underlying philosophical system, rather it is organized around pragmatic choices, i.e., the way it works best for the Library of Congress' actual book collection.

H: Social Sciences and Business
 HB: Economic theory
 HC: Economic history and conditions
 J: Political Science
 K: Law

Subject Headings

Both the Dewey and Library of Congress classification systems allow libraries to organize books by subject on library shelves. However, as we stated before, most books and magazine articles contain information on a number of different subjects. As a result library users need more comprehensive subject access to information than can be provided by a Dewey or Library of Congress classification number. The way libraries provide more comprehensive access to information in books and magazine articles is by assigning subject headings. Subject headings are assigned to a book or magazine article by a librarian or indexer--these headings describe what the book or magazine article is about. Library users can also search for information in library databases using subject headings. Subject heading searching can be a very effective way to locate specific information.

When assigning subject headings to a book or magazine article it is important that the librarian be consistent. Librarians cannot simply make up subject headings as they go along, and they must always use a subject heading the same way for every item on a given topic. There are a number of standardized resources available to assist librarians and indexers in assigning subject headings.

Library of Congress Subject Headings

Not only did the Library of Congress develop a classification system to organize its books by subject on the library shelves, it also developed a subject heading system to describe what a book is about.

Library of Congress Subject Headings are published in large red books. Each heading has its own listing with links to other headings. A Library of Congress Subject Heading does not exist in isolation; rather, it is part of an interconnected list

of related subject headings, something like a family tree. In fact, the phrase "subject tree" is used to describe these related subject headings. This subject heading system is related to how the various western academic disciplines divide knowledge. When assigning subject headings to a book the librarian must actually read parts of the book and determine what the book is about. The librarian then consults the LC Subject Headings and tries to find the subject heading which accurately describes the book's main idea.

When an appropriate subject heading is found the librarian assigns it to the book record in the library catalog. The librarian next consults the list of related subject headings to determine if any of them might be appropriate. Then the librarian looks for other subject headings that describe other aspects of the book's content. Once all the information about a book has been entered into the library catalog patrons can search for the book. Because the book has been assigned subject headings using the Library of Congress Subject Heading system, patrons can now use those same subject headings to search the library catalog and find books about a given subject. *(We will demonstrate how to search the library catalog in Lesson 4)*

Wilson index headings

The Library of Congress Subject Heading system is not the only one used to organize information by subject. Companies that index magazine and journal articles tend not to use the Library of Congress Subject Headings; rather, they create subject heading systems of their own. The H.W. Wilson Company is a private company that creates indexes to articles in magazines and journals. The H.W. Wilson Company creates some of the most popular magazine and journal indexes in America. You may be familiar with many of their indexes already, they include:

Readers' Guide to Periodical Literature

Humanities Index

Social Sciences Index

General Science Index

Business Periodicals Index

Each of these indexes allow library users to search for magazine and journal articles by subject. To search effectively you need to understand how the H.W. Wilson Company subject headings work.

Just as librarians catalog books using the Library of Congress Subject Heading system, indexers at the H.W. Wilson Company index magazine articles using the H.W. Wilson Subject Heading system. The indexer reads the magazine article, determines the subject content of the article and lists the magazine article in the index under the appropriate subject headings. The library patron then consults the appropriate H.W. Wilson index and attempts to find articles under appropriate subject headings. (Some libraries have access to the electronic version of the H.W. Wilson indexes and the library patron can search for articles by subject using a database).

Local library subject headings

At one time or another the "official" subject heading systems fail to provide libraries with adequate subject headings from which to choose--the "official" headings are either too obscure, or just don't quite describe the subject in the right way. As a result librarians develop their own subject headings for use in their local library. These local library subject headings may be used in cataloging books in the local library

catalog, or they may be used in organizing local library collections such as pamphlet, picture, or map collections. Local subject headings work in the same way as the more "official" types; however, local subject headings are often not used outside of the particular library that developed them.

An example of local library subject headings adopted by other libraries is the *Hennepin County Public Library Subject Headings for Works of Fiction*. As we have discussed, cataloging fiction can be very difficult. The Hennepin County Public Library was not happy with the Library of Congress Subject Heading system when it came to cataloging works of fiction. As a result the Hennepin County Public Library developed its own subject headings for fiction. Over time public libraries from around the country heard about the Hennepin County project, and before long Hennepin County Public Library was selling its *Subject Headings to Works of Fiction* to public libraries around the country.

Locations in the library

Libraries arrange their materials into different collections based on the type of resource. It will be helpful for you to know about these collections.

- Reference collections: Materials used in the library that provide access to information often in a summarized form. Reference collections typically include encyclopedias, statistical material, dictionaries, bibliographies, literary criticism, handbooks, and biographies. Reference collections do not circulate.
- Circulating collections: materials that can be checked out of the library. Each library sets its own policy on how many items a patron can check-out, as well as how long the item is loaned.
- Reserve collections: course materials set aside by faculty for student use. Most library reserve collections are located behind the circulation desk and are limited to in-library use only.
- Special Collections: materials purchased in specialized subject areas. The library usually shelves special collection material separate from the general circulating and reference collections.
- Pamphlet files: materials often of an ephemeral nature that the library has chosen to collect.
- Microform collections: material that has been miniaturized and placed on microfilm or microfiche. Microform material must be read on special microform machines.
- Audiovisual collections: video and audio tape material.

Source:

Minneapolis Community & Technical College. 2001. "The Organization of Knowledge". <http://www.metc.mnscu.edu/Library/tutorials/infolit/tables/version/lessons/lesson2/organization3.htm> (17 Jan. 2004).

3-2. Dewey Decimal Classification System

- 000 Generalities
- 010 Bibliographies & catalogs
- 020 Library & information sciences
- 030 General encyclopedic works
- 040 Unassigned
- 050 General serials & their indexes
- 060 General organizations & museology
- 070 News media, journalism, publishing
- 080 General collections
- 090 Manuscripts & rare books
- 100 Philosophy & Psychology
- 110 Metaphysics
- 120 Epistemology, causation, humankind
- 130 Paranormal phenomena
- 140 Specific philosophical schools
- 150 Psychology
- 160 Logic
- 170 Ethics (Moral philosophy)
- 180 Ancient, medieval, Oriental philosophy
- 190 Modern Western philosophy
- 200 Religion
- 210 Natural theology
- 220 Bible
- 230 Christian Theology
- 240 Christian moral & devotional theology
- 250 Christian orders & local churches
- 260 Christian social theology
- 270 Christian church history
- 280 Christian denominations & sects
- 290 Other and comparative religions
- 300 Social Sciences
- 310 General statistics
- 320 Political science
- 330 Economics
- 340 Law
- 350 Public administration
- 360 Social services; associations
- 370 Education
- 380 Commerce, communications, transport
- 390 Customs, etiquette, folklore
- 400 Language
- 410 Linguistics
- 420 English & Old English
- 430 Germanic languages, i.e., German
- 440 Romance languages, i.e., French

- 450 Italian, Romanian, Rhaeto-Romanic languages
- 460 Spanish & Portuguese languages
- 470 Italic languages, i.e., Latin
- 480 Hellenic languages, i.e., Classical Greek
- 490 Other languages
- 500 Natural Sciences & Mathematics
- 510 Mathematics
- 520 Astronomy & allied sciences
- 530 Physics
- 540 Chemistry & allied sciences
- 550 Earth sciences
- 560 Paleontology, Pale zoology
- 570 Life Sciences
- 580 Botanical sciences
- 590 Zoological sciences
- 600 Technology (Applied Sciences)
- 610 Medical sciences
- 620 Engineering & allied sciences
- 630 Agriculture
- 650 Management & auxiliary services
- 660 Chemical engineering
- 640 Home economics & family living
- 670 Manufacturing
- 680 Manufacture for specific uses
- 690 Buildings
- 700 The Arts
- 710 Civic & landscape art
- 720 Architecture
- 730 Plastic arts
- 740 Drawing & decorative arts
- 750 Painting & paintings
- 760 Graphic arts
- 780 Music
- 770 Photography & photographs
- 790 Recreational & performing arts
- 800 Literature & Rhetoric
- 810 American literature in English
- 820 English and Old English literature
- 830 Literatures of Germanic languages
- 840 Literatures of Romance languages
- 850 Italian, Romanian, Rhaeto-Romanic
- 860 Spanish & Portuguese literatures
- 870 Italic literatures, i.e., Latin
- 880 Hellenic literatures, i.e., Classical Greek
- 890 Literatures of other languages
- 900 Geography & History
- 910 Geography & travel
- 920 Biography, genealogy, insignias

- 930 History of the ancient world
- 940 General history of Europe
- 950 General history of Asia & Far East
- 960 General history of Africa
- 970 General history of North America
- 980 General history of South America
- 990 General history of other areas

Source:

University Libraries, The Pennsylvania State University. "Dewey Decimal Classification System"

<http://www.mctc.mnscu.edu/Library/tutorials/infolit/tablesversion/lessons/dewey.pdf> (17 Jan. 2004).

3-3. Library of Congress Classification System

A: General Works
AE: Encyclopedias
AI: Indexes
AM: Museums
AP: Periodicals
AS: Academies and learned societies
AY: Yearbooks, almanacs, directories
B: Philosophy, Psychology, Religion
B: History & systems of philosophy
BC: Logic
BD: Speculative philosophy
BF: Psychology
BH: Aesthetics
BJ: Ethics
BL: Religions, mythology, rationalism
BM: Judaism
BP: Islam, Bahaism, Theosophy
BR: Christianity (General)
BS: The Bible
BT: Doctrinal theology
BV: Practical theology
BX: Denominations and sects
C: Auxiliary Sciences of History
CB: History of civilization & culture
CC: Archaeology (General)
CD: Diplomatics, archives, seals
CE: Chronology
CJ: Numismatics
CN: Epigraphy
CR: Heraldry
CS: Genealogy
CT: Biography (General)
D: History - General & Eastern
D: History (General)
DA: Great Britain
DB: Austria, Czechoslovakia, Hungary
DC: France
DD: Germany
DE: Mediterranean, Greco-Roman world
DF: Greece
DG: Italy
DH - DJ: Netherlands, Belgium, Luxembourg
DK: Russia
DL: Northern Europe
DP: Spain, Portugal

DQ: Switzerland
DR: Eastern Europe; Turkey
DS: Asia
DS520-DS689: Southeast Asia
DT: Africa
DU: Oceania, Australia, New Zealand
DX: Gypsies
E & F: History - Western Hemisphere
M: Music
M: Music (General)
ML: Literature of music
MT: Music instruction and study
N: Fine Arts
N: Visual arts (General)
NA: Architecture
NB: Sculpture
NC: Drawing, design, illustration
ND: Painting
NE: Print media
NK: Decorative arts, applied art
NX: Arts in general
P: Language and Literature
P: Linguistics
PA: Greek and Latin
PB: Modern European languages; Celtic languages
PC: Romance languages
PD: Old Germanic and Scandinavian languages
PE: English language
PF: Dutch, Flemish, German languages
PG: Slavic languages and literature
PH: Finno-Ugrian and Basque languages and literature
PJ: Middle Eastern languages and literature
PK: Indo-Iranian languages and literature
PL: East Asian, African, and Oceanic languages and literature
PM: American Indian; artificial languages
PN: Literature; literary history and collections
PN1993-PN1996: Motion Pictures
PQ: Romance literature
PR: English Literature
PS: American literature
PT: Germanic literature
PZ: Children's literature
Q: Science
Q Science (General)
QA: Mathematics
QB: Astronomy
QC: Physics
QD: Chemistry

QE: Geology
QH: Natural history (General)
QK: Botany
QL: Zoology
QM: Human anatomy
QP: Physiology
QR: Microbiology
R: Medicine
R: Medicine (General)
E: America (General), United States
F1-975: United States local history
F1001-1140: Canada
F1201-1392: Mexico
F1401-3799: Central and South America, the Caribbean area
G: Geography, Anthropology, Recreation
G: Atlases, Globes, Maps
GA: Mathematical geography, cartography
GB: Physical geography
GC: Oceanography
GF: Human ecology
GN: Anthropology
GR: Folklore
GT: Manners and customs
GV: Sports and recreation
GV1580-GV1799: Dance
H: Social Sciences and Business
H: Social sciences (General)
HA: Statistics
HB: Economic theory
HC: Economic history and conditions
HD: Land, agriculture, industry
HE: Transportation and communication
HF: Commerce
HG: Finance
HJ: Public finance
HM: Sociology
HN: Social history
HQ: Social groups; the family, marriage, women
HS: Societies and clubs
HS: Societies and clubs
HS: Societies and clubs
HV: Social pathology, criminology, welfare
HX: Socialism, communism, anarchism
J: Political Science
J: Official documents
JA: Collections and general works
JC: Political theory
JF: Constitutional history and administration

JK: U.S. constitutional history
JS: Local government
JV: Colonization, emigration and immigration
JX: International law, international relations
K: Law
K: Law (General)
KD: Law of the United Kingdom and Ireland
KE: Law of Canada
KF: Law of the United States
KFN: Individual states
KG: Law of Latin America, Mexico and Central America (General)
KH: Law of South America (General)
KJ: Law of Europe
RA: Public aspects of medicine
RB: Pathology
RC: Internal medicine
RD: Surgery
RE: Ophthalmology
RF: Otorhinolaryngology
RG: Gynecology and obstetrics
RJ: Pediatrics
RK: Dentistry
RL: Dermatology
RM: Therapeutics; pharmacology
RS: Pharmacy and materia medica
RT: Nursing
RX: Homeopathy
RZ: Other systems of medicine
S: Agriculture
S: Agriculture (General)
SB: Plant culture
SD: Forestry
SF: Animal culture
SH: Aquaculture, fisheries, fishing
SK: Hunting
T: Technology
T: Technology (General)
TA: Engineering (General)
TC: Hydraulic engineering
TD: Environmental technology
TE: Highway engineering
TF: Railroad engineering
TG: Bridge engineering
TH: Building construction
TJ: Mechanical engineering and machinery
TK: Electrical engineering; electronics
TL: Motor vehicles; aeronautics; astronautics
TN: Mining engineering; metallurgy

TP: Chemical technology
TR: Photography
TS: Manufactures
TT: Handicrafts; arts and crafts
TX: Home economics; cooking
U: Military Science
UA: Armies
UB: Military administration
UC: Maintenance and transportation
UD: Infantry
UE: Cavalry. Armored and mechanized cavalry
UF: Artillery
UG: Military engineering
UH: Other services
V: Naval Science
VA: Navies
VB: Naval administration
VC: Naval maintenance
VD: Naval seamen
VE: Marines
VF: Naval ordnance
L: Education
L: Education (General)
LA: History of education
LB: Theory and practice
LC: Special aspects
LD: Individual U.S. institutions
LH: College and school publications
LJ: Student fraternities and societies
LT: Textbooks (General)
VG: Minor services of navies
VK: Navigation. Merchant marine
VM: Naval architecture. Shipbuilding.
Marine engineering
Z: Library Science

Source:

University Libraries, The Pennsylvania State University. "Library of Congress Classification System"
<http://www.mctc.mnscu.edu/Library/tutorials/infolit/tablesversion/lessons/lcclass.pdf> (17 Jan. 2004).

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تشخیص و تعیین نیاز اطلاعاتی

4-1. Topic Exploration

- **What do I really want to write about?**
- **How do I focus my topic so it's manageable?**
- **What terms will help me find the best information?**

Considering Topic Ideas

Choosing the right topic for your research -- one that you want to invest time in and one that has sufficient information -- is a critical decision in the research process.

Your interest and motivation to learn about the topic will greatly influence the quality of your final product. Consider the following:

What do you really want to write about?

What you spend your time on should count for something that is worthwhile. Consider carefully your interest in the subject, the value of your work, the time you will be investing.

- Use your [creative instincts](#).
- Think about your [own experiences](#), background and prior learnings.

Explore issues within your field or an area of interest in your major.

Still don't have a clue . . . ?

- Link to [Purdue's Online Writing Lab \(OWL\)](#)
 - [When You Start To Write](#)
 - [Thought Starters](#)
- Link to [Quick Stops for Topics](#)

Exploring Your Topic

Analyze what you know and don't know about your interest area.

What you already know about your topic will determine at what point you begin the research process. If you don't know much about the subject area you may need to start by getting more background information.

- Clarify the reasons for your interest in the topic (even if you have no particular interest; you're just doing it because you have to!).
- What do you know? Think carefully about every aspect of the topic that you are familiar with or know something about.
- Do some [exploratory reading](#) to gain a fuller understanding of the subject field.
- Determine what you want to know more about.

- What is the goal of your research?

Clarifying the goals of your research will ensure that you select materials with the appropriate content, perspective, and focus to fully develop your topic.

- Do you want to convince others of a position on an issue?
- Do you want to expand on what you already know about a particular topic?
- Do you want to explore a new perspective on a topic?
- What will be your general approach to the topic: historical? comparative? theoretical? interdisciplinary?

Talk with others.

Allowing others to challenge your ideas or to confirm your theories provides "food for thought" and can help get your project off to a good start.

- Consult with a librarian in person, by phone or via e-mail at ugrl@purdue.edu
- Discuss topic ideas with classmates or friends

Clarify understandings with your instructor.

Just to make sure you are on the right track, you may wish to discuss your topic ideas with your instructor. Don't waste your time pursuing an idea that isn't going to fit the requirements of your assignment.

Selecting Your Topic

To select a preliminary topic idea ... brainstorm a bit and write down a list of key words, terms, or phrases that describe this idea.

(NOTE: You may wish to consult outside resources -- instructors, friends, [reference books](#), etc. -- to help develop the subject area you have chosen.)

Pay particular attention to:

1. related issues and aspects of the topic
2. terminology
3. references to important books or articles listed in bibliographies

Now list at least three ways to focus that topic in ways that are of particular interest to you. Ask yourself, "What about this subject do I want to know more about?"

You may wish to consider narrowing it down by one or more of the following aspects:

- among a specific group of people (i.e., adult students; education majors; women; etc.)
- by a particular time period (1998; 1960s; 1800s)

- by geographic region (U.S.; Indiana; South America)

by cross-disciplinary perspectives (psychological aspects; sociological implications; public policy issues)

Sources:

Comprehensive Online Research Education (CORE). "Topic Exploration".
<http://core.lib.purdue.edu/> (18 Jan. 2004).

4-2. Controlled Vocabularies, Thesauri and Classification Systems Available in the WWW. DC Subject

Compiled by [Traugott Koch](#)

3 Subject and Keywords Identifier: SUBJECT

Name: Subject and Keywords

Identifier: Subject

Definition: The topic of the content of the resource.

Comment: Typically, a Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource.

Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.

Ex.:

Thesauri and other controlled vocabularies, available for the choice of (controlled) terms

Generalities. (All subjects. Library and information sciences, Media, Computing)

- [UNESCO Thesaurus](#) (English, French, Spanish)
- [\(Upper\) CYC Ontology \(general\)](#)
- [OCLC FAST: Faceted Application of Subject Terminology \(experimental\)](#)
- [ASIS Thesaurus of Information Science](#)
- [Semiotischer Thesaurus der Bibliothekswissenschaft](#) (German, incomplete)
- [UMI ProQuest? databases: Controlled Subject Terms](#)
- [Finnish General Subject Headings List](#) (VESA, in Finnish and Swedish)
- [Svenska ämnesord](#) (30 000 terms in Swedish, complete list of SAB subject headings and classification codes)
- [Humanioratesaurusen Humord](#) (in Norwegian)
- [Illinois Researcher Information Service \(IRIS\) Keyword Thesaurus](#)

Philosophy and psychology

Religion

Social sciences. (Economics, Law, Government, Society, Environment, Education, Commerce)

- [HASSET: Humanities and Social Science Electronic Thesaurus](#) (based on a UNESCO thesaurus)
- [SOSIG Thesaurus, based on HASSET](#) (linked to a search feature for the SOSIG Internet Catalogue)
- [OECD Macrothesaurus](#) (Social and economic sciences; English, Spanish, French).
- [Population Multilingual Thesaurus](#) (English, French, Spanish). [POPIN Population thesaurus](#) (demography, population studies. CICRED France)
- [Bioethics Thesaurus](#) , 1998 edition, updated 1999 (BIOETHICSLINE)
- [Eurovoc Thesaurus](#) (multilingual thesaurus covering the fields in which the European Communities are active; government, parliaments. 11 EU languages, plus transl. into a further 10 languages)

- [TRIBLEX Thesaurus, International Labour Organization](#) (English, French)
- [Legislative Indexing Vocabulary](#) (LIV; LC)
- [Global Legal Information Network \(GLIN\) Thesaurus](#) (LC)
- [Government of Canada Core Subject Thesaurus](#) (English, French)
- [# Canadian Government Thesauri and Controlled Vocabularies](#)
- [EURODICAUTOM](#) (multilingual EU terminology, with definitions)
- [CERES \(California Environmental Resources Evaluation System\)/NBII Thesaurus Partnership Project](#)
- [EPA Terms of Environment](#) (terms, definitions, abbreviations, acronyms)
- [Global Change Master Directory \(Earth Science Data\), Science Keywords Valid](#)
- [Umweltdatenkatalog Online Thesaurus](#), Oesterreichisches Umweltbundesamt (in German and English)
- [GEneral Multilingual Environmental Thesaurus, GEMET](#) (EEA; huge HTML files. 19 languages).
- [Florida Environments Online Thesaurus](#)
- [ERIC Thesaurus](#) (Educational Resources Information Center, ERIC in the US)
- [European Education Thesaurus](#) (to download. Covering the 11 official languages of the European Union plus in Albanian, Croatian, Czech, Hungarian, Polish, Slovene and Turkish)
- [European Treasury Browser Thesaurus](#) (European Schoolnet. For download: Multilingual thesaurus in twelve languages: Albanian, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Spanish, Swedish aimed to index educational resources)
- [Cedefop's Multilingual Thesaurus of Vocational Training \(VET-Thes 1992\)](#)

Language. (Linguistics, Languages)

Natural sciences and mathematics. (Astronomy, Physics, Chemistry, Earth sciences, Biology)

- [NASA Thesaurus](#) (only browsable in PDF)
- [Astronomy Thesaurus](#) (English, French, German, Italian and Spanish)
- [Thesaurus for Liquid Crystal Research and Applications](#)
- [World Species List - Animals, Plants, Microbes](#)
- [Integrated Taxonomic Information System \(ITIS\), Biological Names](#) (Member of Species 2000)
- [NCBI Taxonomy database](#) (National Center for Biotechnology Information)
- [Index Nominum Genericorum \(Plantarum\), ING](#)
- [IBS: Vascular Plant Families and Genera](#)
- [Mammal Species of the World \(MSW\)](#)
- [Bird Taxonomy](#)
- [Fossil and Recent Brachiopod Genera](#)
- [Gene Ontology](#)
- [Biocomplexity Thesaurus](#) (NBII and CSA)

Technology (Applied sciences). (Medicine, Engineering, Agriculture)

- [Medical Subject Headings \(MeSH\)](#), National Library of Medicine ([MeSH homepage](#))
- [Bioethics Thesaurus](#) , 1998 edition, updated 1999 (BIOETHICSLINE)
- [European multilingual thesaurus on health promotion](#) (in 12 languages, to download in pdf or text)

- [Health Canada Controlled Vocabulary](#) (English, French)
- [Health and Ageing Thesaurus](#), Australian Government (for download in pdf)
- [Alcohol and Other Drug \(AOD\) Thesaurus](#) (NIAAA)
- [HIV/AIDS Treatment Thesaurus](#) (CATIE Canada)
- [IEEE Approved Indexing Keyword List](#) (1998. distributed via email)
- [Canadian Thesaurus of Construction Science and Technology](#)
- [MDA Waterways Object Name Thesaurus](#)
- [AGROVOC \(FAO\)](#) (Arabic, Chinese, English, Français, Español, Português)
- [CAB Thesaurus. The Thesaurus for the Applied Life Sciences](#)
- [AGRIFOREST, Finnish Agricultural Subject Headings](#) (Finnish and English with AGROVOC and CAB terminology)
- [NAL Agricultural Thesaurus](#) (National Agricultural Library, USDA)
- [On-Line Glossary of Technical Terms in Plant Pathology \(Cornell\)](#)
- [Thesaurus of Parasitology](#)

The arts. (Architecture, Fine arts, Graphic arts, Music)

- [Art and Architecture Thesaurus \(AAT\)](#)
- [English Heritage National Monuments Record Thesauri](#), including the Thesaurus of Monument Types and the Archaeological Objects Thesaurus
- [Union List of Artist Names \(ULAN\)](#)
- [British Museum Object Names Thesaurus](#)
- [British Museum Materials Thesaurus](#)
- [Thesaurus for Graphic Materials I: Subject Terms](#) (TGM I; LC)
- [Thesaurus for Graphic Materials II: Genre and Physical Characteristic Terms](#) (TGM II; LC)
- [GSAFD Genre Terms](#) (Guidelines on Subject Access to Individual Works of Fiction, Drama, Etc., 2nd edition 2000. Experimental service at OCLC)
- [Thesaurus of Musical Instruments](#) (Subset of LCSH)

Literature and rhetoric

Geography and history

- [Getty Thesaurus of Geographic Names \(TGN\)](#)
- [ZUDIS-thesaurus für die liche Suche](#) (German)
- [Alexandria Digital Library Gazetteer Server](#)
- [Geographic Feature Type Thesaurus](#) (Alexandria Digital Library)
- [Thesaurus zu GNOMON Online](#). Internationales Informationssystem für Klassische Altertumswissenschaft (in German)
- [Canadian Subject Headings](#) (English, French RVM)

General vocabulary tools, available for the choice of words

Authority lists:

- [Library of Congress Authorities](#): browse and display authority headings for Subject, Name, Title and Name/Title combinations. You can also download authority records in MARC format for use in a local system
- [CERL "Thesaurus"](#) (contains forms of imprint places, imprint names, and personal names as found in material printed before the middle of the nineteenth century)

Lexical tools (English):

[Lexical FreeNet](#) (compute relations between concepts, shortest conceptual path, uses semantic relations from WordNet and statistical analyses of large corpora)
[Plumb Design Visual Thesaurus](#) (visualized thesaurus, accesses WordNet to display a given word graphically connected to related words)
[WordNet 1.6 on the Web - a Lexical Database for English](#) (Princeton)
[Alternative search interfaces to WordNet](#)
[Roget's Internet Thesaurus](#) (English synonym reference, words and phrases)
[Wordsmyth English Dictionary-Thesaurus](#) (definitions, synonyms)

Dictionaries:

[Dictionaries](#) (The Linguist List)
[OneLook Dictionaries, The Faster Finder](#) (search 350 dictionaries in one step)
[WWWebster Thesaurus and dictionary](#)

Classification schemes, available for the choice of categories and notations

Universal:

- [Library of Congress Classification \(LCC\) Outline](#) (LCCS, official version, shallow)
- [Library of Congress Classification](#) (LCCS, not complete, not authorized)
- Dewey Decimal Classification: [WWlib Classification Browser](#) (limited, not authorized)
- [Universal Decimal Classification \(UDC\) Outline](#)
- [Universella Decimalklassifikationen. Svensk elektronisk utgaava](#) (Swedish edition, two levels of hierarchy, not authorized)

National general:

- [Regensburger Verbundklassifikation \(RVK\)](#)
- [Nederlandse Basisclassificatie \(BC\)](#) (Scheme integrated with a service)
- [Emneregister til Deweys desimalklassifikasjon \(DDK4\)](#) (NBO. In Norwegian)
- [BIBSYS emneregister](#) (DDK, UDK. In Norwegian)
- [SAB classification system](#) (in Swedish)
- [SAB, Sweden](#) (Scheme integrated with a linklist at Moelndals Stadsbibliotek. In Swedish)
- [SAB classification codes, searchable and browsable list](#) (in Swedish)

Subject specific, international:

- [Mathematics Subject Classification 2000 \(MSC\)](#), with conversion tables to the 1991 version)
- [Mathematics Subject Classifications \(from AMS\)](#)
- [International Reviews on Mathematical Education/Zentralblatt f?aktik der Mathematik: Subject Classification Scheme \(ZDM\)](#)
- [GAMS \(Guide to Available Mathematical Software\) Problem Classification System](#)
- [ACM Computing Classification System](#) (CCS. formerly CR)
- [Physics and Astronomy Classification Scheme](#) (PACS)
- [Structural Classification of Proteins \(scop\)](#)
- [National Library of Medicine Classification](#)

- [Ei Classification](#) (Engineering; Scheme integrated with the former EELS service)
- [AGRIS Subject Categories](#)
- [AGRICOLA Subject Category Code, incl. Scope notes](#) (from AgNIC/NAL)
- [ICONCLASS](#) (iconographical research, documentation of images)
- [North American Industry Classification System \(NAICS\)](#)
- [Ortelius ""Thesaurus" =Classification of scientific disciplines](#) (English, Hungarian)

Subject specific, national:

- [DTV's emnesystem og tesaurus](#), in Danish, building on the Engineering parts of UDC
- [Klassifikation Sozialwissenschaften f?IS und SOLIS](#) (in German and English)
- [Joint Academic Coding System. Higher Education Statistics Agency, UK](#)

List of other schemes not freely and/or digitally available:

[MARC Code List for Relators, Sources, Description Conventions \(of MARC 21\)](#). (Part III: Classification Sources and Part IV: Subject/Index Term Sources).

[Taxonomy Warehouse](#)

Source:

Koch, Traugott.1996. "Controlled vocabularies, thesauri and classification systems available in the WWW. DC Subject". <http://www.lub.lu.se/metadata/subject-help.html> (4 Feb. 2004).

4-3. Directory of Scholarly and Professional E-Conferences

Note as of 02/22/02 the Directory is fully online - however it is unlikely to be updated again soon. The original team and I have simply not been able to keep up. Please use what's here but keep in mind that it has not been updated.

- [Search the Directory](#)
- [Scope of the Directory](#)
- [The Directory History and the Directory Team](#)
- [Generic Subscription and Archives Access Instructions](#)

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Source:

Kovacs, Diane K. 2002. "Directory of Scholarly and Professional E-Conferences"
<http://www.kovacs.com/directory/> (17 Jan. 2004).

4-4. How to Write a Thesis Statement

What is a Thesis Statement?

Almost all of us--even if we don't do it consciously--look early in an essay for a one- or two-sentence condensation of the argument or analysis that is to follow. We refer to that condensation as a thesis statement.

Why Should Your Essay Contain A Thesis Statement?

- to test your ideas by distilling them into a sentence or two
- to better organize and develop your argument
- to provide your reader with a "guide" to your argument

In general, your thesis statement will accomplish these goals if you think of the thesis as the answer to the question your paper explores.

How Can You Write Good Thesis Statement?

Here are some helpful hints to get you started. You can either scroll down or select a link to a specific topic.

[How to Generate a Thesis if the Topic is Assigned.](#)

[How to Generate a Thesis if the Topic is Not Assigned.](#)

[How to Tell a Strong Thesis Statement from a Weak One.](#)

How to Generate a Thesis Statement if the Topic is Assigned.

Almost all assignments, no matter how complicated, can be reduced to a single question. Your first step, then, is to distill the assignment into a specific question. For example, if your assignment is "Write a report to the local school board explaining the potential benefits of using computers in a fourth-grade class," turn the request into a question like "What are the potential benefits of using computers in a fourth-grade class?" After you've chosen the question your essay will answer, compose one or two complete sentences answering that question.

Q: "What are the potential benefits of using computers in a fourth-grade class?"

A: "The potential benefits of using computers in a fourth-grade class are"

OR

A: "Using computers in a fourth-grade class promises to improve"

The answer to the question is the thesis statement for the essay.

How to Generate a Thesis Statement if the Topic is Not Assigned.

Even if your assignment doesn't ask a specific question, your thesis statement still needs to answer a question about the issue you'd like to explore. In this situation, your job is to figure out what question you'd like to write about.

A good thesis statement will usually include the following four attributes:

- take on a subject upon which reasonable people could disagree
- deal with a subject that can be adequately treated given the nature of the assignment
- express one main idea
- assert your conclusions about a subject

Let's see how to generate a thesis statement for a social policy paper.

Brainstorm the topic.

Let's say that your class focuses upon the problems posed by drug addiction. You find that you are interested in the problems of crack babies, babies born to mothers addicted to crack cocaine.

You start out with a thesis statement like this:

Crack babies.

This fragment isn't a thesis statement. Instead, it simply indicates a general subject. Furthermore, your reader doesn't know what you want to say about crack kids.

Narrow the topic

Your readings about the topic, however, have led you to the conclusion that not only do these babies have a difficult time surviving premature births and withdrawal symptoms, but their lives will be even harder as they grow up because they are likely to be raised in an environment of poverty and neglect. You think that there should be programs to help these children.

You change your thesis to look like this:

Programs for crack kids.

This fragment not only announces your subject, but it focuses on one main idea: programs. Furthermore, it raises a subject upon which reasonable people could disagree, because while most people might agree that something needs to be done for these children, not everyone would agree on what should be done or who should do it. You should note that this fragment is not a thesis statement because your reader doesn't know your conclusions on the topic.

Take a position on the topic.

After reflecting on the topic a little while longer, you decide that what you really want to say about this topic is that in addition to programs for crack babies, the government should develop programs to help crack children cope and compete.

You revise your thesis to look like this:

More attention should be paid to the environment crack kids grow up in.

This statement asserts your position, but the terms more attention and the environment are vague.

Use specific language.

You decide to explain what you mean about "the environment," so you write:

Experts estimate that half of crack babies will grow up in home environments lacking rich cognitive and emotional stimulation.

This statement is specific, but it isn't a thesis. It merely reports a statistic instead of making an assertion.

Make an assertion based on clearly stated support.

You finally revise your thesis statement one more time to look like this:

Because half of all crack babies are likely to grow up in homes lacking good cognitive and emotional stimulation, the federal government should finance programs to supplement parental care for crack kids.

Notice how the thesis answers the question, "Why should anything be done for crack kids, and who should do it?" When you started thinking about the paper, you may not have had a specific question in mind, but as you became more involved in the topic, your ideas became more specific. Your thesis changed to reflect your new insights.

How to Tell a Strong Thesis Sentence from a Weak One.

1. A strong thesis takes some sort of stand.

Remember that your thesis needs to show your conclusions about a subject. For example, if you are writing a paper for a class on fitness, you might be asked to choose a popular weight-loss product to evaluate. Here are two thesis statements:

There are some negative and positive aspects to the Banana Herb Tea Supplement.

This is a weak thesis. First, it fails to take a stand. Second, the phrase "negative and positive" aspects" are vague.

Because Banana Herb Tea Supplement promotes rapid weight loss that results in the loss of muscle and lean body mass, it poses a potential danger to customers.

This is a strong thesis because it takes a stand.

2. A strong thesis justifies discussion.

Your thesis should indicate the point of the discussion. If your assignment is to write a paper on kinship systems, using your own family as an example, you might come up with either of these two thesis statements:

My family is an extended family.

This is a weak thesis because it states an observation. Your reader won't be able to tell the point of the statement, and will probably stop reading.

While most American families would view consanguineal marriage as a threat to the nuclear family structure, many Iranian families, like my own, believe that these marriages help reinforce kinship ties in an extended family.

This is a strong thesis because it shows how your experience contradicts a widely-accepted view. A good strategy for creating a strong thesis is to show that the topic is controversial. Readers will be interested in reading the rest of the essay to see how you support your point.

3. A strong thesis expresses one main idea.

Readers need to be able to see that your paper has one main point. If your thesis expresses more than one idea, then you might confuse your readers about the subject of your paper. For example:

Companies need to exploit the marketing potential of the Internet, and web pages can provide both advertising and customer support.

This is a weak thesis statement because the reader can't decide whether the paper is about marketing on the Internet or web pages. To revise the thesis, the relationship between the two ideas needs to become more clear. One way to revise the thesis would be to write:

Because the Internet is filled with tremendous marketing potential, companies should exploit this potential by using web pages that offer both advertising and customer support.

This is a strong thesis because it shows that the two ideas are related. Hint: a great many clear and engaging thesis statements contain words like "because," "since," "so," "although," "unless," and "however."

4. A strong thesis statement is specific.

A thesis statement should show exactly what your paper will be about, and will help you keep your paper to a manageable topic. For example, if you write a paper on hunger, you might say:

World hunger has many causes and effects.

This is a weak thesis statement for two major reasons. First, "world hunger" can't be discussed thoroughly in five or ten pages. Second, "many causes and effects" is vague. You should be able to identify specific causes and effects. A revised thesis might look like this:

Hunger persists in Appalachia because jobs are scarce and farming in the infertile soil is rarely profitable.

This is a strong thesis because it narrows the subject to a more specific and manageable topic and it also identifies the specific causes for the existence of hunger.

Produced by Writing Tutorial Services, Indiana University, Bloomington, IN

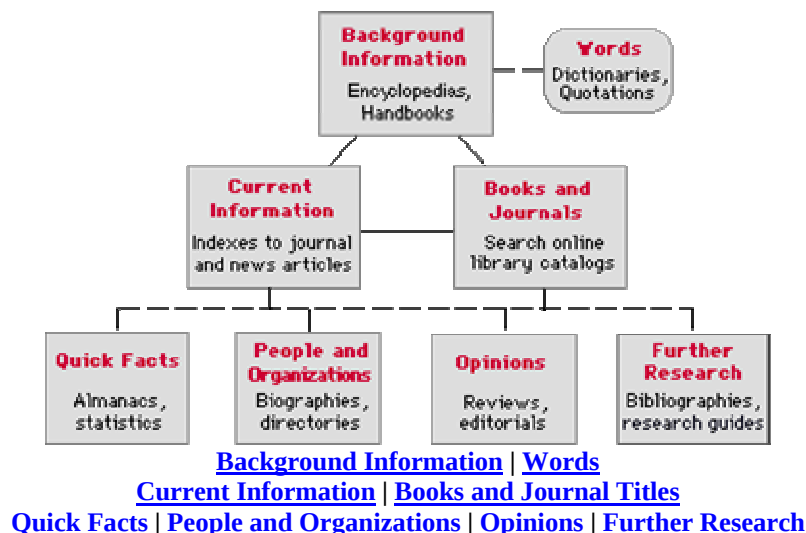
Source:

The Trustees of Indiana University. 2003. "How to Write a Thesis Statement".
<http://www.indiana.edu/~wts/wts/thesis.html> (31 Jan. 2004).

دسترسی به اطلاعات موردنیاز:
۵. منابع اطلاعات و ابزارهای جایی و بازیابی اطلاعات

5-1. General Resources for All Subjects

Useful Sources for Information in a Search Strategy Format



Background Information (General and Subject Encyclopedias)

[Columbia Encyclopedia, Sixth Edition](#) [WWW]

Contains nearly 51,000 full text articles on a wide range of topics, including 15,000 biographies, maps, speeches, and more than 80,000 hypertext cross-references to link relevant information.

[Encyclopedia Britannica Online](#) [OhioLINK users only]

Access over 75,000 quality full text articles, as well as 200,000 selected Web sites and 2,000 videos on virtually every topic. Also includes special sections and resources on presidential campaigns, atlases, year in review, timelines, and highlighted research topics.

[Encyclopedia Americana](#)

Provides information on a wide variety of topics with extensive coverage of science and technology and a strong emphasis on American history.

[Facts on File](#)

Contains a digest of important news stories, providing concise profiles of state, national, and international events and including a detailed name and subject index.

Words

(Dictionaries, Thesauri, Quotations)

[American Heritage Dictionary, 4th Edition](#) [WWW]

Describes current American use of English language.

Bartlett's Quotations [WWW]

Browse an index of authors or search for particular words in the online version of this well-known reference work.

List of Dictionaries [WWW]

Links to a variety of Internet dictionaries, primarily for English and other languages.

Merriam-Webster's Collegiate Dictionary (10th Edition) [OSU users only]

Provides searchable dictionary of over 100,000 items.

One Look Dictionaries [WWW]

Provides one-page forum to search a variety of general and subject dictionaries, including science, medical, technological, business, sports, religion, acronyms, and miscellaneous

Reference Dictionaries [WWW]

Online dictionaries for Chinese, French, Greek, Latin, music, law, medical, technical, slang, and links to other dictionary sites on the Internet.

Web of On-line Dictionaries [WWW]

Over 800 searchable on-line dictionaries from Afrikaans to Yiddish, as well as multi-lingual dictionaries, thesauri, language identifiers, on-line grammars, and more.

WordNet 1.5 on the Web [WWW]

WordNet is an on-line lexical reference system developed by the Cognitive Science Lab at Princeton University. Enter a search word and retrieve synonyms, antonyms, other related terms.

Current Information

(Indexes to Identify Magazine, Journal, Newspaper Articles)

1st Headlines

1stHeadlines is a search engine and index for current full text news which makes it easy to search the headlines and access news stories. The headlines from local, regional, national and international online news sources are updated 24 hours a day.

Academic Search Premier [OhioLINK users only]

Full text articles from over 3,400 publications, as well as indexing to identify articles found in 900 other academic publication, for information on a wide range of topics in art, computer science, education, engineering, ethnic studies, humanities, language, literature, medical sciences, social sciences, and more.

ARL Directory of Electronic Journals, Newsletters, and Academic Discussion Lists [WWW]

Association of Research Libraries' description and links to over 1700 electronic serials.

Applied Science and Technology Abstracts [OhioLINK users only]

Indexes and abstracts over 300 periodicals in a wide variety of subjects ranging from aeronautics, chemistry, and computers to physics, plastics, and transportation.

ArticleFirst [OSU users only]

Provides table of contents pages from the latest issues of 11,500 journals in science, technology, medicine, social science, business, humanities, popular culture.

Business Source Premier *[OhioLINK users only]*

Full text articles from over 2,200 business journals, as well as indexing to identify articles found in over 535 other publications, for information on a wide range of topics in accounting, economics, finance, international business, management, marketing, and more.

Electronic Journal Center (OhioLINK) *[OhioLINK users only]*

Access to thousands on online, full-text journals on a wide variety of topics and searchable by title or subject.

CIC Electronic Journal Collection *[WWW]*

The Committee on Institutional Cooperation provides this list of and access to full text re-journals available through the member research institutes in the Midwest, including The Ohio State University.

Essay and General Literature Index *[OSU users only]*

Indexes essays and chapters from collections focusing mainly in the social sciences and humanities.

Full Text Journals by Title *[WWW-some access restricted]*

Alphabetical listing and access to hundreds of electronic journals available to Ohio State-affiliated students, staff, and faculty. Most journals are in the fields of science (mathematics, chemistry, physics, biochemistry, molecular biology), but some arts and humanities journals are also available.

Humanities Abstracts *[OhioLINK users only]*

Indexes and abstracts catalogs from over 460 English language periodicals in archaeology, classics, communication, folklore, history, journalism, language, literature, music, performing arts, philosophy, photography, political criticism, religion, and more.

Indexes, Abstracts, Bibliographies, and Tables of Contents Services *[WWW]*

Provides access to journal, magazine, and newspaper articles; research papers; preprints; proceedings; book chapters; and similar materials in arts and humanities, science and technology, and social sciences.

Inside Info Plus *[OhioLINK users only]*

Indexes over 6 million articles on a wide range of topics from 21,000 of the most frequently requested journals from the British Library Document Supply Center, searchable by author, title, journal, and keyword

Internet Press *[WWW]*

Links to thousands of full-text newspapers, television, radio and other media resources internationally.

LexisNexis Academic *[OSU users only]*

Online services providing access to full text files including newspapers, business information, legislation, legal resources, medical information patents, and more.

Library Literature *[OSU users only]*

Indexes English and foreign journals, monographs, proceedings, pamphlets, and library school themes.

News Trawler *[WWW]*

Search hundreds or full text, international news resources by country, category, and alphabetic list of titles from this meta site with one search query.

Newspaper Source [OhioLINK users only]

Full text articles from over 200 regional and international newspapers, news wires, *The Christian Science Monitor*, *The Los Angeles Times*, and *USA Today*, along with abstracts to identify articles from the *New York Times* and *The Wall Street Journal - Eastern Edition*.

OhioLINK Electronic Journal Center [OhioLINK users only]

Links to electronic journals by subject or title from Elsevier available to OhioLINK users

PapersFirst [OSU users only]

Contains papers on a vast number of subjects from every congress, conference, exposition, workshop, symposium and meeting publications received at The British Library.

ProceedingsFirst [OSU users only]

Contains 19,000 citations of publications on worldwide meetings, conferences, expositions, workshops, congresses, and symposia received at The British Library.

PubList.com [WWW]

Comprehensive directory of information for 150,000 publications and 8,000 newspapers around the world, using *Ulrich's International Periodical Directory* and other resources.

Readers' Guide to Periodical Literature

Excellent index for articles covering current events, issues, and information on people found in popular periodicals and some scholarly journals .

SciNet [WWW]

Specialized searchable directory of full-text online resources in science and nature topics such as agriculture, astronomy, biology, chemistry, environment, medicine, mathematics, physics, social science, technology, and more.

Time.Com [WWW]

Accesses daily and archival full text articles from Time Daily service, including Time Magazine, Money, People, Fortune, Life, CNN, Entertainment Weekly, SIOOnline and more.

Wall Street Journal via Proquest Direct [OSU users only]

Contains the full-text *Wall Street Journal* newspaper, including extensive coverage of stock markets, finance, investments and business-oriented news, business and financial news and analysis, company news, and in-depth features

Books and Journal Titles

OSCAR [WWW]

Locate books, journals (after you have used an index to identify specific articles), and other materials in the OSU Libraries.

OhioLINK [WWW]

Locate books, journals, and other materials in major Libraries throughout the state of Ohio.

Other library catalogs [WWW]

Access to catalogs for the Big Ten Libraries' (CIC), Center for Research Libraries (CRL), Columbus Metropolitan Library, Ohio Public Libraries (OPLIN), Library of Congress Catalog, WorldCat, and others.

Quick Facts

(Almanacs, Atlases, Statistics Sources)

ABC Interactive World Fact Book [WWW]

Contains CIA facts on all countries and regions recognized by the U.S. State Department, including info on each area's flag, geography, people, government, economy, transportation, communications and defense.

Absolute Trivia [WWW]

Over 5,000 facts updated daily and searchable by keyword or subject on topics of animals, entertainment, environment, food/drink, geography, history, holidays, inventions, laws, people, space, sports, statistics, technology, words/numbers, and much more.

American Statistics Index

Indexes and abstracts (summaries) for 800 periodicals and 10,000 reports, studies, etc. containing statistical data from every source issued by the U.S. government.

Atlappedia Online [WWW]

Contains full color physical and political maps as well as key facts and statistics on countries of the world, including geography, climate, people, religion, language, history, economy, and more.

CIA Publications and Handbook [WWW]

Contains current (1995) data about the size, population, climate, terrain, economy, crime rate, life expectancy, languages, religions, migration, currency, politics, and much more for each of the nearly 300 countries listed.

FEDSTATS [WWW]

Searchable indexes of statistics from 70 U.S. federal government agencies including the Bureaus of Justice, Labor, Transportation, Census, Energy, Agriculture; the Internal Revenue, National Science Foundation, Agencies for Children and Family; Aging' Toxic Substances; Animal and Plant Health' Army Corps of Engineers and many more.

Finding data in the Internet: a journalist's guide [WWW]

Links to useful data on basic reference, agriculture, aviation, crime, pollution, education, energy, health, immigration, law, military, politics, weather and more.

Global Statistics [WWW]

Statistical data and ready reference answers on information ranging from country profiles, city information, population, geographic areas, state capitals, and more.

Infoplease.com [WWW]

Vast resource of full-text information, statistics, and articles from almanacs, dictionaries, and encyclopedias on the world, sports, entertainment, U.S., people, business, living, society, science, and technology.

Info Service [WWW]

The world's largest reference source with extensive numbers of links for health, fitness, sports, news, business, reference, history, art, weather, etc.

Library Spot - Statistics [WWW]

Provides links to the Bureau of Labor Statistics, FedStats, Environmental Stats from the EPA, and other subject statistical sites on population, criminal justice, health, and more.

Martindale's "The Reference Desk" [WWW]

Covers areas from astrology and housing, immigration and dinosaurs, chromosome maps and postal information, mortgage calculators, college course information, and the periodic table.

A Matter of Fact [OhioLINK users only]

In-depth statistics, charts, essays, tables and abstracts from newspapers, periodicals and the *Congressional Record* on current news and issues.

Measure 4 Measure [WWW]

A collection of interactive web sites that estimate, calculate, evaluate, translate, etc. in areas including science and math, health, finance, and many other miscellaneous converters.

My Virtual Reference Desk [WWW]

Hundreds of links to data from dictionaries, almanacs, calendars, directories, encyclopedias, grammar, languages, news, sports, stocks, statistics, travel, weather, weights and measures and more.

Perry-Castenada Library Map Collection [WWW]

Approximately 1,500 non-copyrighted electronic political and topographic maps for all countries and areas of the world are available at this site. Current and historical collections are available as well as a list of other map sites on the Internet.

Ready Reference List [WWW]

Government documents, info technology, dictionaries, thesauri, phone books, maps, currency exchange, science data, and other reference sources around the world.

Ready Reference Using the Internet [WWW]

Full-text sources and data for hundreds of topics including abortion, acid rain, animal rights, automobiles, calculators, cloning, colleges, crime, drug abuse, employment, income tax, Nobel Prizes, patents, population and almost everything else.

The Reference Desk [WWW]

Features science tables and databases, world maps, language dictionaries, travel, entertainment, journals, current world reports (time, weather, currency exchange, transportation schedules), "what's new" in 249 countries, Web tutorials, computer info, etc.

Social Sciences Data Center [WWW]

University of Virginia has made current versions of the *County and City Data Book* and other important business and social statistical data sources available online.

Statesman's Year-Book

Annual almanac provides statistics and other factual information for the countries of the world including the United States.

Statistical Abstract of the United States

Provides a broad range of useful statistics for political, social, and economic subjects in the United States.

Statistical Abstract of the United States (selected information) [WWW]

Selected frequently-requested information from *Statistical Abstract of the United States*, available online, including tables, state rankings, state profiles, and a guide to *State Statistical Abstracts*, as well as links to other statistical reference sites.

Statistical Reference Index

Indexes and abstracts state and local government materials and publications of non-profit organizations, business associations, universities, and private publishers.

University of Michigan Document Center [WWW]

Links to hundreds of statistical sites arranged by subject including agriculture, business and industry, cost of living, demographics, education, energy, environment, finance and currency, foreign governments, government finances, health, labor, military, politics, science, sociology, transportation, weather, and multi-topic statistical sites.

Statistical Sites - (Bureau of Labor) [WWW]

Links to principal federal and international statistical agencies.

Statistical Sites on the World Wide Web - U.S. Federal Government [WWW]

Links to statistics and information from more than 70 U.S. Federal government and many international statistical agencies.

Statistical Sources

Helps to locate sources for statistics on over 12,000 topical areas.

LexisNexis Statistical [OhioLINK users only]

Corresponds to the print publications: *American Statistical Index* (1983-present), *Statistical Reference Index* (1983-present), and *Index to International Statistics* (1980-present). Accesses state and national governmental statistics, private and international statistics.

United Nations Statistical Yearbook

Summary of international statistics compiled yearly by the United Nations. Topics include agriculture, education, finance, manufacturing, social statistics, and trade.

U.S. Census Bureau [WWW]

Census Bureau page offers access to population, housing, economic data, including portions of the *U.S. Statistical Abstract* and the *County and City Data Book*

U.S. Government Information Statistics [WWW]

Links to statistics in areas such as agriculture, business, crime, education, energy, foreign trade, health, income, labor, population, social security, and transportation, as well as other useful sites for statistics.

USPS City/State/ZIP Code Lookup [WWW]

Searchable database to identify ZIP codes associated with a city and state, or the city and state if you enter the ZIP code.

World Almanac and Book of Facts *[OhioLINK users only]*

Comprehensive and readable statistics on social, religious, political, educational, and many other areas.

People and Organizations

(Biographical Sources, Directories)

Associations Unlimited *[OhioLINK users only]*

Contains descriptions and information for over 80,000 associations worldwide, including national, international, regional, state and local associations.

Biographical Information in OhioLINK Databases *[OhioLINK users only]*

Links to general and subject-specific online OhioLINK databases and help on how to search these resources for biographical information.

Biographical Dictionary *[WWW]*

Presents a searchable database to obtain biographical information of people from ancient times to the present.

Biography and Genealogy Master Index *[OSU users only]*

Indexes dictionaries and directories for basic data such as birth dates, education, and addresses of over 5.5 million people, as well as some sources for extensive essays

Biography.com *[WWW]*

Read first chapters and reviews of current best-selling biographies, search an online database of 15,000 short biographical entries drawn from the *Cambridge Biographical Encyclopedia*, access the A&E and Biography Channel television program guides.

Biography Index *[OSU users only]*

Online index to a variety of biographical materials including periodicals and selected books, essays, biographies and autobiographies, diaries, memoirs, and obituaries.

Biography Resources -- Librarian's Index to the Internet *[WWW]*

Directories, databases, and specific resources can identify about any information needed about people including locations of famous graves, African-American Women writers, biographies of US Congress, people featured on postage stamps, famous birthdays, inventors, Popes, and celebrity obituaries.

Biography Index *[OSU users only]*

Indexes biographical materials in more than 3,000 periodicals, 2,000 books, autobiographies, memories, journals, diaries, letters, interviews, bibliographies, obituaries, biographical novels, drama, pictorial works, poetry, and juvenile literature.

Current Biography Yearbook

Essay-length biographical sketches of prominent people for each year, as well as birth and death dates, portraits, and sources for further reference.

Dictionary of American Biography

Essays covering over 17,000 people who contributed to American life.
Excludes currently living people.

Dictionary of National Biography

Contains essays on 32,000 British or Irish men and women, early settlers in America, and other foreigners who gained prominence in the United Kingdom. Excludes currently living people.

Library Spot - Biographical Info [WWW]

Links to biographical information on women, inventors, authors, presidents, Nobel Prize winners, celebrities and over 20,000 other notable people.

Lives: The Biography Resource [WWW]

Links to thousands of biographies, autobiographies, memoirs, diaries, letters, narratives, and oral histories all searchable by individual, profession, historical era, and geography. Also includes links to general collections, biographical criticism, and special collections.

New York Times Obituaries Index, 1858-1968 and 1969-1978

Covers over 353,000 names from 1858-1968 and 36,000 names from 1969-1978.

Scholarly Societies Project [WWW]

Provides links via 40 subject areas to 1,000 scholarly societies' Internet sites.

SuperPages.com: Connecting Buyers and Sellers [WWW]

Search for addresses and phone numbers of businesses and organizations all over the United States.

U.S. Postal Service: Your Post Office [WWW]

Look up zip codes and postal rate information.

WhoWhere? People Finder [WWW]

Search engine to locate individual e-mail addresses, phone numbers, personal home pages, Companies on the Internet, toll free numbers, and more.

Who's Who in America

Contains basic biographical data on 75,000 men and women of prominence in America.

Who Was Who in America

Brief directory information on people from America and other countries who influenced American life from Jamestown to the recent past.

World Biographical Index [WWW]

Contains about 2.4 million short biographical entries for eminent individuals who lived in North and South America, Europe, Australia, New Zealand, and Oceania, including the person's name, variations of the name, pseudonyms, years of birth and death, occupation, and bibliographic information about the sources used.

Opinions

(Reviews, Editorials)

Book Review Digest [OSU users only]

Online index to reviews for fiction and non-fiction published in the United States. Includes excerpts from reviews.

Editorials on File

Contains reprints of editorials on important national and international news topics selected from a variety of U.S. newspapers.

New York Times Books on the Web [WWW]

Searchable archive of over 50,000 book reviews, author interviews, and book news articles from the newspaper and the *New York Times Book Review* since 1980.

Opinion-Pages [WWW]

Full Text editorial, opinion, and comment pages from English newspapers around the world, searchable by keyword, geographic region, or subject including political and general, business and finance, technology, sports, health, and arts and leisure.

Further Research

(Bibliographies, Research Guides, Other WWW Resources)

Academic Info [WWW]

Extensive list of research web sites searchable by keyword of subject, from African-American history, American literature, and anthropology to law, mathematics, philosophy, reference, women's studies, and world history.

Academic Info: Reference Desk [WWW]

Subject directory of Internet resources for academic research and general information, including academic subject guide, encyclopedias and almanacs, search engines, research tools, academic directories, language, US and World information, health and medicine, current events, people, popular culture, weather, money, and more.

ARBA Guide to Subject Encyclopedias and Dictionaries

Contains excerpts from reviews for over 2500 subject areas encyclopedias and dictionaries taken from the *American Reference Books Annual (ARBA)*.

The Best Information on the Net [WWW]

Reference and research site with hundreds of librarian-selected Web resources on sites by academic major, reference information, full-text books, journals, poetry, news, jobs, disability resources, resources for librarians, and other subject indexes to the Web.

BUBL LINK: Libraries of Networked Knowledge [WWW]

BUBL (Bulletin Board for Libraries) is a subject dictionary maintained to serve the interests of the academic and research community. BUBL is organized by subject, alphabetically, and by Dewey Decimal Classification, and the site may be either browsed or searched for a European slant on quality Internet sites.

Canadian Information By Subject [WWW]

Provides hundreds of subject areas with a large number of links to Internet resources on all aspects of Canada.

The Clearinghouse [WWW]

Provides access to thousands of value-added topical guides to Internet resources.

Cumulative Book Index [OSU users only]

International bibliography of books and other materials published in English.

Digital Librarian: A Librarian's Choice of the Best of the Web [WWW]

Thousands of professionally reviews sites on over 90 subjects including activism, business, chemistry, classics, directories, health, languages, movies, parenting, reference, statistics, Web page design, women's resources, and more.

Dissertation Abstracts [OSU users only]

Indexes doctoral dissertations and some masters theses from universities in the U.S., Canada, and some foreign countries. Abstracts available from mid-1980 on.

Frequently Used Sites Related to U.S. Federal Government Information [WWW]

Huge list of valuable links to government agencies, resources, people, articles, and statistics on current events, business, census, Congress, consumer information, copyright, patents, crime, education, health, laws, natural resources, Executive Branch, scientific/technical reports, Supreme Court, tax forms, travel and voting/elections.

Galaxy [WWW]

Extensive number of links for professionals organized by subject and subtopic (such as reference --> history) and further divided into categories such as academic organizations, collections, directories, non-profit, periodicals, etc.

Global Books in Print Online [OSU users only]

Includes books currently available or soon to be available for purchase. Key words, authors, title words, publishers and other information may be searched.

Hot Sheet [OSU users only]

Hundreds of links to the best web sites and search engines, all arranged by topics, including business, computers, culture, directories, music, news, reference, show business, sports, travel, and more.

INFOMINE: Scholarly Internet Resource Connections [WWW]

Nearly 10,000 scholarly Internet resources are arranged in ten broad topical sections, e.g., "Biological, Agricultural & Medical Sciences," "Social Sciences and Humanities," and "Visual and Performing Arts," searchable by subject, keyword, or title.

IntIndex: An Internet Index [WWW]

Exhaustive list of resources for over 80 subject area including abbreviations, almanacs, biology, careers, copyright, disasters, Internet, movies, patents, religion, transportation, weights, and much more.

Librarians' Index to the Internet [WWW]

Searchable, annotated subject directory of more than 4,000 Internet resources selected by librarians for usefulness to public library users, in areas including arts, automobiles, business, computers, cultures, disabilities, jobs, organizations, recreation, science, sports, women, and much more.

Michigan Electronic Library [WWW]

Links to hundreds of electronic resources, news, organizations, and reference materials for business, children, education, government, politics, law, health, humanities, computers, Internet, library science, news, media, science, social issues, and more.

OPLIN-Ohio Public Library Network [WWW]

Provides access to Ohio public library resources as well as federal, state and regional information materials, Ohio history and information, kids resources and other electronic information such as full text journals, reference materials, newspapers and more.

Pinakes: A Subject Launchpad [WWW]

A collection of meta sites for subjects at art, architecture, aerospace, business, economics, library science, chemistry, education, computer science, engineering, history, language, law, botany, mathematics, biomedicine, philosophy, social sciences, and more.

Reference Shelf - (University of California, San Diego) [WWW]

Wide variety of resources including quotations, dictionaries, biographies, currency exchange rates, tax forms, maps, population as well as links to other notable Internet reference collections.

Reference Sources [WWW]

Hundreds of useful Web research sites on subjects including general reference, general science, biology, chemistry, health, statistics, current events, Internet info, quotations, and other resources by subject.

Search Beat ... The One-Stop Directory [WWW]

Hundreds of subject areas and related interest sites, including categories of newspapers, automobiles, accounting, careers, e-mail look-up, family, history time-lines, music, science, travel, universities, and hundreds of other useful sites.

StudyWeb [WWW]

Searchable list of 47,000 links to research sites on over 40 broad subject categories with hundreds of sub-topic categories.

Virtual Facts on File [WWW]

Huge list of very useful sites for quick facts and general instruction for categories such as dictionaries, maps, biography, encyclopedias, U.S. government, history, Internet, law, libraries, population, weights and measures, world religions, and much more.

Virtual Reference Sites [WWW]

Contains thousands of the most popular information reference locations and tools on the Web, including dictionaries, maps, white and yellow pages, health information, and more.

Wall Street Executive Library [WWW]

Director of over 1,400 of the most relevant and useful business Web sites including links to national and international newspapers; online magazines and journals in news, business, and computers/technology; search engines; directories; public records; download sites; privacy resources; quick reference; encyclopedias and almanacs; business tools; city guides and maps; fast facts; dictionaries; grammar; reference, and much more.

WebGEMS [WWW]

Links by subject to hundreds of informational sites including short articles, larger texts, statistical data, dictionaries, databases, maps, image archives, subject guides, and instructional resources.

WWW Virtual Library [WWW]

Sites are maintained by subject specialists at academic institutions throughout the world for topics such as agriculture, computer science, communications and media, education, engineering, humanities, international affairs, law, business, recreation, science, and more.

Source:

Ohio State University, University Libraries. 2004. "General Resources for All Subjects: Useful Sources for Information in a Search Strategy Format"
<http://www.lib.ohio-state.edu/gateway/bib/general.html> (17 Jan. 2004).

5-2. Types of Internet Resources

Introduction

My hope for this paper/homepage is that by developing a framework for categorizing the different kinds of resources which are available, I will be able to share the growing excitement and enthusiasm for the World Wide Web. I believe that the Internet is the future for institutional research, finance, and facilities planning in higher education. In this age of decreased funding, continued legislative scrutiny, and the student right to know movement, the success of planning lies in our ability to serve as complex information brokers using the best tools available (the Internet). Resources on the Internet may be divided into the following categories:

[Listservs, Newsgroups, and E-Mail Discussion Groups](#)
[Federal, State, and Local Government](#)
[Electronic Publications](#)
[Library Access Catalogs/Literature Searches](#)
[Peer Comparisons](#)
[Admissions](#)
[Factbooks, Management Information Systems, and Intranets](#)
[Policy Studies](#)
[Environmental Scanning](#)
[Professional Development/Associations](#)
[Higher Education Research](#)
[Online Survey/Questionnaire Research/HTML Forms](#)

Types of Resources:

Listservs, Newsgroups, and E-Mail Discussion Groups Many people fail to realize how much listservs and newsgroups have to offer. If you have participated in a listserv, perhaps you have been disappointed because it never talked about anything of interest to you. Most people never become actively involved. Except for some of the assessment-specific listservs, which have been around for a while, most of the general higher education listservs do not live up to their potential. Too often members fail to recognize the purpose of a listserv and have unrealistic or simplistic expectations. If you expect to be able to monitor a listserv for a few months without contributing, you will probably be disappointed. You need to remember that listservs evolve and flow with member contributions. A good listserv will also provide archives for the past few years of postings and you should look at these first if you are going to find everything discussed about the topic you're interested in. Usually, you can download archives from a special FTP site at the listserv or have files sent to you via email. Once downloaded, you do a series of searches for the keywords you're looking for. Good listservs provide their own search indices to help you quickly find the posts you want. Moderators should regularly step in to regulate inappropriate posts, flaming, and to stimulate discussion.

Some listservs are filled with requests for information, announcements, job listings, and similar postings. This is okay if it is a agreed upon purpose of the listserv, i.e.

those specifically designed for discussion about employment opportunities in a field. When there is discussion about a topic in a listserv, it is sometimes uneven, with most members remaining quiet and a few participants dominating the discussion with point-counterpoint posts. Very often, the discussion goes to minor points of interest. Rarely does one find engaging dialogue among senior scholars, institutional researchers, or higher education administrators about substantive topics that involve reflection, synthesis, and analysis. Perhaps this is too much to expect when interests, positions, and backgrounds are so varied. I believe it is because too few people realize the true opportunities which listservs provide and do not invest the time and thought to making them work for their benefit.

One quickly finds that there is no single listserv meeting the complex needs of the IR community. The [Electronic AIR](#) (AIR-L) and SCUP E-Mail News are not discussion groups, but edited, electronic publications. AIR-PAL has had some dialogue, but has not really taken off yet. The six new AIR-specific listservs now offered with help from Bates College, (JCAR-L, Rank-L, IPEDS-L, Stand-L, SRK-L, and Recert-L) are exciting ideas, if institutional researchers use them for their intended purpose. They break the discussion of varied IR interests into specific channels, but they have just begun.

Darell Glenn of West Virginia's SHEEO office produces a feature in the [Electronic AIR](#) called ListWatch, which is designed to "save the time and effort of IR professionals who want to know more about electronic discussion lists before subscribing." This is an invaluable service. There are thousands of discussion lists. Those representing disciplinary affiliations are the most evolved and you need to subscribe your way through a series of listservs to find those which will meet your current needs. Depending on your office's responsibilities, you may find great listservs for assessment, facilities planning, finance, and student affairs. The student affairs and continuing education listservs are more evolved than those for IR and you may need to subscribe to different lists at different times to keep up with each field. The 15,000+ newsgroups which are available depending on your Internet service provider offer an infinite world for discussion. One no longer has to have a separate newsgroup reader installed, since Netscape and other browsers incorporate this into their most recent versions. Few general higher education groups are available, though. ASHE-L has an accompanying newsgroup with many of the same postings. This is an underutilized resource and is somewhat proprietary to the mission and purposes of the HEPROC group of discussion lists. Newsgroups make no demands on listservs and accompanying archives. Many institutions have their own newsgroups for students, research institutes, and other groups and these provide an invaluable and sometime bizarre glimpse into university life. Services have developed on the web which allow search and retrieval of newsgroup posts by sophisticated search criteria. Whether it is an arcane discussion of getting around problems with a software package or learning to use HTML forms, you will find one or more newsgroups dedicated to this discussion. Newsgroups, contrary to listservs, often move very quickly and have very invested participants.

Some institutions participate in special e-mail discussion groups. These are not listservs, in that the distribution of postings is not automatic and there are no archives. Rather, postings are sent to a central e-mail account and distributed to a group listing of e-mail addresses. This allows for strict editing and control of postings. The Southern University Group (SUG) is an example of this pseudo

listserv. Member IR offices respond quickly to requests as part of a tacit agreement with institutional peers. These electronic e-mail groups facilitate numerous types of data exchange, from sharing current IPEDS reports to quick surveys about policy issues.

Two additional types of electronic discussion which are not yet being used much in IR are electronic conferences or forums and chat rooms. Conferences/forums/bulletin boards allow readers to post and reply to messages threaded by topic. These can be seen everywhere from the online edition of the New York Times to the support forum homepages for software packages. They allow you to do your homework by reading what others have written about a topic. I am in the process of developing an electronic message board for VAMAP, the Virginia AIR group. Chat rooms no longer require special add-in software to access them. These live discussion rooms permit users to post comments and read replies in "real time." It is possible to host a virtual conference of IR professionals all clicked in to the same chat room discussing a hot issue. Other untapped possibilities include live, Internet phone conference calls and live video/audio conferencing - all a major departure from the often outdated approach of listserv discussion groups.

Federal, State, and Local Government Almost every federal, state, and local government entity with a LAN has a web presence and staying in touch with what is up there is invaluable. Various federal agencies such as the Department of Education, the National Science Foundation, and the Bureau of the Census offer many levels of information and data electronically. Federal web homepages are beginning to serve as implicit channels for dissemination. You hear about it first on the web. Contact names and phone numbers, forms, data, newsletters, publications, notices of grant awards, and table generators are all available. Large county offices are making serious use of geographical information systems and are sharing these data and analyses on the web. State SHEEOs, purchasing agencies, benefits offices, and legislatures also have a growing presence.

Almost every level of government that your institution interacts with, whether in compliance reporting or political posturing, offers current data to your office via the web. Get to know the U.S. Dept of Education homepages and gopher sites. But more importantly, watch for analyses done by your SHEEO. Be aware of systems for tracking federal and state legislation, finding U.S. and state code, and obtaining electronic versions of critical documents. The many federal locator homepages are a good place to start, but don't hesitate to start trying keywords for hot topics in your favorite search engine. Make a point of documenting every level of homepage that could be of use and share printed copies with key administrators to encourage their use of the web.

Electronic Publications Many publications are available electronically. [Internet Resources for Institutional Research](#) lists at least 28 higher education-related electronic journals, magazines (e-zines), and newsletters, ranging from the [Journal of Higher Education](#) to the [London Times Higher Education Page](#). Campus newspapers, statewide newspapers, and internal employee publications are all available in current editions. The [Chronicle of Higher Education](#) is in a category by itself and is invaluable just for its searchable index of job listings. A daily e-mail feed of headlines is available to keep you on top of current issues. If you have a paper subscription to the Chronicle, you can obtain a free password to use the special Internet site [Academe Today](#). This homepage offers full text electronic versions of

articles and documents referenced in articles, including Supreme Court rulings, budgets, etc. There are also many listings and articles about web resources of interest to faculty and staff. This site also includes a searchable index to the last five plus years of Chronicles, if you are in a hurry to locate an article you saw a year ago but can't find to answer a question that's been raised.

Many specialized online publications are available to help you keep informed about Internet resources, including Web Review, Culture in CyberSpace, HotWired, Netsurfer, and the Scout Report. These provide brief write-ups and links. Most of the major Internet publications such as Net Guide, Internet World, Web Developer, Web Week, and Yahoo Internet Life provide homepages with the links mentioned in their current issue as well as key feature articles (saving you the subscription price).

Library Access Catalogs/Literature Searches The combination of sophisticated Internet search engines like [SavvySearch](#) and [Metasearch](#), public library access catalogs with world wide web access, and unprecedented access to proprietary datasets formerly available only on CD-Rom makes the web a librarian's paradise. When you need to do a literature review, ERIC is still a very good place to start. If your library consortium does not hold the periodical, you can obtain a copy of the articles you are interested in by fax or electronic full text at a nominal fee through services such as Carl Uncover.

No longer is one bound by library software systems. Homepages are available to translate your search criteria into every possible software system, from NOTIS to OCLC. Try the catalogs of major research libraries. Try the periodical catalogs of the Library of Congress. Many libraries have online forms for requesting inter-library loan materials. Given increased journal and monograph prices, it is impossible to expect most libraries to house all of the documents you are interested in. With inter-library loan and searchable catalogs throughout the world, there are no limits to the information you can collect. Sometimes, though, it is easier to go the the reference room of a good library and use the many CD-Roms of literature databases which are available. Many of these are not on the web, except for students and faculty/staff with valid ID numbers. If you hunt around, though, you can usually find a web source for proprietary databases or access to similar databases which will meet your needs.

It is worth trying the same search criteria used for your public access catalog in the search engines for homepages. Other institutions may have put policy studies or data about your topic in their campus wide information systems. The better search engines allow you to search not only web pages, but newsgroups, FTP sites, software archives, and other archives. More than ever, the web offers you access to many levels of information, if you know where to look.

Peer Comparisons The web offers all levels of information and data for peer comparisons, from policy studies to data collection. As part of justifying their existence and service role, every federal agency has moved to make its key datasets available on the web. All of the IPEDS data are available in zipped format for downloading from the web and on CD-Rom. Some datasets are even available with table generators. NCES is experimenting with providing SQL query access for selecting and retrieving subsets of data. The many datasets in the CASPAR system are available for downloading and include software for selecting records, generating reports, and exporting data.

SHEEOs, like the feds, are trying to show the payoff from expensive unit record reporting by making summary reports available on the web. In the past year, many have moved from simply putting up SAS output as pre-formatted text to producing HTML tables of data with a nice graphical layout.

As of the end of April, 1996, at least 100 institutions have homepages for their IR offices. Many include versions of an electronic factbook and this is a great source for peer comparison data as well as policy information. Keep a lookout for world wide web pages for your peers, but don't overlook existing gopher sites, where institutions as recently as 1994 were making substantial investments of time and resources in a menu-driven approach to campus wide information systems. If your project concerns student affairs, assessment, budget, financial aid, admissions, or affirmative action, you may find homepages for these offices at your peer institutions. There are efforts in place to do for these types of offices what [Internet Resources for Institutional Research](#) tries to do for IR.

Keep going back to the homepages for your peers, as they are evolving and working like you to put up as many documents as possible to broker information.

Admissions Finally there is some payoff to the hundreds of hours spent completing college admissions guide questionnaires. Each of the main guides has a homepage, where you can view the results of your submissions and obtain data on peers. The best of these homepages provide links back to your institution, or at least a special write-up from the admissions office. These homepages are great for investigating program offerings at peer institutions. They allow you the opportunity to view your institution the way prospective students and parents view it if they are on the web. CD-Rom versions of these pages are also available, with video and audio clips and are using the best multimedia tools available within an HTML-like authoring environment.

Factbooks, Management Information Systems, and Intranets As institutional research and planning offices have evolved from gopher menu-based systems to homepages using javascript, frames, and CGI scripts for counters and guest log books, there is much discussion about what information and data to make available on the web. There is pretty easy acceptance for the idea of putting up an electronic version of the factbook, and this is where many IR offices get started. But some factbook tables such as admissions yield rates and SAT scores can quickly become political controversies, given that any legislator, journalist, or board of trustees member can quickly access them. Educating your major administrators about your homepage can raise more problems than solutions.

One way to break apart this discussion is to consider the difference between sharing reports on the Internet in officially sanctioned homepages and offering what is called an Intranet. Both allow you to bridge Unix, Apple, and PC platforms with a graphical user interface. But the Intranet is a point of departure for sensitive, political information. I believe that the Intranet will become the single greatest tool for institutional research in the 21st century. Institutions will be able to provide users with various web browsers access to live and extract-based data warehouses, sensitive documents, internal publications, policy manuals, and query access to what were once client-server applications for student, admissions, human resource, financial, space, and other sophisticated management information systems.

A recent online version of the Forrester Report describes how "Over the next four years, the role of proprietary NOS (network operating system) technology will fade as the Intranet is enhanced with essential standards-based services" (Pincince et al, 1996, p. 1). Directories, e-mail, files, printing, and network management are becoming web processes and SQL query tools such as Cold Fusion for ODBC-compliant databases are now available for various platforms. This represents a "virtual" paradigm shift in using the Internet, with unparalleled access to data and services. It is the role of institutional researchers to serve as the key information brokers for the Internet and Intranet at our institutions.

When you think about looking for peer comparison data on the web or distributing an report in HTML table format as part of your IR office homepage, consider the role of the Intranet. To survive, many IR professionals have had to decentralize some of their functions in data administration and clean-up and become very proactive in reporting. The web offers immediate, low cost distribution and control of external and internal data with surprisingly low levels of programming skills. Not that the web will reduce the amount of data administration which needs to take place, but that the vision of client server architecture for distributed information systems may only be realized in the context of the web and that this is absolutely necessary if institutions are going to keep pace with their information infrastructures.

Policy Studies In conducting analysis of a proposed policy, there are a number of places to turn to on the Internet. Listservs and newsgroups offer an ongoing dialogue, though you cannot expect them to immediately address your issue and may need to review the archives for previous discussions which are pertinent. If you have a network of peer institutions set up with an informal e-mail discussion group, this is the best place to turn for quick responses to an informal survey about a policy question. Using the search engines, you may find examples of policies published on the web and perhaps even committee or task force reports which provide unique insights into the policy development process.

There may be online publications which address your topic. Certainly, you can use ERIC and other literature databases to find articles, books, and/ or unpublished conference papers. When you have located an author who has written about the issue or an institution which has implemented a policy, don't hesitate to e-mail them directly. While some scholars have e-mail addresses that are used only by their graduate assistants or support staff, many others and many institutional researchers are active users of electronic mail and will respond quickly and willingly to your request for information. Often it is possible to engage in a series of posts with a colleague over the course of a day about a project, moving from an initial description of the problem to synthesizing the literature, analyzing alternatives, and preparing recommendations. I find that the immediacy and intimacy of e-mail work to one's advantage in fostering an online one-to-one discussion.

Environmental Scanning Jim Morrison's work in environmental scanning is available at his homepage [On the Horizon](#), with links to various types of Internet resources and abstract-like briefings on environmental scanning issues. When the tools for environmental scanning meant paying attention to newspaper clippings, the Chronicle of Higher Education, and everything else listed in [Megatrends](#), it was very difficult and time consuming to get a handle on this process and implement it consistently. With the advent of the world wide web, scanning takes on a whole new meaning.

Just as the [CRAYON](#) service allows you to create your own newspaper by picking the choices of online newspapers, comics, and features you are interested in, some of the proprietary services like PointCast tailor individual news items to your interest (usually for a fee). Using the many free search engines and catalogs (such as [Yahoo](#)), you can usually get the latest on a topic within minutes. By saving the links you find in a file, you can create your own homepage of resources on the topic with little effort and share this on your IR homepage.

For state-wide higher education issues, at least one or two daily newspapers usually cover the state legislature and each branch of state government has its own set of special homepages. The bottom line on scanning - the world is now wide open because of the Internet, with low or no cost to your IR office, if you are willing to spend the time tracking the issues of interest to your institution. Even if you don't implement an ongoing scanning process, you can make up for it for special projects by using the Chronicle's search engine for back issues which is included in [Academe Today](#) and using the many subject catalogs and IR/planning resource homepages which are being created.

Professional Development/Associations Over 50 higher education-related, professional associations are listed in the [Associations](#) index of [Internet Resources for Institutional Research](#). These do not include the many discipline-specific organizations with a web presence. Each association offers a homepage or gopher site with professional development resources, including information about membership, upcoming conferences, and publications. Most offer their own list of important links to Internet resources. A few offer searchable databases of monographs. It is important to become familiar with the associations for your area of work responsibilities. While one can read association journals such as [Planning for Higher Education](#) without being a member of [SCUP](#), you couldn't get to know the inside of the association without attending its conferences and membership. Using association homepages is the next best thing. One reason that associations make the investment is to attract prospective members and offer member services at low cost.

These homepages are really invaluable. They allow you to view conference programs in advance to help you decide whether you want to attend a conference. For a conference such as the AIR Forum, associations typically provide detailed information and links to homepages for conference hotels, lists of attractions to visit, and weather reports. Even if you do not plan on attending a conference, access to an electronic version of the conference program allows you to find colleagues who are presenting papers or panels about topics you are interested, whom you can contact on your own for help with projects. Association homepages provide access to electronic newsletters and order forms for other publications. In these pages you will find e-mail addresses and contact information for association committee members and elected officers, along with a calendar for future conferences, workshops, and other professional development opportunities.

Some of the AIR state organizations such as CAIR, the [California Association for Institutional Research](#), post a list of upcoming conferences as part of their homepage and listserv. The [Chronicle of Higher Education](#) offers a weekly section on upcoming conferences that is maintained more extensively in its subscription site [Academe Today](#). Regardless of the project area, association homepages offer much to institutional researchers in their search for Internet resources to support decision-making.

Higher Education Research Institutional researchers need to stay at least aware of current research in higher education. Like IR, scholarship in this field addresses many topics, from faculty salary equity regression studies to cost of instruction models. There are a number of ways to keep up on research and the Internet offers some exciting ways of doing it. Perhaps the easiest is to use ERIC to look at current articles published in a topical area. The Carl Uncover service will send you the table of contents for the journals you are interested in as soon as a new number is published. Or, you can always subscribe to Higher Education Abstracts.

As in the discussion on associations, there is much to be learned from monitoring the homepages for ASHE and AERA and their accompanying scholarly listservs. Conference information is particularly useful for keeping track of who is doing work in certain topical areas, for example who is doing the most interesting research on faculty workload and presenting it at conferences. If your project concerns student affairs, assessment, or legal issues, there are plenty of other homepage resources available in these specialized areas. Some of the doctoral programs in higher education administration maintain their own homepages with useful information about the field. Other homepages for research centers such as the [Higher Education Research Institute](#) at UCLA, the [National Center for Higher Education Management Systems \(NCHEMS\)](#), and the [National Center on Postsecondary Teaching, Learning and Assessment](#) at Penn. State provide reports of their grant activity for dissemination to the field.

Using the many Internet e-mail directories which are available and the homepages for schools of education, you will find e-mail addresses for the scholars doing work on the topics you are interested in. Don't hesitate to e-mail someone with a question - but do your homework first and make good use of the person's time by not asking questions you could answer yourself if you did a decent literature search.

Online Survey/Questionnaire Research/HTML Forms If you spend much time on the web, you will encounter a reader survey. The forms capability of web browsers with HTML Level 2 and above offers a phenomenal and inexpensive institutional research tool. The next time you want to conduct a survey, whether of students, staff, or colleagues at peer institutions, try developing a survey form on the web. The HTML coding is easy.

Save a survey you like to disk, then look at the use of select and value statements to learn how it's done. I developed a [survey form](#) to collect case studies for this paper. I used a CGI script written in C that I downloaded from another site to put the survey responses into HTML format. Then I printed the results and used content analysis for the coding. You don't have to go to this much trouble and my approach wasn't the best way, just what I knew how to do at the time. Using software such as WebForms or Arachnid's mail utilities, you can do surveys without CGI bin access or programming because results are e-mailed to you. The software looks on your mail server and separates form responses from mail, bringing the surveys into a table-like format which you can then export to a database for analysis. This is a great way to handle ad hoc requests and track how well you're able to complete them.

The online malls with secure ordering forms from shopping carts of items you select from a catalog are driven by forms and scripts written with C, Perl, and products such as Cold Fusion. You can offer web access to any database for querying, updating data, or creating new records (what a survey really is in the first place). Begin to pay attention to search engines, online ordering, and other query forms at your favorite web sites to see what is possible with scripts. In the homepage [Internet Resources for Institutional Research](#), I have several different types of scripts: (1) [a script for completing a questionnaire](#); (2) [a script to add your favorite link](#) (really another survey); and (3) [a script to search links on the homepage](#). Think about ways in which your office can include forms and the different types of scripts.

Source:

"Types of Internet Resources" <http://airweb.org/links/reports/types.html> (24 Jan. 2004).

5-3. Government Information

- [Basic information about government publications](#)
- [Carrier Library's documents collection](#)
- [How to find government information in:](#)
 - o agency publications
 - o legislative documents
 - o court cases
 - o hearings
- [Assistance](#)

Basic information about government publications

Government information includes any publications issued by local, state, national, or international governments. The documents collection has information on topics ranging from AIDS to the environment. In fact, it is hard to think of a topic you would **not** find in government documents.

Government information includes laws, regulations, statistics, consumer information, and much more. Government information is generally considered to be reliable.

Carrier Library's documents collection

Carrier Library contains a sizeable collection of federal and state government documents. As a federal government depository, Carrier Library receives about fifty percent of the government agency publications as they are produced and a complete collection of Congressional hearings since 1976. Carrier Library is also a depository for Virginia state government documents.

Both the U.S. and Virginia documents collections are located on the first floor. U.S. documents are classified by [Sudocs](#) number. Virginia documents are arranged by department or agency. There is no index for Virginia state government documents, but you may wish to browse through this collection on Stack 2B.

Most government documents circulate, just like books.

- [Locations](#) of important government documents
- [Map](#) of government documents area

In addition to the documents collection in the library, you can find many federal and state documents on the Internet.

How to find government information

The best way to find government information in agency publications, legislation, court cases, and hearings is to use the following sources:

- [LEO Library Catalog](#)
Federal documents in Carrier Library are cataloged in LEO. Search by topic and Limit to "Where Item is Located" - Gov't Documents
- [GPO Access](#)
Search for information on your topic in Congressional bills, Congressional Record, U.S. Code, Federal Regulations, Federal Register, U.S. Budget and more. You may download the full text of a bill or law.
- [LexisNexis Congressional](#)
Full-text of bills, laws, regulations, and much more.

- [U.S. Constitution, Bill of Rights, and Amendments](#)
- [U.S. Code](#) - the body of law of the United States
- [Code of Virginia](#) - searchable
- [Virginia General Assembly](#)
Bills and resolutions by session. Great place to check on the status of VA legislation.
- [LawGuru](#)
Full text of Virginia Supreme Court opinions, Virginia Code, and Virginia General Assembly Bills, as well as similar documents for 47 other states and the United States.
- [U.S. Supreme Court Decisions](#) - 1990 -
- [Selected Historic U.S. Supreme Court Decisions](#)
For earlier decisions look in U.S. Reports (US) or U.S. Supreme Court Reports (LEd2d) in the Law Library.

Assistance

Ask for help in finding government documents on your topic at:

- **Reference Desk** (568-6267) - Open most hours the library is open.
- **Documents Office** (568-3827) - Open 8:00-4:00 weekdays.

Source:

James Madison University, JMU Libraries. "Government Information"
<http://www.lib.jmu.edu/library/gold/modules.htm> (17 Jan. 2004).

5-4. Statistical Information

Statistics are a valuable kind of information in research because they can provide data for making comparisons and determining historical trends. When you write a term paper, your argument will in many cases be more convincing if you can use statistics to back up what you say.

The United States government is one of the largest and most important publishers of statistical information. Many of its agencies and departments have statistical divisions which regularly publish statistical abstracts and digests of basic socio-economic data about the United States.

One of the best sources of statistical information published by the U.S. government is described below:

- **Statistical Abstract of the United States** (Ref HA202 A35)

Published annually since 1878 by the U.S. Bureau of the Census, Statistical Abstract presents quantitative summary statistics of the U. S. government as well as some private agencies. It covers social, economic, and political aspects of the country such as population, vital statistics, immigration, education, labor, and transportation. Statistics given in the tables cover a period of several years, usually about 15 or 20. To find if a particular subject is covered in Statistical Abstract, use the detailed index in the back of the book.

In addition to Statistical Abstract of the United States, a number of excellent statistical sources can be found in book form and on the Internet:

- **America Votes** (in book form at Carrier Library - Ref JK1967 A18)
- **American Statistics Index** (in book form at Carrier Library - Index Table 3)
- **Accident Facts** (in book form at Carrier Library - Ref HA217 .A4)
- **Book of the States** (in book form at Carrier Library - Ref JK2403 B6)
- **Budget of the United States** (in book form at Carrier Library - Ref HJ2051 A5975)
- [Bureau of Justice Statistics Home Page](#)
- **Business Rankings Annual** (in book form at Carrier Library - Ref HG4050 B88)
- **Business Statistics of the United States** (in book form at Carrier Library - Ref HC101 B87)
- **County and City Data Book** (in book form at Carrier Library - Ref HA202 A36; or the CD-ROM on the Government Documents CD-ROM workstation adjacent to the Reference Desk).
- **Datapedia of the United States** (in book form at Carrier Library - Ref HF202 K87)
- **Economic Indicators Handbook** (in book form at Carrier Library - Ref HC103 E26)
- [Economic Statistics Briefing Room - White House](#)
- **Educational Rankings** (in book form at Carrier Library - Ref LB2331.63 E34)
- **Europa World Year Book** (in book form at Carrier Library - Ref JN1 E85)
- **Facts on File** (in book form at Carrier Library - Ref D410 .F3)

- **International Energy Statistics Sourcebook** (in book form at Carrier Library - TJ163.13 I575)
- **International Marketing Data and Statistics** (in book form at Carrier Library - Ref HA42 I56)
- **Morbidity and Mortality Weekly Report** (in book form in the Carrier Library - Ref Sup. Docs. HE20.7009) as well as on the [Internet](#).
- [National Center for Health Statistics](#)
- **Nutrition Tables** (in book form at Carrier Library - Ref TX551 S735)
- **Sourcebook of Criminal Justice Statistics** (in book form at Carrier Library - Ref HV7245 N37) and on the [Internet](#)
- **Statistical Abstract of Latin America** (in book form at Carrier Library - Ref HA935 S8)
- **Statistical Handbook on the American Family** (in book form at Carrier Library - Ref HQ536 S727)
- **Statistical Handbook on Violence in America** (in book form at Carrier Library - Ref HN90 S833)
- **Statistical Record of Children** (in book form at Carrier Library - Ref HQ767.8 S73)
- **Statistical Record of Health and Medicare** (in book form at Carrier Library - Ref RA407.3 S78)
- **Statistical Record of Older Americans** (in book form at Carrier Library - Ref HQ1064 V5 S697)
- **Statistical Record of the Environment** (in book form at Carrier Library - Ref TD180 D37)
- **Statistical Record of Women Worldwide** (in book form at Carrier Library - Ref HQ1150 S73)
- **Uniform Crime Reports or Crime in the United States** as it is also known (in book form at Carrier Library - Ref HV6787 A3)
- [U.S. Bureau of Justice Statistics](#)
- [U.S. Bureau of Labor Statistics](#)
- [U.S. Centers for Disease Control](#)
- [USA Statistics in Brief](#)
- **Virginia Statistical Abstract** (in book form at Carrier Library - Ref HA686 V57)
- **Vital Statistics of the United States** (in book form at Carrier Library - Ref HA203 A22)
- [World Factbook \(CIA\)](#)

Source:

James Madison University, JMU Libraries. "Statistical Information"
<http://www.lib.jmu.edu/library/gold/modules.htm>

5-5. Database Basic Contents

- [What is a Database?](#)
- [Electronic Database Searching](#)
- [Choosing Search Terms](#)
- [Live Database Search](#)
- [Keyword / Subject Searching](#)
- [Limiting Your search](#)
- [Expanding Your Search](#)
- [See What You've Learned](#)

What is a Database?

A [database](#) is any organized collection of information. Some examples of databases you may encounter in your daily life are:

- a telephone book
- T.V. Guide
- airline reservation system
- motor vehicle registration records
- papers in your filing cabinet
- files on your computer hard drive.

Some examples of databases you may encounter when using library resources are:

Encyclopedias 	SABIO Catalog	Electronic Journals 
Expanded Academic Index	World Wide Web	Magazines

Below are some ways information may be organized:

- a table of contents
- alphabetical order
- numerical order
- an [index](#)
- subject categories

Electronic Database Searching

What is an electronic database?

An electronic database is any collection of information that is specially organized for

rapid searching by a computer. It may be stored on a [CD-ROM](#), a computer disk, laser disk, or magnetic tape. Some examples of electronic databases are:

Encyclopedia Britannica Online

SABIO Online Catalog

Academic Search Premier

PsychInfo

National Newspaper Index

How do you search an Electronic database?

A good search strategy is one key to successful searching.

Hint: Think about your topic. Is it too broad or unfocused? You can narrow your topic by asking yourself some pointed questions.

Example:

You can go from the very broad topic of **alcohol abuse** to the very focused search question

Why has there been an increase in binge drinking among fraternity and sorority students in the United states over the past three years?

Just ask yourself some of the following questions:

What is a search strategy?

A search strategy is a search plan. This plan will help you identify key words or ideas to use when searching on your topic.

Example: You are looking for information on sorority and fraternity initiation or hazing.

If you chose some of these words then you have identified **key terms or ideas to use in your search strategy.**

**hazing
sorority
fraternity
initiation**

Choosing Search Terms

You are looking for information on the psychological effects of video games on students. Some search terms are taken directly from your search question.

What are the **psychological effects of video games on students?**

Here are some possible **key words or ideas: video games, psychological effects, students**

Sometimes there are key words, concepts or ideas which are **not** stated. These terms can include synonyms, or related terms.

Question ?

What effect does the **media** have on perceptions of ideal weight and physical attractiveness in the United States?

What are some words that are *suggested by* or *related to* **media**?

These are some possibilities: **newspapers, television, radio, magazines, billboards, Internet advertising**

Back to our question: ?

What effect does media have on perceptions of **ideal weight** and **physical attractiveness** in the U.S.?

What are some words that are *suggested by* or *related to* **ideal weight** or **physical attractiveness**?

Go ahead and brainstorm!

Here are some synonyms, related terms or ideas you may have considered:

<i>beauty</i>	<i>tattoos</i>	<i>Good looking</i>	<i>sex appeal</i>	<i>obesity</i>
<i>celebrity</i>	<i>peer pressure</i>	<i>Madonna</i>	<i>Brad Pitt</i>	<i>handsome</i>
<i>body piercing</i>	<i>fashion models</i>	<i>physical attractiveness</i>	<i>body building</i>	<i>Cosmo Magazine</i>
<i>aging</i>	<i>hair</i>	<i>sex symbol</i>	<i>phen-fen</i>	<i>buff</i>
<i>steroids</i>	<i>anorexia</i>	<i>pumping iron</i>	<i>thin</i>	<i>bulimia</i>
<i>sensuality</i>	<i>diet</i>	<i>self image</i>	<i>advertising</i>	<i>exercise</i>

Now at last you will do a real live Keyword Search in Expanded Academic Index Before you search...

- Choose a topic
- To focus your topic, ask yourself these questions: Who? What? Where? Why? Which? When?
- State your topic as a sentence or a question
- What are the keywords or **ideas** in your sentence or question?

Begin your search... [Click here to start your search in Expanded Academic Index](#)
(Please select the **Keyword** box when searching) **Important note:** When your search is finished, click on your browser's **Back Arrow** to return to **RIO**.

Doing a Basic Search by Keyword or Subject

There are two basic ways of searching for subject information in most electronic databases:

- You just completed a keyword search by using the words that appear in your search question. **[Keyword searching]**

Keyword Searching - "You Say"

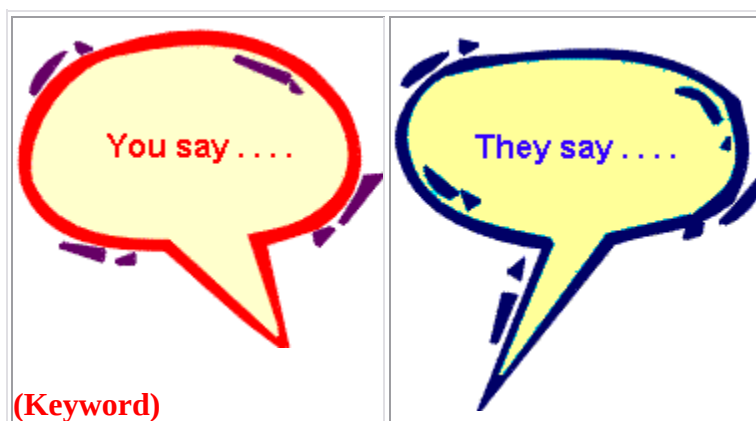
So, if you are interested in doing a search on "*the history of African Americans in film and the film industry in the United States*," you can do a **Keyword** search using the words that appear in your own search question or statement such as: **film, films, film industry, blacks, African Americans, etc.**

- You can also do a subject search by using words that have been officially assigned by an indexer or cataloger to describe the subject. **[Subject searching]**

Subject Searching - "They Say"

Or, you can do a **Subject** search by using words that have been officially assigned by an indexer such as: **Afro-Americans in motion pictures - United States - History.**

In our SABIO catalog, when you look for information by **Subject**, you will only find the terms **they** say!



	(Subject)
Movies	Motion Pictures
Cars	Automobiles
Attorneys	Lawyers
TV	Television
Magazines	Periodicals

Hint: It helps to do a **Keyword** search first. Then look to see what **Subjects** are used by the index or database. (see below)

The screenshot shows a search interface with a search bar containing 'blacks film' and a 'Search' button. Below the search bar, the results are displayed in a list format. The 'Subjects' field is highlighted with a red oval, showing two subject terms: 'Afro-Americans in motion pictures' and 'Motion pictures -- United States -- History'.

Location	Main
Author	Pines, Jim
Title	Blacks in films : a survey of racial themes and images in the American film
Publisher	London : Studio Vista, 1975.
Call #	PN1995.9.N4 P5
Subjects	Afro-Americans in motion pictures Motion pictures -- United States -- History

Limiting Your Search

Most electronic databases have features which help you to **limit** your search.

Limit by combining terms with the Boolean Operator "AND"

This is one of the most powerful ways to limit your search.

Note: Click on your browser's **reload** button to repeat this animation.

- Suppose you are looking for information on body image and how it is influenced by the media.
- Using **AND** will lead you to articles which have information on **both body image AND media**.
- In most databases you can use the **AND** when searching either by Subject or Keyword.

Limit by excluding terms with the Boolean Operators "NOT" or "NO"

You can use the **NOT** or **NO** operators to **exclude** specific terms from your search.

- Let's say you are looking for articles on *anorexia nervosa*.
- If you do **NOT** want the articles you find to discuss bulimia, then your keyword search might look like this: **anorexia nervosa NOT bulimia**.

In most [databases](#) you can use the **NOT** or **NO** when searching by either [Subject](#) or [Keyword](#).

Limit by material type

In the SABIO catalog, as well as many other databases, it is possible to **limit** your search to a specific material or format, such as a book, map or record.

Once you get your list of hits, just click on the limit button in SABIO (below)



Then, using the pop-up box for **material type**, you can choose from among the list of formats.

MATERIAL type:

Book,
Serial,
Score, Map,
Video/film,
Other

Hint: By pressing on the pop-up box when you are actually doing a search, you can choose a format or material type.

Limit by year

Let's say you searched the Sabio catalog under the subject: beauty, personal. You can limit your search to a **specific year** or a **range of years**. You can limit your search to **before** or **after** a specific year.

Below is an example of a search on **beauty, personal** which has been limited to items published after 1990, but before 1997.

You searched: WORD: **beauty personal**
524 entries found

[Start Over](#) [Previous Page](#)
[Nueva Búsqueda](#) [Página Anterior](#)

Please select criteria to limit by:

Words in the article TITLE

YEAR of publication: After and Before

Limit/sort items retrieved using above data

Limit by Grouping Terms

In some databases you can also limit your search by grouping words together, to search for phrases such as:

- *ideal weight*
- *physical attractiveness*
- *pretty as a picture*
- *mirror, mirror on the wall.*

If you are using a World Wide Web [search engine](#) such as Alta Vista, use quotation marks to search for phrases. Example: **"to be or not to be"**

Too few results?

Expand Your Search!

[*truncation or "wild cards"](#)

[*synonyms](#)

[*related terms](#)

[*logical operators - the Boolean "OR"](#)

[*spelling - check for accuracy and variants](#)

[*other indexes](#)

[*do the same search again](#)

[*is there a thesaurus?](#)

"wild cards" are symbols that take the place of letters. They may appear either inside a word or at the end. The term **"truncate"** (to shorten by cutting off) is sometimes used. Each database uses its own symbol:

? \$! or *

The one used most commonly is the asterisk *****.

Some examples:

wom*n will find woman, women, or womyn

diet* will find diet, diets, dietary, dietician, dieting, etc.

cat* will find cat, cats, catatonic, cataclysm, catechism,

cat-**o-nine-tails**, catt**ails**, cater**pillar**, catch-**22**, etc., etc., etc.

Using "**wild cards**" can make a big difference in the number of results.

To find journal articles about [anorexia](#) in *PsychInfo*, a psychology index, searching with these keywords finds:

[anorexics](#) - 44 articles

[anorexic](#) - 493 articles

[anorexia](#) - 2, 698 articles

Using the **truncated** search term [anorexi*](#), one finds 2,799 articles, including titles in 9 foreign languages, and with several different word endings.

ANOREXIGEN is in 1 title.
 ANOREXIGENIC is in 25 titles.
 ANOREXIGENOS is in 1 title.
 ANOREXII is in 1 title.
 ANOREXIQUE is in 6 titles.
 ANOREXIQUES is in 5 titles.
 ANOREXIS is in 1 title.
 ANOREXI* is in 4330 titles.
 There are 4330 entries with ANOREXI*.

PsycINFO at the University of Arizona Library

Here are some examples of different word endings for "anorexi*."

Next Page
 Extended Display
 Start Over
 Search Again
 Limit/Sort

People don't always use the same words to name things.

Try using **synonyms** for your search terms. Here are some examples:

overweight = obese

flu = influenza

car = automobile

road = street = highway = avenue

help = assistance = aid

germs = bacteria

doctor = physician

lawyer = attorney

Think of **related terms**, words that are related to the original search word; they will often turn up more information.

If you are wanting articles about **personal beauty**, what might be some useful **related terms**?

Here are some possible choices

beauty contests

physical attractiveness

body image

handsome

self concept

You probably thought of some others.

Using the Boolean "**OR**" operator to link all the terms related to **personal beauty** will find many more results.

beauty contests **OR** *personal beauty* **OR** *physical attractiveness* **OR**
body image **OR** *handsome* **OR** *self concept*

in *PsychInfo* will find over 3,000 titles !

(This is more than anybody wants to know about **personal beauty**, but it shows the power of the "**OR**" operator.)

Always be aware of **spelling**

make sure you spell **correctly**,

and consider **variant** spellings for words.

color = colour neighbor = neighbour

Hint: A helpful reference for American-to-British English spelling equivalents is found

in [Britannica Online](#). (For U of A customers only)

Try other indexes.
But.remember,

>>>**Where** you search does make a **difference**
in the kinds of results you find!<<<

The titles listed below describe different kinds of information about
obesity... depending on the kind of index.

ERIC	Education	"School-based Weight Management Services"
Compendex	Engineering	"Childhood Obesity Prediction with Artificial Neural Networks "
Academic Search Premier	General	"Land of the Fat"
AGRICOLA	Agriculture [includes Veterinary Medicine]	"Body Weight as a Predisposing Factor for Humeral Fractures in Cocker Spaniels "
Handbook of Latin American Studies	Latin America	"A Study of Obesity in the Caribbean "
Anthropological Literature	Anthropology	"Modernization, Migration and Obesity Among Samoan Adults"
PsycINFO	Psychology	"Cause and Effect Beliefs and Self-Esteem of Overweight Children"

Sometimes the computer is not "awake" to receive your search the first time around, or doesn't have any ports available for new searches. Just in case, try the same search again **immediately**.

Is there a thesaurus in this database ? ? ?

A thesaurusnot a tyrannosaurus ! ! !

Hint: Look in the **FAQ** (Frequently Asked Questions)
or the **Help** screen
or the Database **Guide** . . .

You'll be glad you did !

Internet Addresses

U.S. Mail Addresses
<i>Mary Smith 101 Main Street Tucson, AZ 85716</i>

- A standard U.S. Mail address, like the one shown above, starts at the most local part of the address, the house number and works outward.

Internet E-mail address
<i>msmith@aruba.arizona.edu (username@server.institution.domain)</i>

- An E-mail address (above) does the same thing. The last part of the E-mail address is sort of like a zip code system for the Internet. This can help you interpret where an E-mail message comes from. Here are several major domains:

.edu - for educational institutions	.gov - for government offices
.com - for commercial businesses	.mil - military
.org - non-profit organizations	.net - similar to .com (for businesses)

- Most U.S. Internet addresses do not end with a country code (such as .us) Most sites in other countries end in a country code. For example .ca is for Canada, .fr is for France, and .jp is for Japan.
- World Wide Web Addresses -- Are also called [URL's](#) (uniform resource locator) and usually begin with **http://**

World Wide Web Address
http://www.library.arizona.edu

- The Internet began as a decentralized government network with no central control, so that it might withstand a military attack.
- Because no one is in charge, users adhere to an informal group of rules known as [netiquette](#) or network etiquette.
- For example, [spamming](#), sending unwanted E-mail messages to many people at once, is considered bad netiquette.
- The most widely used method of accessing the Internet today is known as the [World Wide Web](#) or "The Web," for short. The Web organizes information on the Internet from a variety of sources using [hypertext](#) - a series of links that connect information from all over the globe. Web pages are written in the Hyper Text Mark-Up Language or [HTML](#) .
- The software programs that we use to explore the Web are called [browser](#) software programs and the two most widely used are Netscape Navigator and Microsoft's Internet Explorer.

Navigating With the Netscape Browser

Back/Forward - moves back to previous or forward to next screen.	Reload - redisplay the current page. Useful when part of a page loads.	Home - returns back to the page you started from.	Search - provides links to tools to find information on the Web.	Print - lets you print the information on the page currently displayed.
--	--	---	--	---

Bookmarks - allows you to Save, for later retrieval, your favorite Web addresses.

Location - displays the URL or Web address of the currently displayed page.

File - This displays a drop-down menu that allows you to Save, Print, Exit the program, etc.	View - Lets you set which tool bars will show on the screen; allows you to view the HTML source code.	Help - Links to a variety of Help pages for using the Netscape software.
--	---	--

Edit - A drop down menu allows you to cut and paste, find a word on the current page, set up Netscape preferences, etc.

Go - Displays the path of Web pages taken to get to the page you are currently on. This is a useful way to go back several pages at once.

Source:

Arizona Board of Regents, The University of Arizona Library. 1998. "Database Basics Contents" <http://www.library.arizona.edu/rio/db1-1.html> (17 Jan. 2004).

5-6. What Is the Internet, the World Wide Web, and Netscape?

What is the Internet?

What is the World Wide Web and What Makes It Work?

What is Netscape and Internet Explorer?

Getting Connected to the Internet

What is the Internet?

The Internet is a network of networks, linking computers to computers sharing the TCP/IP protocols. Each runs software to provide or "serve" information and/or to access and view information. The Internet is the transport vehicle for the information stored in files or documents on another computer. It can be compared to an international communications utility servicing computers. It is sometimes compared to a giant international plumbing system. The Internet itself does not contain information. It is a slight misstatement to say a "document was found *on* the Internet." It would be more correct to say it was found *through* or *using* the Internet. What it was found in (or on) is one of the computers linked to the Internet.

Computers on the Internet may use one or all of the following Internet services:

- Electronic mail (e-mail). Permits you to send and receive mail. Provides access to discussion groups often called Listservs® after the software they operate under.
- Telnet or remote login. Permits your computer to log onto another computer and use it as if you were there.
- FTP or File Transfer Protocol. Allows your computer to rapidly retrieve complex files intact from a remote computer and view or save them on your computer.
- Gopher. An early, text-only method for accessing internet documents. Gopher has been almost entirely subsumed in the World Wide Web, but you may still find gopher documents linked to in web pages.
- The World Wide Web (WWW or "the Web"). The largest, fastest growing activity on the Internet.

What is the World Wide Web and what makes it work?

The WWW incorporates all of the Internet services above and much more. You can retrieve documents, view images, animation, and video, listen to sound files, speak and hear voice, and view programs that run on practically any software in the world, providing your computer has the hardware and software to do these things.

When you log onto the Internet using Netscape or Microsoft's Internet Explorer or some other browser, you are viewing documents on the World Wide Web. The current foundation on which the WWW functions is the programming language

called HTML. It is HTML and other programming imbedded within HTML that make possible Hypertext. Hypertext is the ability to have web pages containing links, which are areas in a page or buttons or graphics on which you can click your mouse button to retrieve another document into your computer. This "clickability" using Hypertext links is the feature which is unique and revolutionary about the Web.

How do hypertext links work? Every document or file or site or movie or soundfile or anything you find on the Web has a unique URL (uniform resource locator) that identifies what computer the thing is on, where it is within that computer, and its specific file name. (More explanation on the structure of URLs.) Every Hypertext link on every web page in the world contains one of the URLs. When you click on a link of any kind on a Web page, you send a request to retrieve the unique document on some computer in the world that is uniquely identified by that URL. URLs are like addresses of web pages. A whole cluster of internationally accepted standards (such as TCP/IP and HTML) make possible this global information retrieval phenomenon that transcends all political and language boundaries.

[Return to Outline](#)

What is a Browser? What is Netscape and Internet Explorer?

A browser is a computer program that resides on your computer enabling you to use the computer to view WWW documents and access the Internet taking advantage of text formatting, hypertext links, images, sounds, motion, and other features. Netscape and Internet Explorer are currently the leading "graphical browsers" in the world (meaning they facilitate the viewing of graphics such as images and video and more). There are other browsers (e.g., Macweb, Opera). Most offer many of the same features and can be successfully used to retrieve documents and activate many kinds of programs.

Browsers all rely on "plug-ins" to handle the fancier files you find on the Web. Plug-ins are sub-programs stored within a browser or elsewhere in your computer especially to support special types of files you may click on. If you click on a link, and your computer does not currently have the plug-in needed for the file you clicked on, you are usually prompted with an opportunity to get the plug-in. Most plug-ins are free, and easy and safe to install on your computer; follow the instructions you are given.

The main way in which browsers differ is in the convenience features they offer for navigating and managing the Web and all the URLs you may want to keep track of. Netscape and Internet Explorer both offer the ability to e-mail documents, download them to diskette, print them, and keep track of where you've been and sites you want to "bookmark." [Return to Outline](#)

Getting Connected to the Internet

To access the Internet by computer, you need a computer, a modem or other telecommunications link, and software to connect to an Internet Service Provider

([links to more about ISPs](#)). If you are not affiliated with the University or wish a private ISP, here is a site where you can [find ISPs of all kinds](#) by area code or zip code. (the URL is http://webservices.cnet.com/html/aisles/Internet_Access.asp). This type of technical information is beyond the scope of this tutorial and of the [Teaching Library Workshops](#).

TV Set-Top Boxes such as SONY's "Web-TV" are emerging as an alternative to PCs and MACs for viewing the Internet. You may wish to consult [Yahoo's links, including opinions, on WebTV computer hardware technology](#).

Confused by all this jargon? See [GLOSSARY of WWW and Netscape Jargon](#).
Want help and instructions? The Teaching Library offers free drop-in classes on the Internet, WWW, Netscape, and finding information using the Internet. Click here for [Schedule of Teaching Library Courses](#).

Source:

Barker, Joe. 1995. "What is the Internet, the World Wide Web, and Netscape?". Berkeley: University of California, the Library.
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/WhatIs.html> (26 Jan. 2004).

5-7. The Best Search Engines

Recommended Search Engines: Table of Features

Google has one of the largest databases of Web pages, including many other types of Web documents (e.g., PDFs, Word or Excel documents, PowerPoints). Despite the presence of many advertisements and considerable clutter from blog sites and newsgroups, Google's popularity ranking often makes pages worth looking at rise near the top of search results. Google alone is not sufficient, however. Less than half the searchable Web is fully searchable in Google. Overlap studies show that about half of the pages in any search engine database exist only in that database. Getting a second opinion is therefore often worthwhile. For a second opinion, we recommend Teoma, Vivisimo (a meta-search engine that indirectly searches three huge search engine databases), or AlltheWeb.

See also: **HOW DO SEARCH ENGINES WORK?**

Search Engine	<u>Google</u> www.google.com	<u>Teoma</u> www.teoma.com	<u>AlltheWeb Advanced</u> Type alltheweb and click <u>Advanced Search</u> .	<u>Alta Vista Advanced</u> Type www.av.com then click <u>Advanced Search</u>
Links to help	Google help pages	Teoma help pages	AlltheWeb help pages	AltaVista help pages
Size, type Size varies frequently and widely. See tests and more charts .	HUGE. Over 2 billion. Claims over 3 billion but about 1 billion are not fully indexed (i.e., cannot be full-text word searched). Unindexed pages are retrieved if your search matches their titles or match other pages linking to them. Biggest in tests .	LARGE. Claims to have 1 billion fully indexed, searchable pages, and 1 billion more partially indexed. Strives to become #1 in size.	HUGE. Over 3 billion fully indexed, searchable pages. Sometimes ties for first in tests . <u>Advanced Search</u> worth mastering.	LARGE, but smaller than Google or AllTheWeb. See tests . Use the <u>Advanced Search</u> .
Noteworthy features and limitations	Popularity ranking using <u>PageRank™</u> . Limit of 10 words per search, excluding OR. Indexes the first 101KB of a Web page, and 120KB of PDF's.	<u>Subject-Specific Popularity™</u> ranking. Suggests terms within results to refine. Suggests pages within results with many links.	No <u>stop words</u> . <u>URL Investigator</u> to find out about a page. <u>Conversion</u> of weights and measures.	Full <u>Boolean</u> searching and powerful Searching within results using SORT BY box in <u>Advanced Search</u> . Basic search provides distracting commercial, paid, and directory

				entries.
Phrase searching (term definition)	Yes. Use " ". Searches common " <u>stop words</u> " if in phrases in quotes.	Yes. Use " ". Searches common " <u>stop words</u> " if in phrases in quotes.	Yes. Use " "	Yes. Use " "
Boolean logic (term definition)	Partial. AND assumed between words. Capitalize OR. - excludes. No () or <u>nesting</u> . In <u>Advanced Search</u> , partial Boolean available in boxes.	Partial. AND assumed between words. Capitalize OR. - excludes. No () or <u>nesting</u> .	If Boolean expression is selected in <u>Advanced Search</u> , accepts AND, OR, ANDNOT, and ().	AND, OR, AND NOT, NEAR (within 10 words). In <u>Advanced Search</u> , or capitalized in <u>Basic Search</u> .
+Requires/ - Excludes (term definition)	- excludes + will allow you to retrieve " <u>stop words</u> " (e.g., +in)	- excludes + will allow you to retrieve " <u>stop words</u> " (e.g., +in)	In top box, - excludes	Available only in <u>Basic Search</u> . We recommend Boolean logic in <u>Advanced Search</u> .
Sub-Searching (term definition)	Sort of . At bottom of results page, click "Search within results" and enter more terms. Adds terms.	Sort of . Add terms. REFINER pastes suggested sub-topics within results.	Sort of. At bottom of search results. Terms entered will be added to terms previously searched.	Yes. Use <i>Sorted by</i> box under Boolean search box. Sorts and filters search results.
Results Ranking (term definition)	Based on page popularity measured in links to it from other pages: high rank if a lot of other pages link to it. <u>Fuzzy AND</u> also invoked. Matching and ranking based on "cached" version of pages that may not be the most recent version.	Based on Subject-Specific Popularity™, links to a page by related pages. More <u>info</u> .	Automatic <u>Fuzzy AND</u> . Also seems to use "importance" and links to pages. In <u>Advanced Search</u> , SHOULD INCLUDE gives higher priority to word or phrase in box. Each box read as a phrase. In Boolean Search, <i>rank:word</i> is supposed to rank by that term.	By the terms you specify in <i>Sorted by</i> box under Boolean search box. Relevancy ranked if left blank.
Field limiting	link: site:	intitle: inurl:	In <u>Advanced Search</u> , can	title: url:

(term definition)	allintitle: intitle: allinurl: inurl: <u>Advanced Search</u> boxes for most of these. Offers <u>Uncle Sam</u> for US federal pages and other <u>special searches</u> .	site: geoloc: <u>Explanations</u> , <u>limitations</u> .	search within: text, title, link name, url, link to the url (<u>Explanation of</u> <u>these</u> <u>distinctions</u> .) and filter by: domain terms. Also offers commands similar to Google as <u>Special</u> <u>Features</u> .	link: host: domain: anchor: text: image: applet: <u>Definitions</u> .
Truncation (term definition)	No. Search variant endings and synonyms separately, separating with OR (capitalized): <i>airline OR airlines</i>	No. Search variant endings and synonyms separately, separating with OR (capitalized): <i>airline OR airlines</i>	No. Enclose variants in () in top box to create OR search. (<i>airline</i> <i>airlines</i>)	Yes. Use *.
Case sensitivity (term definition)	No.	No.	No.	Yes. Upper case retrieves matching upper case. Lower case retrieves lower or upper case. Also accent and character sensitive.
Language	Yes. Major Romanized and non-Romanized languages in <u>Advanced</u> <u>Search</u> .	Yes. Major Romanized languages. Use <u>lang</u> :	Yes. Major Romanized and non-Romanized languages. Allows you to specify matching character sets. Read <u>Help</u> and <u>Customize</u> .	Yes, extensive list includes major Romanized and non-Romanized languages.
Limit by age of documents	In <u>Advanced Search</u> .	In <u>Advanced</u> <u>Search</u> .	In <u>Advanced</u> <u>Search</u> .	Yes, in Advanced search.
Translation	Yes, in <u>Translate this</u> <u>page</u> link following some pages. To English from major European languages.	No.	No.	Yes, to and from English and other languages. Click on <u>Translate</u> following result.

You may also wish to consult "What Makes a Search Engine Good?" - a table (PDF file) summarizing the factors I use to evaluate search engines overall.

How do Search Engines Work?

Search Engines for the general web (like all those listed above) do not really search the World Wide Web directly. Each one searches a database of the full text of web pages selected from the billions of web pages out there residing on servers. When you search the web using a search engine, you are always searching a somewhat stale copy of the real web page. When you click on links provided in a search engine's search results, you retrieve from the server the current version of the page.

Search engine databases are selected and built by computer robot programs called spiders. Although it is said they "crawl" the web in their hunt for pages to include, in truth they stay in one place. They find the pages for potential inclusion by following the links in the pages they already have in their database (i.e., already "know about"). They cannot think or type a URL or use judgment to "decide" to go look something up and see what's on the web about it. (Computers are getting more sophisticated all the time, but they are still brainless.)

If a web page is never linked to in any other page, search engine spiders cannot find it. The only way a brand new page - one that no other page has ever linked to - can get into a search engine is for its URL to be sent by some human to the search engine companies as a request that the new page be included. All search engine companies offer ways to do this.

After spiders find pages, they pass them on to another computer program for "indexing." This program identifies the text, links, and other content in the page and stores it in the search engine database's files so that the database can be searched by keyword and whatever more advanced approaches are offered, and the page will be found if your search matches its content.

Some types of pages and links are excluded from most search engines by policy. Others are excluded because search engine spiders cannot access them. Pages that are excluded are referred to as the "Invisible Web" -- what you don't see in search engine results. The Invisible Web is estimated to be two to three or more times bigger than the visible web. For more information about the Invisible Web and how to find and use the web "hidden" in it, please see our web page on this topic.

Source:

Barker, Joe. 1996. "The Best Search Engines". Berkeley: University of California, the Teaching Library.
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/SearchEngines.html> (26 Jan. 2004).

5-8. Recommended General Subject Directories

Subject Directories	<u>Librarians' Index</u> www.lii.org	<u>Infomine</u> infomine.ucr.edu	<u>Academic Info</u> www.academicinfo.net Recommend <u>Browsing</u>	<u>About.com</u> www.about.com	<u>Yahoo!</u> dir.yahoo.com
Size, type	Over 13,000 Compiled by public librarians in information supply business. Highest quality sites only. Great, reliable annotations.	Over 115,000 Great, reliable annotations. Cooperatively compiled by university & college-level, academic librarians of the UC campuses.	Rich selection of about 25,000 pages, selected as "college and research level Internet resources" aimed at "at the undergraduate level or above." Brief annotations.	Over 1 million Generally good annotations done by "Guides" with various levels of expertise.	About 2 million. Scarce descriptions and annotations. Often useful, especially for popular and commercial topics. Useful as listing of many other <u>directories and search engines</u> .
Phrase searching (<u>term definition</u>)	Yes. Use " "	Yes. Use " " term term requires exact match	No. " " make searches fail.	Yes. Use " "	Yes. Use " "
Boolean logic (<u>term definition</u>)	AND implied between words. Also accepts OR and NOT, and ().	AND implied between words. Also accepts OR.	OR implied between words. Accepts AND, OR, NOT and () Recommend AND between words in most searches.	No.	No.
Truncation (<u>term definition</u>)	Use *. Also <u>stems</u> . Can turn stemming off on <u>Advanced Search</u> page.	Automatically expands words. Can turn stemming off. Use " " to search exact terms.	No.	Use *. Not accepted consistently.	No.
Field searching	<u>Advanced Search</u> allows Boolean searching within subject, titles, description, parts of URLs, and more.	Select boxes under search box to limit to KW (keyword) SU (subject) TI (title) AU (author) AN (annotation)	No.	No.	t:requires terms in title field u:requires terms in URL

How to Find Subject-Focused Directories for a Specific Topic, Discipline, or Field

There are thousands of specialized directories on practically every subject. If you want an overview, or if you feel you've searched long enough, try to find one. Often they are done by experts -- self-proclaimed or heavily credentialed. Here are some ways to find them:

Use any of the Subject Directories above to find more specific directories. Here are some tips:

- In the **Librarians' Index**, **Infomine**, or **Academic Info**, look for your subject as you would for any other purpose, and keep your eyes open for sites that look like directories. Read through the descriptions. Sometimes these resources are identified as "Directories" or "Gateway Pages." These three directories are small enough that you can read through the results of a search.
- In **Yahoo!**, try adding the terms **web directories** to your subject keyword term:

EXAMPLES:

civil war web directories

weddings web directories

- In **About.com**, search by topic and look for pages that are described as "101" or "guides" or a "directory." About.com is written by "Guides" who, themselves, often are experts in the sections they manage. Sometimes they write excellent overviews of a topic.

Use Google or other search engines to find specialized directories:

- Search for the words **web directory** and your topic. If a directory web page refers to itself using the words "web directory," you will locate it.

You can also try **directory** but you may wind up with membership directory, phone directory, etc.

- Search your broad topic terms, and look at the top of Google's results for Google Directory links. Look at them. They come from a not outstanding, but often useful directory called Open Directory. There may be useful directory sites in those selections.

See also the tips for finding databases on the web. Authors of directories often call themselves a "database," and vice versa.

Source:

Barker, Joe. 1996. "Recommended General Subject Directories". Berkeley: University of California, the Teaching Library.

<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/SubjDirectories.html> (26 Jan. 2004).

5-9. Internet Navigator

Use this syllabus to access the course modules quizzes and assignments. If you are taking this course for credit, please be sure to carefully review additional instructions and deadlines provided by your instructor at your educational institution.

[Module 1](#) will introduce you to basic Internet concepts and cover some widely used Internet communication tools.

Things To Do:

- Submit the Module 1 [Assignment](#) (10 points)
- Read the entire [module](#).
- Complete all exercises.
- [QUIZ 1](#) (10 points)

[Module 2](#) presents an overview of the research process.

Things To Do:

- Read the entire [module](#).
- Complete all exercises and assignment.
- [Assignment: Start your research](#) (10 Points)
- [QUIZ 2](#) (10 points)

[Module 3](#) will introduce you to very important tools and techniques for finding information. Each student will complete a series of assignments and a research project. Your research for this course will be a list of resources, also called an annotated bibliography. You may review these [sample assignments](#) to help you understand what is expected. You do NOT have to write a paper for this course.

Things To Do:

- Read the entire [module](#).
- Complete all exercises and assignment.
- [Assignment: Research project](#) (30 points)
- [QUIZ 3](#) (10 points)

[Module 4](#) will introduce you to Web publishing and the HyperText Markup Language used to create Web pages. Your final project will be a Web page listing the 2 best resources you found in the module 3 assignment and your thoughts on information.

Things To Do:

- Read the entire [module](#).
- Complete all exercises and assignment.
- [Assignment: Create a Web page](#) (10 points)
- [QUIZ 4](#) (10 points)
- Complete [course evaluation](#)

Source:

UALC. 2001. "Internet Navigator" <http://www-navigator.utah.edu/index.htm> (17 Jan. 2004).

5-10. Choose the Best Search for Your Information Need

Information need	Search strategy
I need a few good hits fast .	Google - largest index ¹ results ranked by general popularity with "blind spots." ² Cached copy of page if site unavailable. All the Web - large, automatically adds phrases from its dictionary to improve relevance of results.
I have a broad academic subject and need pointers to quality sites.	Librarians' Index to the Internet - "thinking person's Yahoo" ³ with weekly updates. Infomine - librarian-selected directory with flexible search options.
I have a popular or commercial topic .	Yahoo - user-submitted, editor-categorized commercial "tree" entries are integrated with Google search results
I want to search on confusable (e.g. bush v. Bush) or ignored words (e.g. there v. There - a company) in a phrase (e.g., "Vitamin A" or "to be or not to be").	Alta Vista Advanced - use capital letter Google - use quotes around phrase, or +word
I can't spell something (e.g. "Ku Klux Klan" or "Klu Klux Klan").	Use a dictionary for the correct spelling. If an alternative spelling will generate better results Google asks you, "Did you mean: (more common spelling)?"
I need a template to focus my search .	AlltheWeb Advanced or AltaVista Advanced (full Boolean) template prompts you to include or exclude words and phrases, domain, format, date, etc.
I need to organize and refine my results .	Combined major engine results (metasearch) clustered by topics. Select keywords to pinpoint your search further. • Vivisimo - automatic clustering, hierarchical folders • Surf Wax - identify promising results using preview summary ("SiteSnap"); see context of key words on the page ("ContextZooming"), add "Focus Words" to narrow next search. • Ez2Find - gathers results from top engines (results include some invisible web information) • Dogpile - "fetch" and clustered results (Vivisimo) attracts younger students. • Altavista - displays the most common words from your results which you can add

	to your query for more focused results.
I need to see relationships among ideas.	• KartOO - intuitive interface visually "maps" relationships and refines ideas • Web Brain - visual view of related subjects. Click on term to search dmoz database, a directory compiled by volunteer editors
I need a subject hub prepared by an expert .	Virtual LRC - searches high-quality educational directories Pinakes - a subject launchpad to major academic gateways. WWW Virtual Library - worldwide volunteers maintain oldest academic subject-organized catalog of links to full-text, databases, and gateways. BUBL LINK / 5:15 - directory of 5-15 academic sites (European focus) also organized by Dewey number and subject terms. Teoma - ranks by subject-expert popularity (links from authority pages), suggests expert hub-sites About.com - screened and trained volunteers create general-interest subject guides.
I need balanced information from verified sources for a school research project to take home .	For certain types of research, useful books and magazines may only be available in print. Ask your local librarian.
I need biographical information.	Infoplease Biography - search 30,000 people (encyclopedia, almanac, dictionary), or browse categories. Biography.com - search 25,000 popular figures Lives - alphabetical directory of dead people only
I need US government information.	First Gov - search official site for U.S. government, state and local, or drill down topics in a directory.
I need the current buzz or breaking news .	Daypop - receives daily feeds from 1000 news sources, online magazines, and 19,000 weblogs (subjective, personal) - can use +, -, "" Newsblaster - get a sense of day's major stories and images - automatically collects, categorizes, and summarizes news events, reflecting the media from a particular country. Hotbot (Inktomi) - freshest database⁴
I need more complete news coverage .	Yahoo News - unique depth and breadth +continuously updated, categorized news (7-30 days archive) +editor-selected "Full Coverage" provides background +"Op-Ed," "News Photos," "Video" (political) and "Local." Google News - 4500 news sources, automatically grouped, includes articles' leading sentences, 30

	day archive. World News Network - world news organized by region, topic, industry. Country or regional hot-spots in "Special Reports."
I need to get a overview of the media in a region or industry.	Headline Spot - directory of established media by subject, industry or area (large cities, states, countries, regions).
I need fuller news coverage to develop background to understand an issue.	Behind the Headlines - key resources related to the latest headlines; resources are carefully selected, indexed and described by specialists in 60+ British educational and research organizations. US News Briefings - editor-compiled overview, with links to stories, key biographies, relevant documents and Web sites.
I need accurate, objective information on hot topics (current and controversial).	Social Issues - K-12 topics from public library Homework Center. BIOTIN - solid topic information, Catholic perspective Hot Topics Supersites - sites which have resources on many controversial topics of current interest selected by public-university librarian. Public Agenda Online - background and analysis of social issues with public opinion studies
I want to get opinions on current issues.	Yahoo Op/Ed - today , by country Opinion-Pages - searches international editorials, opinions, commentaries and columnists. PollingReport - aggregates national surveys of the American public Google Usenet Advanced Search - searches newsgroups. Blogdex - "most contagious information currently spreading in the weblog community."
I need to see news from other countries' perspectives .	All the Web News advanced - search 7 days coverage, 3000+, multilingual Search Engine Colossus - links to search engines and directories worldwide Abyz News Links - links to international newspapers, news media, internet services, magazines, and press agencies. World Press Review - succinct overviews of issues from international perspectives, views of U.S. from abroad.
I need simple reference information (basic facts, current statistics, name identification).	Search Reference - choose fact sites, then metasearch. CIA World Factbook by country or search data. InfoNation - compare data for (up to 5) UN countries. Wikipedia - volunteer-created encyclopedia.
I need statistical data depth .	Statistical Information help page
I need invisible web resources (access	Turbo10 - configurable search of deep net

to databases not commonly indexed by search engines).	resources. Invisible Web - small, high-quality directory list. Resource Discovery Network - keyword search Direct Search - links and search (boolean, date, fields) Depth of Search: Choosing Invisible Web Databases - small list geared to K-12
I need primary sources .	<i>Online only:</i> Library and Archival Exhibitions on the Web UNESCO Primary Sources Online <i>Print and online:</i> Repositories of Primary Sources - by country, region Ready, Net, Go - metaindex to worldwide archives
I need information found in presentations, spreadsheets and other formats [pdf] [doc] [xls] [ppt] [rtf] [ps].	Google Advanced - searches for Adobe Acrobat, Word documents, Excel spreadsheets, PowerPoint presentations, Rich Text Format and Postscript documents. Search Adobe PDF Online - see summary before downloading.
I need images and sounds (photos, art, designs, logos, videos, music, noises), media types (Java, mp3) or file extensions [.gif].	Singingfish Advanced Audio Video - large index AlltheWeb- advanced pictures , video , simple audio Lycos MultiMedia - cross-search pictures, audio, mp3, video AltaVista- select format, size, etc - images , audio , video Google Image Search - indexes 425+ mill., advanced narrows by size or type. ClassroomClipart - browse categories suitable for K-12. <i>Fine arts:</i> ADAM , FAMSF , SILS , Richman's list of picture/art sites . American Memory US historical maps, motion pictures, photos and prints, sound recordings. FindSounds - locates sound effects and sample sounds.
I heard part of a radio program and want to hear all of it.	PublicRadioFan - if you know the station or program, click through "tree" links. Design a worldwide public radio programs list, check what's playing now. HP Speechbot - keyword audio search, results include audio link and transcript of words in context, sort by date
I need free or inexpensive software .	CNET - meta search engine for shareware.
I need a map .	National Geo. MapMachine : world physical, political print . Cornell Digital Earth - world maps: choose layers

	of geological, geographical, and geophysical data (GIS), then download image (.ps, .jpg) TIGER Map Service - U.S. Census information maps Maptech MapServer - U.S. topographical, aerial and satellite, nautical maps - flexible searching, options for printing/e-mailing MapQuest - U.S. driving directions.
I need a quotation .	The Quotations Page Quoteland Quotations Archive, Search Creative Quotations, Bartlett (1901).
I want to get advice from experts.	Ask A+ Locator - browse, or search by keyword or subject, a database of high-quality "AskA" services. AllExperts - volunteer experts (read self-profile to assess expertise) SourceNet Experts - database of experts for journalists Sources and Experts - directory maintained by news researcher
I need a virtual librarian .	24/7 - live reference from public library system. Ask a Librarian - e-mail and live help from Library of Congress. Ask on NoodleBoard if you subscribe to NoodleBib.
I want notice of new sites as they're announced.	Scout Report review or weekly e-mail notification of new sites, often not yet listed elsewhere.
I need to periodically rerun a good search I've already composed.	GoogleAlert- reruns your search periodically on its large index and sends alerts via e-mail. HotSheet, AmphetaDesk, FeedDemon (beta) - desktop and RSS Headliner web page software to create custom pages with your own choice of news sources.
I need sites just for kids .	KidsClick! - click through librarian selected and organized subject tree, or search 600+ high-quality sites. See Dewey classification of sites. Yahooligans! - results from directory, clustered by category, and kid-safe popular sites. Ithaki - metasearch engine (Dmoz Kids, Yahooligans, FactMonster, ArtKidsRule, AolKids, AppuKids, Discovery School)

Source:

Abilock, Debbie. 1996."Choose the Best Search for Your Information Need".
<http://www.noodletools.com/debbie/literacies/information/5locate/adviceengine.html>
 (31 Jan. 2004).

5-11. A Listserv to Explore the Growing Area of Digital Reference Services

ANNOUNCING DIG_REF

The Virtual Reference Desk (<http://www.vrd.org>) announces the DIG_REF Listserv. DIG_REF is a forum for the growing number of people and organizations answering the questions of users via the Internet. From Ask-an-Expert (AskA) services to libraries, an increasing number of organizations are creating digital reference services to provide expert information and reference help.

DIG_REF seeks to bring together experts who answer questions, as well as librarians, organizations and associations dedicated to meeting the reference needs of their users via the Internet. The list will discuss all aspects of providing question & answer services over the worldwide network, from service creation and implementation to issues of services and quality. This list will also provide information on the Virtual Reference Desk project and developments in the field of digital reference.

To subscribe to DIG_REF, just do this:

1. Send an e-mail message to:

LISTSERV@LISTSERV.SYR.EDU

2. In the first line of the message, type:

SUBSCRIBE DIG_REF Firstname Lastname

(Of course, you would substitute your actual name in the line, such as "SUBSCRIBE DIG_REF John Doe" No quotes necessary)

The DIG_REF listserv computer will respond with an informative message, which will ask for a confirmation. You will then be added if you properly follow the directions.

For more information on subscribing and other DIG_REF commands, see [DIG_REF Policies and Commands](#).

Source:

United States department of Education. "A LISERV to Explore the Growing Area of Digital Reference Services". http://www.vrd.org/Dig_Ref/dig_ref.shtml (26 Jan. 2004).

5-12. Keeping Up-to-date with Internet Sources

- The number and type of resources available on Internet covering the entire gamut of knowledge is enormous.
- There is a tremendous increase in the frequency with which these resources get added on the Internet.
- The different kinds of search engines and directories help us to identify and retrieve relevant resources to some extent.
- Most of these search engines do not alert us with the recently added resources in specific disciplines.
- To alleviate this problem, some websites specialise in reviewing the newly added resources and reporting only the important resources which get added on the Internet at regular intervals.
- Few important websites have been identified, which help us in identifying and including noteworthy resources for NCSI's [Infowatch](#) - A monthly electronic newsletter in Science, Engineering and Technology.
- Another important way of keeping informed about new sites, is through e-mail based discussion forums (e.g. LIS-Forum and NCSI-NET).

SciCentral News Alert - A gateway to best Science, Engineering, Medical research online resource

Brought out by Sciquest.com. Reports recent resources in the form of selected articles, special reports, comprehensive directories, in Biological sciences, Health sciences, Physical & chemical sciences, Earth & Space sciences, Engineering sciences and are arranged subjectwise. Weekly additions are sent by e-mail also.

http://www.sciquest.com/cgi-bin/ncommerce3/ExecMacro/sci_index.d2w/report

BUBL LINK - Catalogue of Internet Resources

BUBL is a national information service for the higher education community brought out by Andersonian Library, Strathclyde University, Scotland from 1997. LINK stands for Libraries of Networked Knowledge. Fortnightly. Selected Internet resources covering all academic subject areas are catalogued according to DDC (Dewey Decimal Classification). Subject categories include General reference, Creative arts, Humanities, Language, Literature & Culture, Social sciences, Engineering & Technology, Health studies, Life sciences, Mathematics & Computing, Physical sciences. The BUBL LINK catalogue currently holds over 11,000 resources. This is far smaller than the databases held by major search engines, but it can provide a more effective route to information for many subjects, across all disciplines. Search and browse interface is available.

<http://bubl.ac.uk/link/updates/current.html>

Internet Resource Newsletter - Monthly guide to the best new websites.

Started in 1994 by Heriot-Watt University Library, Edinburgh, UK. Resources are arranged alphabetically. This monthly newsletter aims to raise awareness of new sources of information on the Internet, particularly those which are relevant to research interests at Heriot-Watt University, including engineering, science, and social science. This archive lists over 5,000 resources. Search and browse interface included.

<http://www.hw.ac.uk/libWWW/irn/irn.html>

Academic Info - Your Gateway to Quality Educational Resources

Started from May 2000, Academic Info is an independent Internet subject directory compiled and maintained by Mike Madin with the assistance of a volunteer group of subject specialists in US. Academic Info aims to be the premier educational gateway to online college and research level Internet resources for researchers in colleges and universities. Subject categories like Science, Engineering, Health & Medicine, Library & Information Science...are included along with other disciplines. Search and browse interface included. Resources are organised subjectwise and are reported monthly.

<http://www.academicinfo.net/new.html>

Digital Librarian - A librarian's choice of the best of the Web

Is maintained by Margaret Vail Anderson, a librarian in Cortland, New York from 1996 onwards. Resources are categorised under 90 subdivisions. E-mail notification available. Recent resources arranged alphabetically. Monthly new sites in various subjects are reported. Browse feature is included.

<http://www.digital-librarian.com/new.html>

Infomine - Scholarly Internet Resource Collections

INFOMINE is a unique Web resource featuring well organized access to important university level research and educational tools on the Internet. Began in 1994 by University of California, California State University, and other university and college librarians. Fortnightly. New resources arranged chronologically. Covers nearly 8000 resources in Biological, Agriculture & Medical Sciences, Physical sciences, Engineering, Computing and Mathematics as well as Social sciences. INFOMINE is librarian built. Search and browse feature available. In-depth description and indexing, careful selection, a considerable number of options in browsing/searching (access points), and ample help in usage aid in finding important Internet resources quickly and easily via INFOMINE. E-mail alerting of new resources.

http://infomine.ucr.edu/cgi-bin/whats_new?liberal

Librarian's Index to the Internet - Berkeley Digital Library SunSITE

The Librarians' Index to the Internet is a searchable, annotated subject directory of more than 7,200 Internet resources in all disciplines, selected and evaluated by librarians for their usefulness to users of public libraries. Maintained by Carole Leita on the Berkeley Digital Library SunSITE, California, since 1997. Resources are listed under Databases category and under specific resources. Weekly, e-mail alerting available

<http://lii.org/>

Netsurfer Science - Science and Technology sites

Started in 1994 by Netsurfer's Communications Inc., California. Guide to interesting news, places and resources online. It is delivered weekly by E-mail. New resources listed under different subject categories.

Back issues are accessible by dates.

<http://www.netsurf.com/nss/>

The Scout Report for Science & Engineering

Brought out by the Internet Scout Project, Department of Computer Science, University of Wisconsin. Fortnightly e-mail alerts. Useful for faculty, students, staff, and librarians in the life sciences, physical sciences, and engineering. Each biweekly issue offers a selective collection of Internet resources covering topics in the sciences, and related fields such as math and engineering, that have been chosen by librarians and content specialists in the given field of study. Archives can be searched or browsable. Around 10,000 carefully selected resources from 1994 onwards. Resources are arranged under the following categories: Research, Learning resource, Current Awareness, General Interest, New data, In the News. Scout Reports are also available for Social sciences, Business and economics as well.

<http://scout.cs.wisc.edu/report/sci-eng/current/index.html>

TIPTOP - The Internet Pilot to Physics

Published by IOP Publishing from 1996, includes all subject categories under Physics. Weekly e-mail alerts. Search and browse interface available.

<http://physicsweb.org/resources/search.phtml>

EEVL: Edinburgh Engineering Virtual Library - The UK gateway to quality engineering information on the Internet.

It is a free service, created and run by a team of information specialists from Heriot-Watt University, with input from a number of other universities in the UK. Started in 1996 and covers Aerospace & Defence engineering, Bioengineering, Chemical Engineering, Civil

Engineering, Electrical & Electronic Engineering, Engineering Design, General Engineering, Environmental Engineering, Manufacturing Engineering, Materials Engineering, Mechanical Engineering, Mining, Nanotechnology, Petroleum & Offshore Engineering. Browse and search interface is available. Updated fortnightly.

<http://www2.eevl.ac.uk:4321/whatsnew/>

Yahoo! Picks of the Week

The type of resources include academic as well as general resources. Weekly e-mail notification of resources by Yahoo. Reports more of popular sites.

<http://docs.yahoo.com/picks/>

The Exploratorium's Ten Cool sites

Started in 1995, by exploratorium.edu - The museum of Science, Arts and human perception, includes subjects ranging from Arts to Sciences and Social sciences, emphasises on education and exploratory kind of sites as well as virtual museums. Browse the archives by subjects.

http://www.exploratorium.edu/learning_studio/sciencesites.html

Netmind

Netmind - Service that automatically alerts with updated pages from the URLs requested, by e-mail. Netmind now supports dynamic content change tracking feature, to monitor changes in pages resulting from form submissions! Supports several other tracking features, including keywords, link, description, etc.

<http://mindit.netmind.com/>

Source:

Rajashekar, T.B. and K. Thulasi. 2001. "Keeping up-to-date with Internet source"
<http://144.16.72.189/is213/topic-6.htm> (24 Jan. 2004).

دست‌رسی به اطلاعات مورد نیاز:
۶. استراتژی‌های جستجو

6-1. The Five Steps Search Strategy We Recommend

Step #1. Analyze your topic to decide where to begin

Click [here](#) for a printable FORM you may use to [Analyze Your Topic](#) (pdf file). **PDF files** are supported in Netscape 4.x and some other browsers. To view, search, or print the PDF files, you will need to use [Adobe® Acrobat® Reader](#) software, which is available free from Adobe if you need it.

Does your topic...	have distinctive words or phrases?	methernitha , unique meaning
	"affirmative action", specific, accepted meaning in word cluster	
	have NO distinctive words or phrases you can think of? You have only common or general terms that get the "wrong" pages.	
	"order out of chaos", used in too many contexts to be useful	
	sundiata , retrieves a myth, a rock group, a person, etc.	
	seek an overview of a broad topic?	victorian literature, alternative energy sources
	specify a narrow aspect of a broad or common topic?	automobile recyclability , want current research, future designs, not how to recycle or oil recycling or other community efforts
	have synonymous, equivalent terms, or variant spellings or endings that need to be included?	echinoderm OR echinoidea OR "sea urchin" , any may be in useful pages
		"cold fusion energy" OR "hydrogen energy" , some use one term, some the other; you want both, although not precisely equivalent
		millennium OR millennial OR millenium OR millenial OR "year 2000" , etc.
	Pages you want may contain any or all.	
	Make you feel confused? Don't really know much about the topic yet?	
	Need guidance?	

Step #2. Pick the right starting place using this table:

YOUR TOPIC'S FEATURES:	Search Engines	Subject Directories	Specialized Databases "Invisible Web"	Find an Expert	LUCK
Distinctive or word or phrase?	Enclose phrases in " ". Test run your word or phrase in Google .	Search the broader concept, what your term is "about."	Want data? Facts? Statistics? All of something? One of many like things? Schedules? Maps? Look for a specialized database on	Look for a specialized subject directory on your topic. E-mail the author of a good page you find. Ask a discussion group or	Always on your side. Keep your mind open. Learn as you search.
NO distinctive words or phrases?	Use more than one term or phrase in " " to get fewer results.	Try to find distinctive terms in Subject Directories			
Seek an overview?	NOT RECOMMENDED	Look for a specialized Subject			

Narrow aspect of broad or common topic?	AltaVista's Boolean searching	Directory focused on your topic Look for a Directory focused on the broad subject.	the Invisible Web . Hard to predict what you might find.	expert . Never hurts to seek help.
Synonyms, equivalent terms, variants	Choose search engines with Boolean OR , or Truncation , or Field limiting .	NOT RECOMMENDED		
Confused? Need more information?	NOT RECOMMENDED	Look for a Gateway Page (Subject Guide). Try an encyclopedia in a Virtual Library . Ask at a library reference desk.		

Step #3. Learn as you go & VARY your approach with what you learn.

Don't assume you know what you want to find. Look at search results and see what you might use in addition to what you've thought of.

Step #4. Don't bog down in any strategy that doesn't work.

Switch from search engines to directories and back. Find [specialized directories](#) on your topic. Think about [possible databases](#) and look for them.

Step #5. Return to previous strategies better informed.

Search Strategies We Do NOT Recommend

Because of their inefficiency and often haphazard and frustrating results, we do not recommend either of the following two approaches to finding Web documents:

- **Browsing searchable directories.** If you can find a search box, search a directory. BROWSING is a sometimes fun rarely as efficient. The term "directories" refers here to any collection of web resources organized into subject categories or some other breakdown appropriate to the content ([Subject Directories](#) or directories of [specialized databases](#) or of [gateway pages](#)). Browsing locates documents by your trying to match your topic in first the top, broadest layer of a subject hierarchy, then by choosing narrower sub-subject-categories in the hierarchy that you hope will lead to your target. Browsing encounters the difficulty of guessing under which subject category your topic is classified. The taxonomy in every directory differs, making browsing inconsistent from one search tool to another. The category "health" may contain documents on medicine, homeopathy, psychiatry, and fitness in

one directory. In another "medicine" may include health, mental health, and alternative medicine, but not the term psychiatry and may classify fitness only under "lifestyle." *Searching (typing keywords in a search box) retrieves occurrences of your words no matter where they may be classified by subject. Use broad terms in searching any directory.*

- **Following links to sites recommended by heavy use or commercial interest.** Often in search engine results, you will see links to sites that are selected based on how often they are visited by others, or based on fees paid to the browser. Or you may see recommended "cool" sites. Use these with caution! Others may visit sites for reasons having no relation to your information interests, and the best sites for you may still be largely undiscovered by the vast public searching the Web. Taste varies and should vary. Make your own [evaluations](#).

Table Matching Your Search Needs with the Features Search Engines Offer

The purpose of thinking about your topic before you start searching is to **determine what terms to search for** and **what features you need** to search successfully. The table below lists on the left features of many search inquiries. Use it to determine which features your searches need. On the left, the table describes search tool features designed to support each of the search needs listed on the left. The links take you to the [table of search engines](#) -- so you can pick a search engine with the features you need.

Features of your search inquiry	Matching Search Tools Features worth learning and using
Are you looking for a proper name or a distinct phrase ?	PHRASE SEARCHING is a feature you want in every search tools you choose. Requires your terms all to appear in exactly the order you enter them. Enclose the phrase in double quotations " "
• The name of an organization or society or movement • A proper name or an individual • A distinctive string of words generally associated with your topic	Examples: "affirmative action" "world health organization" "a person's name"
Can you think of an organization, proper name, or phrase to search for? It might help zoom in on the pages you want.	In , capitalizing initial letters will cause the terms to be searched as a phrase: World Health Organization
Are some of your terms common words with many meanings and contexts ?	BOOLEAN AND will help: children AND television AND violence journalism AND ethics AND censorship
• <i>Children</i> in conjunction with <i>television</i> and also <i>violence</i> • <i>Censorship</i> as an aspect of <i>ethics</i> in <i>journalism</i>	Google and AllTheWeb and most other search engines put AND in between words automatically (by default): children television violence journalism ethics censorship
Do you anticipate lots of search results with terms you do not want ?	BOOLEAN AND NOT will help: "biomedical engineering" AND cancer

- Your search for *biomedical engineering and cancer* brings you lots of academic programs, and you want research reports. So you try to exclude documents containing Department of or School of

AND NOT "Department of" AND NOT "School of" or its -EXCLUDES near equivalent: "biomedical engineering" cancer - "Department of" - "School of"

Are there **synonyms, spelling variations**, or **foreign spellings** for some of your terms?

- *women, females* with *networking*
- *Sarajevo, Sarajevo* with *peace*
- *literature, litterature* with *French, francaise*

BOOLEAN OR will help:

(*women OR females*) AND *networking*
(*Sarajevo OR Sarajevo*) AND *peace*
(*literature OR litterature*) AND (*French or francaise*)

In **Google**, capitalize OR (no need to type "and"):

peace sarajevo OR sarajevo
literature OR litterature french OR francaise

In **AllTheWeb**, use parentheses and omit the OR:

peace (sarajevo sarajevo)
(literature litterature) (french francaise)

Are you looking for **home pages** and/or other documents **primarily about** your term(s)?

- The home page of the *American Dietetic Association*
- Pages primarily about *Affirmative Action*

LIMIT TO TITLE FIELD IN DOCUMENTS
title:"American Dietetic Association"
title:"affirmative action"

In **Google**, use **allintitle:"affirmative action"**

Are you looking for terms with **many possible endings** ?

- *Feminism, feminist, feminine*
- *Children, child*

TRUNCATION permits retrieving all these variations in one search term (ONLY IN ALTA VISTA):

femini* matches *feminine, feminist, feminism*, etc.

child* retrieves *child* and *children*

Some systems search word ending variants automatically. See the specific instructions for each of the recommended search tools.

Source:

Barker, Joe. 1995. "The Five-Step Search Strategy We Recommend". Berkeley: University of California, the Library.
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Strategies.html> (26 Jan. 2004).

6-2. Things to Know Before You Begin Searching

What are you really searching?

Types of search tools currently available (table)

Where should I begin?

What other tools exist to find information through the Internet?

What are you really searching?

Finding the Web documents (a.k.a. Web "pages" or "sites") you want can be easy or seem impossibly difficult. This is in part due to the sheer size of the WWW, currently estimated to contain 3 billion documents. It is also because the WWW is not indexed in any standard vocabulary. Unlike a library's catalogs, in which can use standardized Library of Congress subject headings to find books in most large, general libraries in the U.S., in Web searching you are always guessing what words will be in the pages you want to find or guessing what subject terms were chosen by someone to organize a web page or site covering some topic.

When you do what is called "searching the Web," you are NOT searching it directly. It is not possible to search the WWW directly. The Web is the totality of the many web pages which reside on computers (called "servers") all over the world. Your computer cannot find or go to them all directly. What you are able to do through your computer is access one or more of many intermediate search tools available now. You search a search tool's database or collection of sites -- a relatively small subset of the entire World Wide Web. The search tool provides you with hypertext links with URLs to other pages. You click on these links, and retrieve documents, images, sound, and more from individual servers around the world.

There is no way for anyone to search the entire Web, and any search tool that claims that it offers it all to you is distorting the truth.

Categories of search tools available now

At present, we find it useful to describe the kinds of intermediate search tools available to you in four categories. You use different strategies to find and exploit the potential of the tools in each class:

Types of Search Tools	Characteristics	Examples
Search Engines (& Meta-Search Engines)	- Full-text of selected Web pages - Search by keyword, trying to match exactly the words in the pages - No browsing, no subject categories - Databases compiled by	- Search Engines recommended and described in this tutorial: Google, Alta Vista Advanced Search, Northern Light Power Search, Alltheweb - Meta-Search Engines: Metacrawler, Ixquick,

	"spiders" (computer-robot programs) with minimal human oversight • Search-Engine size: from small and specialized to 90+ percent of the indexable Web • Meta-Search Engines quickly and superficially search several individual search engines at once and return results compiled into a sometimes convenient format. Caveat: They only catch about 10% of search results in any of the search engines they visit.	Copernic, and <u>others</u>
Subject Directories	• Human-selected sites picked by editors (sometimes experts in a subject) • Often carefully evaluated and kept up to date, but not always -- frequently not if large and general • Usually organized into hierarchical subject categories • Often annotated with descriptions (not in Yahoo!) • Can <u>browse</u> subject categories or search using broad, general terms • NO full-text of documents. Searches need to be less specific than in search engines, because you are not matching on the words in the pages you eventually want. In Directories you are searching only the subject categories and descriptions you see in its pages.	• Recommended and described in this tutorial: Librarians' Index, Infomine, Yahoo!, About.com, AcademicInfo • There are thousand <u>more</u> of Subject Directories on practically every topic you can think of.
Specialized Databases (The <u>Invisible Web</u>)	• The Web provides access through a search box into the contents of a database in a computer somewhere • Can be on any topic, can be trivial, commercial, task-specific, or a rich treasure devoted to your topic	• Locate specialized databases by looking for them in good Subject Directories like the Librarian's Index, Yahoo!, or AcademicInfo; in special guides to searchable databases; and sometimes by keyword searching in general search engines

Where should I begin ?

In this tutorial, we recommend beginning with different types of search tools, depending on what you know about your topic and what you want to know. Do you want broad information? Are you looking for something very specific or perhaps a unique term or phrase? Are you looking for a narrow aspect of a topic with a huge Web presence? When you search, are you overwhelmed by too many or off-target results? Are there a lot of synonyms of equivalent terms for what you seek? Each of these questions can give you a clue where to begin.

Follow this link to our [Recommended Search Strategies Page](#). Or this one to our [Recommended Search Tools](#). In both, we encourage you to vary your search strategy and learn as you search, choosing the optimal approach for each stage of the process. Finding information on the Web is a process. If you find any magic bullets, please [let me know](#).

What other tools exist to find information through the Internet?

If you have exhausted the options above, you may want to ask someone through a [discussion group](#). If you are seeking [international information](#), you may want to search the Web within the country or countries you want (often you need to know the language). Come to free [web searching classes](#) to learn many more ways to search the Internet and [evaluate](#) what you find.

Source:

Barker, Joe. 1995. "Things to Know Before You Begin Searching". Berkeley: University of California, the Library.
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/ThingsToKnow.html> (26 Jan. 2004).

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ارزیابی منابع اطلاعات

7-1. Evaluating Information

Finding information is only one step in the research process. The following criteria may help you evaluate your information source.

Date of Publication

Your research topic and assignment will help you to determine the currency of information that you collect. Current information tends to be more important for scientific topics, while subjects in the humanities may require older information.

- When was the source published?
- Is current information important for your topic?

Edition

Further editions demonstrate that a source has been updated to reflect new information, and may be a standard source in the field.

- Is this a first edition?

Title of Journal

This is an important indicator of the complexity and authority of the information. (see Scholarly, Popular and Professional/Trade Journals)

- Is this a scholarly or popular journal?

Intended Audience

Consider the intended audience for this resource. If the source is difficult for you to read and understand it may not be useful.

- Is it aimed at a specialized or general audience?
- Is the language difficult to understand?

Coverage

Collecting sources relevant to your topic is important when writing a paper or giving a speech.

- Does the source contribute to or support other information you have found on your topic?
- Is this a primary or a secondary source?
- Does it add to what you already know?
- Does it provide a new or useful perspective?

Content Analysis

Is the content appropriate for your information need?

- Examine the source.

- Read the preface, scan the table of contents and the index to get an overview of the source.
- Check to see if the source includes a bibliography. A bibliography will help point you toward other resources on your topic.

Credibility of the Author

Consider these factors and then decide if and how you would like to use this authors work in research.

- What are the authors' credentials, or background in this area?
- Has your instructor or other scholars in the discipline mentioned this author?
- Has this author written other articles, papers, reports or books on this same topic?

Objective vs. Biased

Depending on your information need, you may find the information unsuitable of it is biased or too general.

- Is the information fact or opinion?
- Does the author attempt to remain objective?
- Is the information supported by other research or has this author provided sufficient evidence?

Writing Style

The style of writing may help you to decide the credibility of the author.

- Is the source logically organized?
- Are the ideas clearly presented?
- Is the text easy to read, or is it choppy and difficult to follow?
- Is the author statement or argument repetitive?

Post Evaluation Tips

Based on your evaluation, you may decide to not use some of the sources or find additional sources. Don't get frustrated. The purpose of writing papers, speeches, and projects is for you to learn. Research is just part of that learning process. It is possible that you may have to use several library resources or formats of information to get the information you need. The best thing to do is allow yourself plenty of time for research and ask for help from a librarian or your instructor if you run into any problems.

Quick tips on identifying Popular, Scholarly & Trade Journals

Scholarly Journals:

- report original research or experimentation, often in specific academic disciplines
- targeted audience is the scholarly researcher, faculty, and students
- articles are written by experts in the field

- articles use jargon of the discipline, and assume a familiarity with the subject
- illustrations are few, and support the text, typically in the form of charts, graphs, and maps
- articles must undergo the peer review process prior to publication
- articles usually include footnotes or bibliographies using a standardized citation format
- may be continuously pages from one issue to the next
Example: Issue 1 will end on page 455
and Issue 2 will begin on page 456

Popular Magazines:

- cover news, current events, hobbies or special interests
- are targeted at the general public, and available to a broad audience
- articles are usually written by a member of the editorial staff or a free lance writer
- language of the article is geared for any educated audience, and does not assume familiarity with the subject matter
- include many illustrations, often with large, glossy photographs and graphics
- sources are sometimes cited, but do not usually include footnotes or a bibliography

Professional/Trade Journals

- Written for experts in a particular field; may be extremely specialized
- Designed to help professionals keep up with the latest developments and research in a particular field
- Include notices about people, organizations, new publications, conferences, and topical issues in a field
- Articles use the jargon of the field
- If research results are reported they are unlikely to include a bibliography

Primary and Secondary Sources

Primary Sources are the original resources that first report research or ideas. These may include newspapers, research reports, scholarly journals, trade journals, conference proceedings, dissertations or Web sites.

Secondary Sources are resources that analyze, describe, and synthesize the primary or original source. These include review articles, reference books such as encyclopedias and dictionaries, and textbooks.

Source:

The Trustees of Indiana University. 2003. "Evaluating Information".
<http://www.indiana.edu/~libugls/Publications/evaluating.html> (31 Jan. 2004).

7-2. Web Page Evaluation Checklist

1. Go to Google and perform the search: “**stem cells**” **abortion**
2. Use this Checklist to try to evaluate systematically some of the search results.

Title of page you are evaluating: Title of page you are evaluating:

1. Look at the URL:

Personal page or site? ☐ ~ or %, or *users, members, or people* ☐ ~ or %, or *users, members, or people*

What type of domain is it?

Appropriate for the content?

☐ com ☐ . org/net ☐ . edu ☐ . gov/mil/us

☐ non-US _____

☐ other:

☐ com ☐ . org/net ☐ . edu ☐ . gov/mil/us

☐ non-US _____

☐ other:

Published by entity that makes sense?

Does it correspond to the name of the site?

Publisher or Domain Name entity: Publisher or Domain Name entity:

2. Scan the perimeter of page, looking for answers to these questions:

Who wrote the page? ☐ E-mail ☐ Name: ☐ E-mail ☐ Name:

Dated? Date _____ Current enough? Date _____ Current enough?

Credentials on this subject?

(Truncate back the URL if no useful links.)

Evidence? Evidence?

3. Look for these indicators of quality

Sources well documented?

Complete? If 2nd-hand information, is it **not altered or forged?**

Links to more resources? Do they work?

Other viewpoints? Bias?

4. What do others say?

Who links to it?

Hint: In Google search: *link:all.or.part.of.url*

Many or few?

Opinions of it?

Many or few?

Opinions of it?

Is the page rated well in a directory?

http://lii.org or http://infomine.ucr.edu or http://about.com

Look up the author in Google

Does it all add up?

Why was the page put on the Web? ☐ Inform, facts, data ☐ Explain

☐ Persuade ☐ Sell ☐ Entice

☐ Share/disclose

Other:

☐ Inform, facts, data ☐ Explain

☐ Persuade ☐ Sell/entice

☐ Share/disclose

Other:

Possibly ironic? Satire or parody?

BOTTOM LINE: Is the web page as good as (or better than) what you could find in journal articles or

other published literature that is not on the free, general web?

Web

Source:

Barker, Joe. 1995. "The Best Stuff on the Web: Web Page Evaluation Checklist".
Berkeley: University of California, the Teaching Library.
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/EvalForm.pdf> (26 Jan. 2004).

7-3. Evaluating Web Sites

Since almost anything can be put online, it is necessary to critically evaluate the information you find on the web. Web sites are often a blend of information, entertainment and advertising; this can make determining the credibility of a web site difficult. However, if you apply specific criteria and ask certain questions about any web site and the information it provides, you have a better chance of finding the best the web has to offer. Use the following as general guidelines.

Authority

- Does the site have an author?
- What are the author's qualifications or expertise in the area?
- Is the contact information for the author or the sponsor/publisher given?
- What is the relationship between the author and the sponsoring institution?

Accuracy

- Is the information accurate?
- Has the information been edited/fact-checked?
- Is the information verifiable?
- Does the site document the sources used?
- If the information is historical or biographical, are the dates of events accurate?
- How does the information compare with what you already know?

Currency

- Is the site up-to-date?
- When was the information created or last updated?
- Are the links expired or current?

Point of View

- Whose point of view/perspective is given?
- Is the author simply promoting an agenda?
- To what extent is the information trying to sway the opinion of the audience?
- Is there advertising on the page?

After applying the guidelines, ask yourself whether the document or site is appropriate for your research.

What is the purpose of the Web site?

Do a quick scan of the site. Can you determine its general purpose? Is it meant to:

☐ **INFORM**

e.g., about current events, new information, etc.

□ **EXPLAIN**

e.g., teach, instruct, etc.

□ **PERSUADE**

e.g., change your mind, sell you something, etc.

Who is the intended audience? The domain name and the source of the URL web address of the page will indicate the site's intended audience. Knowing this provides clues as to the site's value and reliability.

Most common domain names

Domain	Meaning	Example
.edu	created at a college or university	www.indiana.edu
.gov	created by an official U.S. federal agency or office	www.federalreserve.gov
.org	varies - in most cases the site was created by a nonprofit organization or an individual	www.npr.org
.com	varies - in most cases the site was created by a for-profit organization	www.amazon.com
.net	varies greatly - often indicates that the site was created by a person, group, etc. that uses an Internet service provider	www.earthlink.net
.mil	created by the U.S. military	www.usmc.mil
.in.us	created by state-supported institution of Indiana - the .us domain requires a state code as a second level domain	www.monroe.lib.in.us

Most web sites fall into the following broad categories:

Advocacy Web Pages

Sponsored by an organization attempting to influence public opinion (that is, one trying to sell ideas). The URL of the page frequently ends in **.org** (organization).

Business / Marketing Web Pages

Sponsored by a commercial enterprise (usually it is a page trying to promote or sell products). The URL of the page frequently ends in **.com** (commercial).

Information Web Pages

Purpose is to present factual information. The URL of the page frequently ends in **.gov**, as many are sponsored by government agencies. Information web pages may be sponsored by an educational institution. The purpose is either to inform prospective students or educate current students. The URL of the page will almost always end in **.edu**.

News Web Pages

Primary purpose is to provide extremely current information. The URL of the page usually ends in **.com** (commercial).

Personal Web Pages

Published by an individual who may or may not be affiliated with a larger institution. Although the URL of the page may have a variety of endings (e.g. *.com*, *.edu*, *.net*, etc.), a tilde (~) is frequently found somewhere in the URL.

Important points...

Because web sites are creative with their presentation, layout, and styles, additional challenges may surface.

- Search engines may retrieve pages out of context, so it is always important to return to the home page of a site to find the correct publisher and author information.
- Be aware that you can easily be taken to other sites that may not provide a link to return you to your original site.
- With use of frames, you may not realize that you have been taken to another site.
- Animated graphics can distract you from the main content of a site.
- Remember! There may be an effective print alternative in your library that better fits your research needs or can verify some of the information you find on the web.
- Consult the library reference staff to find the best information resources, both print and web.

You can find an online tutorial about web evaluation at the following web site:

<http://www.indiana.edu/~libinstr/EvaluateWeb/>

Source:

The Trustees of Indiana University. 2003. "Evaluating Web Sites".
<http://www.indiana.edu/~libugls/Publications/webeval.html> (31 Jan. 2004).

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استفاده مؤثر و مسئولانه اطلاعات

8-1. Guide to Plagiarism and Cyber-Plagiarism

Although [plagiarism](#) has been around as long as students have, the Internet has dramatically increased the ease of and opportunities for plagiarism. "[Cyber-plagiarism](#)" is the term used to describe the process by which students either copy ideas found on the Web without giving proper [attribution](#), or the process by which students download research papers from the Web, in whole or in part, and submit the paper as original work. The phenomenon of cyber-plagiarism is affecting Universities around the globe.

- In a 1999 survey of American students conducted by the [Center of Academic Integrity](#) at Duke University, 68% of the 2,100 students polled said that they had committed at least one academic offence such as plagiarizing ([Quan F1](#)).
- Larry McKill, the Associate Dean of Arts, Student Programs at the [University of Alberta](#), estimates about 70 people were proven to have plagiarized during the academic year 2000 in the Faculty of Arts ([Gold F1](#)).
- During the same year, at the University of Ottawa, 18 students in the faculty of arts and sciences were disciplined for plagiarism; Carleton University reported 50 cases of plagiarism; and at the University of Toronto over 200 cases of plagiarism are reported each year ([Quan F1](#)).
- Most university administrators believe that the number of unreported cases of plagiarism far exceeds reported numbers ([Quan F1](#)).

The purpose of this web site is to examine the issues of plagiarism and cyber-plagiarism and what faculty can do to prevent, detect, and report plagiarism.

Please email any comments or questions to: tami.oliphant@ualberta.ca

[Why Students Plagiarize >>](#)

Why Students Plagiarize

Plagiarism is a difficult concept to define because it encompasses a wide range of actions from merely writing incorrect citations to the wholesale theft of someone else's work or ideas. Also, the type of plagiarism -- [deliberate](#) or [unintentional](#) -- have an impact upon the perception of the offence for both faculty and students. The exact causes of plagiarism are complex, but worth examining.

Reasons for Plagiarizing

For printable handouts and writing tips, please click [Handouts for Students](#).

Writing and Research Skills

- **Lack of research skills** -- many undergraduate students do not know how to search the library catalogue, search databases for journal articles, or use other reference sources. Faculty can help students acquire these skills by working in conjunction with their library. The [University of Alberta Libraries](#) offer free instructional sessions called [Navigating the Library](#). These sessions introduce students to the library and teach them how to search the library catalogue and databases. In addition, the libraries at the University of Alberta offer reference services on a daily basis as well as [e-mail reference](#) and [virtual reference](#).
- **Problems evaluating Internet sources** -- many students do not know how to critically evaluate Internet sources and this can impact on the research process and the student's writing. It is important to remember that there is no quality control on the Internet! Library research guides such as [Critical Evaluation of Resources on the Internet](#) are excellent resources for students. For a printable handout on what to look for when evaluating information found on the Web, please click [Handouts for Students](#).
- **Confusion between plagiarism and paraphrasing** -- studies indicate that up to 60% of students cannot distinguish between paraphrased and plagiarized text ([Roig 914](#)). The problem is magnified when students need to paraphrase unfamiliar vocabulary and technical terms. A study published in *Psychological Reports* found that "students will use writing strategies that result in plagiarism when they face the task of paraphrasing advanced technical text for which they may lack the proper cognitive resources with which to process it" ([Roig 979](#)). The inability to distinguish between plagiarized text and paraphrased text, and incorrectly citing sources, are often the root causes of [unintentional plagiarism](#). For a printable handout on how to distinguish between plagiarism and paraphrasing, please click [Handouts for Students](#).
- **Confusion about terminology** -- "Terminology is another problem that perplexes students and compounds their confusion and anxiety. Many do not understand the difference between a report and an essay, between exposition and argumentation, between a theme and a thesis . . . And 'analyse' and 'discuss' must surely rank at the top of the list of all-time confusing terms" ([Robertson D4](#)).

Instructions on assignments should be clear, concise, and easy to understand.

- **Careless notetaking** -- many students inadvertently plagiarize while doing preliminary research. During the notetaking phase paraphrased material and directly quoted material can easily be mixed up if students aren't careful. At a later date when students begin writing their essay they may no longer be able to distinguish what material is theirs and what material came from their sources. In addition, the student may have written incomplete or incorrect bibliographic information and cannot locate the source they quoted to ensure that they have not plagiarized.

To alleviate this problem some writers use only direct quotations while taking notes. This practice insures that the writer knows when to paraphrase and when to directly quote. Other methods of keeping track of direct quotes and paraphrased material include writing a "P" beside paraphrased material, plus the page number after every note taken, or placing quotation marks around everything copied word for word, even if it is only a phrase.

□ **Confusion about how to properly cite sources** -- the lack of consistency among the different style guides compounds the problems that students experience when citing sources. A student can use up to four different style guides in a year, and each guide may give conflicting information.

In addition, online sources can be particularly difficult to cite. First, there is no consensus among the style guides about citing online sources. Second, URLs are unstable. It is possible that a Web site address can change overnight, or the URL may be long, complex, and confusing.

The University of Alberta Libraries has an online guide that explains how to cite electronic sources. [Citation and Style Guides for Internet and Electronic Resources](#) is available from the University of Alberta Libraries home page. Another helpful resource is the [Research & Writing Guides](#) link.

Misunderstanding Key Concepts

□ **Misconception of [plagiarism](#)** -- students may erroneously assume that the act of plagiarism only involves written text. However the theft or lack of attribution for someone else's ideas is also plagiarism.

□ **Misconception of [intellectual property](#), [copyright](#), and [public domain](#)** -- students may not be able to decipher what information is in the public domain, what materials and ideas are copyrighted, and what materials and ideas are the intellectual property of their creators and thus require proper attribution.

□ **Misconception of [common knowledge](#)** -- students may not have the ability to distinguish what materials, facts, and ideas are considered [common knowledge](#). For a printable handout explaining the concept of common knowledge, please click [Handouts for Students](#).

□ **Perception of online information as public knowledge** -- because some students perceive information found online as public knowledge, they do not realize that Internet resources must be referenced. Journal articles and books found in online databases often do not get properly cited for the same reason. Students need to know that information found online is the intellectual property of its creator and it requires proper attribution.

External Factors

□ **Pressure from family, competition for scholarships and jobs** -- family members and personal expectations can place a great deal of pressure on students to maintain a certain grade point average regardless of what is learned. Often the all that

matters to students are grades when they are competing for scholarships, jobs, or entry into graduate school.

In addition, "Students may also not be as personally interested in their own education versus their career aspirations . . . Even students who are concerned about the learning part of their education may justify plagiarism based on the fear that others are already cheating, causing "unfair competition" ([Fain and Bates qtd. in Auer and Krupar](#)).

For some students, learning may not be the point of an education. They are there to get the qualifications or the piece of paper. This mode of thinking can result in students justifying academic offences because they only need to finish this assignment, this class, or they need the grade.

□ **Student ethics and relationship with the University** -- "Students lack a basic reference point for ethical academic behaviour. Too often learning and the evaluation of learning - namely grading - are considered one rather than two distinct processes. For some students, getting the grade becomes the goal, and they might see any behaviour as appropriate which results in good grades. Thus, lacking clear guidance from faculty and confused about the goal of education, students do not know what constitutes academic dishonesty" ([Peterson qtd. in Lathrop and Foss 115](#)).

□ **The commodification of knowledge and education** -- the move to business and market-models coupled with a consumer mentality can result in some students viewing their education as a commodity. There has been a shift from valuing education for the sake of learning to valuing education so that career aspirations can be fulfilled. As a result some students expect to pay their tuition and cruise through post-secondary education on their way to becoming a professional in their chosen field. Education can be viewed as the passport to a desired job rather than a learning experience.

Internal Factors

□ **Poor time management and organizational skills** -- undergraduate students often do not have the time management or organizational skills necessary to complete a large research paper. They can become overwhelmed by the large task and procrastinate.

To help alleviate the problem of procrastination faculty may ask students to hand in an outline of their paper a week before the paper is due.

Cultural Factors

□ **Culturally based attitudes towards plagiarism** -- The idea that an author has "ownership" of language may be a ludicrous concept to students from different cultures. In some cultures, copying someone else's words or ideas is a high form of flattery. The notion that words can be "owned" is a facet of Western culture.

"Many non-Westerners have a very difficult time understanding that a person can "own" discourse. For many Asian students in composition classes, proper acknowledgement of the language and ideas of others is a very difficult concept to understand, much less master . . . Furthermore, in the West, . . . there is a strong connection between ownership and selfhood, with the implication that whatever one owns (language included) makes up one's personal identity" ([Bowden 13](#)).

This is not a justification for anyone handing in plagiarized work, but it is useful to remember that it may take more time and different approaches for some people to master proper attribution.

Preventing Plagiarism

Preventing plagiarism isn't as difficult as one might think. The following are some simple strategies that faculty can use to prevent plagiarism:

Clarifying Concepts

- ☐ Teach students how to correctly paraphrase, quote, and properly cite sources. For printable handouts click on [Handouts for Students](#).
- ☐ Some students do not know what plagiarism is. Explain the concepts of [plagiarism](#), [intellectual property](#), [copyright](#), [collaboration](#) and [fair dealing](#).
- ☐ Provide the URL to the [Truth in Education](#) project, a Web site devoted to the promotion of academic integrity at the University of Alberta. The URL is: <http://login.ezproxy.library.ualberta.ca/login?url=http://www.ualberta.ca/studentservices/tie>.

Course Syllabi

- ☐ At the beginning of the term tell students that matters of academic dishonesty are taken very seriously at the University of Alberta. Faculty can reinforce this message by including a statement on academic dishonesty in the course syllabi. This statement should, however, be couched as fair warning rather than a threat.
- ☐ In addition to reviewing the [Code of Student Behaviour](#), think about what special issues may arise in a specific class. For example, is collaboration on assignments permissible or not? Faculty must make their expectations clear.
- ☐ Faculty can help students learn how to properly cite materials, particularly Web sources, by providing information on style guides. The University of Alberta Libraries has developed an online resource for citing materials. The [Citation Style Guides for Internet and Electronic Sources](#) provides thorough information on how to cite electronic resources.

During Class

- ☐ Discuss plagiarism as a moral and ethical issue. The relationship between faculty and students is based on trust; teach students the value of academic honesty and outline the responsibilities of being a junior member of the academic community.

- ☐ Discuss the benefits of citing sources properly. Proper attribution shows that the student has done thorough research and that the student has been exposed to a diverse range of thought and opinion. As a result, the paper will likely be stronger.
- ☐ Print a paper from one of the [paper mills](#) and critique it in class. This exercise accomplishes two things: first, it shows students that you are aware of paper mills and corresponding plagiarism detection services and second, you can teach them good writing skills by critiquing the paper.
- ☐ Before the first assignment is due, outline the penalties for handing in plagiarized work and give examples of what the punishment has been for those caught plagiarizing in the past. The threat of being suspended or even expelled from university or receiving a permanent mark on a transcript may be enough to deter a plagiarizer.
- ☐ Address the problems that students may have with citing sources from the Web. Some students may think that by citing a URL they are also citing any other links included in the Web site. Stress that students must cite the URL for any page or link they use. For tips on evaluating Internet sources, please click [Handouts for Students](#).
- ☐ Prior to the first major assignment, either book an instructional session on how to use library resources or make sure your students sign up for the [Navigating the Library](#) sessions that are offered through the University of Alberta Libraries. Many undergraduates do not know how to search the library for materials.

Assignment Design

The following list is comprised of suggestions only. Some professors do not think they are responsible for policing student behaviour or that they should alter their assignments to alleviate student procrastination. However fair warning and enough time to complete an assignment, offers of help, such as looking at drafts or outlines, and clear assignments are things that faculty can do to help their students successfully complete an assignment. Other suggestions include the following:

- ☐ Stagger due dates for different parts of a paper. For example, make the bibliography due a week before the final paper, or specify what materials students can use -- i.e. two Internet sources, three journal articles, two monographs, etc., or assign two or three smaller papers throughout the term rather than a single large one.
- ☐ Assign narrowly focused topics rather than broad general ones or ask students to write about current events as they relate to class materials.
- ☐ Change the paper topics each time the course is offered. This practice will prevent students from appropriating work done by former students.
- ☐ Tell students in advance that you will randomly check sources in the bibliography.
- ☐ Request that students hand in a photocopied page from the sources cited in their paper, or include an annotated bibliography as part of the assignment, or tell students that they can only use references that have been published within the last five years.
- ☐ Require students to hand in notes or outlines with their paper because you are looking for evidence of original thought.

Detecting Plagiarism

Indicators of possible plagiarism include:

- ☐ A student's paper exceeds his or her research or writing capabilities, sounds professional or journalistic, or is too scholarly..
- ☐ The student's paper contains complex or specialized vocabulary, jargon, technical terms, or other words and expressions beyond what would be expected from a student at that level.
- ☐ The quality of writing is inconsistent. For example, the introduction or conclusion may be poorly written compared to the body of the paper.
- ☐ The title page, font, references, format, or layout of the paper is inconsistent.
- ☐ There are imbedded links, page breaks, or incorrect page numbers in the paper.
- ☐ The topic of the paper isn't consistent with the assignment, class lectures, or class handouts.
- ☐ The bibliography is odd in some way. For example, it may be long, the style guide used for the bibliography is different from the one used in class, the citations are all from older sources, or few or none of the materials referenced can be accessed in the library.
- ☐ There are links or URLs at the top or bottom of the paper or greyed out letters or areas.
- ☐ As a general rule, follow your instincts. Most professors can gauge what level their students are at.

How to track down a suspect paper

- ☐ The same searching techniques that students use for locating papers on the Internet can also be used to retrieve plagiarized papers. Try typing in an unusual phrase or sentence from a suspect paper into a search engine like [Google](#) or [Lycos](#). Because no search engine can index the entire Web, it is advisable to use more than one search engine.
- ☐ In addition try using Google's Advanced Search feature. You can specify the formats you would like to search, the language, and you can construct far more specific searches.
- ☐ Another resource to search is the Invisible Web. Web sites like [InvisibleWeb.com](#) or [CompletePlanet](#) offer links to thousands of databases and Web sites that aren't indexed by a regular search engines ([Harris 172](#)).
- ☐ Although it may be tempting to submit student papers to a free detection service, it is strongly recommended that searchers only submit phrases or a few sentences to these search engines. With a stroke of ingenuity, there is evidence to suggest that some of these detection services may be taking submitted student essays and re-selling them from paper mills.
- ☐ In addition, try searching some of the [paper mills](#) for a suspect paper.
- ☐ If the quality of writing appears to exceed the level of the student, faculty may initially check both print and electronic reference sources like encyclopedias and dictionaries. Online reference sources like [AskJeeves.com](#), [Encyclopedia.com](#), and [eLibrary](#) offer links to other Web sites, newspaper and magazine articles, pictures, and books on selected topics. The eLibrary service has a subscription fee but offers a

7 day free trial. Faculty may be able to locate plagiarized sources searching some of these sites.

□ In addition to checking print sources faculty may also want to search a few online databases. The suspect paper may have been taken directly from an article found in an online database like *Academic Search Premier*, accessed via the library, rather than the Internet. The database may also retrieve articles that were omitted in the bibliography but have obviously been used by the student.

□ Another source students can plagiarize from for both ideas and text is usenet groups and list serves. Some search engines will automatically search these Internet sources, but usually they will only search the Web unless the researcher chooses usenet groups and list serves as the format to be searched ([Stebelman 49](#)).

□ Ask a librarian for help if there is difficulty searching for a suspect paper. Faculty can [e-mail](#) library staff or go directly to a reference desk for assistance.

Source:

University of Alberta. 2002. " Guide to Plagiarism and Cyber-Plagiarism"
<http://www.library.ualberta.ca/guides/plagiarism/> (19 Jan. 2004).

8-2. Paragraphs and Topic Sentences

A paragraph is a series of sentences that are organized and coherent, and are all related to a single topic. Almost every piece of writing you do that is longer than a few sentences should be organized into paragraphs. This is because paragraphs show a reader where the subdivisions of an essay begin and end, and thus help the reader see the organization of the essay and grasp its main points.

Paragraphs can contain many different kinds of information. A paragraph could contain a series of brief examples or a single long illustration of a general point. It might describe a place, character, or process; narrate a series of events; compare or contrast two or more things; classify items into categories; or describe causes and effects. Regardless of the kind of information they contain, all paragraphs share certain characteristics. One of the most important of these is a topic sentence.

TOPIC SENTENCES

A well-organized paragraph supports or develops a single controlling idea, which is expressed in a sentence called the topic sentence. A topic sentence has several important functions: it substantiates or supports an essay's thesis statement; it unifies the content of a paragraph and directs the order of the sentences; and it advises the reader of the subject to be discussed and how the paragraph will discuss it. Readers generally look to the first few sentences in a paragraph to determine the subject and perspective of the paragraph. That's why it's often best to put the topic sentence at the very beginning of the paragraph. In some cases, however, it's more effective to place another sentence before the topic sentence--for example, a sentence linking the current paragraph to the previous one, or one providing background information.

Although most paragraphs should have a topic sentence, there are a few situations when a paragraph might not need a topic sentence. For example, you might be able to omit a topic sentence in a paragraph that narrates a series of events, if a paragraph continues developing an idea that you introduced (with a topic sentence) in the previous paragraph, or if all the sentences and details in a paragraph clearly refer--perhaps indirectly--to a main point. The vast majority of your paragraphs, however, should have a topic sentence.

PARAGRAPH STRUCTURE

Most paragraphs in an essay have a three-part structure--introduction, body, and conclusion. You can see this structure in paragraphs whether they are narrating, describing, comparing, contrasting, or analyzing information. Each part of the paragraph plays an important role in communicating your meaning to your reader.

Introduction: the first section of a paragraph; should include the topic sentence and any other sentences at the beginning of the paragraph that give background information or provide a transition.

Body: follows the introduction; discusses the controlling idea, using facts, arguments, analysis, examples, and other information.

Conclusion: the final section; summarizes the connections between the information discussed in the body of the paragraph and the paragraph's controlling idea.

The following paragraph illustrates this pattern of organization. In this paragraph the topic sentence and concluding sentence (CAPITALIZED) both help the reader keep the paragraph's main point in mind.

SCIENTISTS HAVE LEARNED TO SUPPLEMENT THE SENSE OF SIGHT IN NUMEROUS WAYS. In front of the tiny pupil of the eye **they put**, on Mount Palomar, a great monacle 200 inches in diameter, and with it see 2000 times farther into the depths of space. **Or they look** through a small pair of lenses arranged as a microscope into a drop of water or blood, and magnify by as much as 2000 diameters the living creatures there, many of which are among man's most dangerous enemies. **Or**, if we want to see distant happenings on earth, **they use** some of the previously wasted electromagnetic waves to carry television images which they re-create as light by whipping tiny crystals on a screen with electrons in a vacuum. **Or they can bring** happenings of long ago and far away as colored motion pictures, by arranging silver atoms and color-absorbing molecules to force light waves into the patterns of original reality. **Or** if we want to see into the center of a steel casting or the chest of an injured child, **they send** the information on a beam of penetrating short-wave X rays, and then convert it back into images we can see on a screen or photograph. **THUS ALMOST EVERY TYPE OF ELECTROMAGNETIC RADIATION YET DISCOVERED HAS BEEN USED TO EXTEND OUR SENSE OF SIGHT IN SOME WAY.**

George Harrison, "Faith and the Scientist"

COHERENCE

In a coherent paragraph, each sentence relates clearly to the topic sentence or controlling idea, but there is more to coherence than this. If a paragraph is coherent, each sentence flows smoothly into the next without obvious shifts or jumps. A coherent paragraph also highlights the ties between old information and new information to make the structure of ideas or arguments clear to the reader.

Along with the smooth flow of sentences, a paragraph's coherence may also be related to its length. If you have written a very long paragraph, one that fills a double-spaced typed page, for example, you should check it carefully to see if it should start a new paragraph where the original paragraph wanders from its controlling idea. On the other hand, if a paragraph is very short (only one or two sentences, perhaps), you may need to develop its controlling idea more thoroughly, or combine it with another paragraph.

A number of other techniques that you can use to establish coherence in paragraphs are described below.

Repeat key words or phrases. Particularly in paragraphs in which you define or identify an important idea or theory, be consistent in how you refer to it. This consistency and repetition will bind the paragraph together and help your reader understand your definition or description.

Create parallel structures. Parallel structures are created by constructing two or more phrases or sentences that have the same grammatical structure and use the same parts of speech. By creating parallel structures you make your sentences clearer and easier to read. In addition, repeating a pattern in a series of consecutive sentences helps your reader see the connections between ideas. In the paragraph above about scientists and the sense of sight, several sentences in the body of the paragraph have been constructed in a parallel way. The parallel structures (which have been **emphasized**) help the reader see that the paragraph is organized as a set of examples of a general statement.

Be consistent in point of view, verb tense, and number. Consistency in point of view, verb tense, and number is a subtle but important aspect of coherence. If you shift from the more personal "you" to the impersonal "one," from past to present tense, or from "a man" to "they," for example, you make your paragraph less coherent. Such inconsistencies can also confuse your reader and make your argument more difficult to follow.

Use transition words or phrases between sentences and between paragraphs. Transitional expressions emphasize the relationships between ideas, so they help readers follow your train of thought or see connections that they might otherwise miss or misunderstand. The following paragraph shows how carefully chosen transitions (CAPITALIZED) lead the reader smoothly from the introduction to the conclusion of the paragraph.

I don't wish to deny that the flattened, minuscule head of the large-bodied "stegosaurus" houses little brain from our subjective, top-heavy perspective, BUT I do wish to assert that we should not expect more of the beast. FIRST OF ALL, large animals have relatively smaller brains than related, small animals. The correlation of brain size with body size among kindred animals (all reptiles, all mammals, FOR EXAMPLE) is remarkably regular. AS we move from small to large animals, from mice to elephants or small lizards to Komodo dragons, brain size increases, BUT not so fast as body size. IN OTHER WORDS, bodies grow faster than brains, AND large animals have low ratios of brain weight to body weight. IN FACT, brains grow only about two-thirds as fast as bodies. SINCE we have no reason to believe that large animals are consistently stupider than their smaller relatives, we must conclude that large animals require relatively less brain to do as well as smaller animals. IF we do not recognize this relationship, we are likely to underestimate the mental power of very large animals, dinosaurs in particular.

Stephen Jay Gould, "Were Dinosaurs Dumb?"

SOME USEFUL TRANSITIONS

(modified from Diana Hacker, *A Writer's Reference*)

To show addition:

again, and, also, besides, equally important, first (second, etc.), further, furthermore, in addition, in the first place, moreover, next, too

To give examples:

for example, for instance, in fact, specifically, that is, to illustrate

To compare:

also, in the same manner, likewise, similarly

To contrast:

although, and yet, at the same time, but, despite, even though, however, in contrast, in spite of, nevertheless, on the contrary, on the other hand, still, though, yet

To summarize or conclude:

all in all, in conclusion, in other words, in short, in summary, on the whole, that is, therefore, to sum up

To show time:

after, afterward, as, as long as, as soon as, at last, before, during, earlier, finally, formerly, immediately, later, meanwhile, next, since, shortly, subsequently, then, thereafter, until, when, while

To show place or direction:

above, below, beyond, close, elsewhere, farther on, here, nearby, opposite, to the left (north, etc.)

To indicate logical relationship:

accordingly, as a result, because, consequently, for this reason, hence, if, otherwise, since, so, then, therefore, thus

Source:

The Trustees of Indiana University. 2003. "Paragraphs and Topic Sentences".
<http://www.indiana.edu/~wts/wts/paragraphs.html> (31 Jan. 2004).

8-3. Using Outlines

Many writers use an outline to help them think through the various stages of the writing process. An outline is a kind of graphic scheme of the organization of your paper. It indicates the main arguments for your thesis as well as the subtopics under each main point. Outlines range from an informal use of indenting and graphics (such as --, *, +) to a formal use of Roman numerals and letters. Regardless of the degree of formality, however, the function of an outline is to help you consider the most effective way to say what you want to say.

Outlines usually grow out of working plans for papers. For shorter, less complex papers, a few informal notes jotted down may be enough. But longer papers are too big to organize mentally; you generally need a more systematic plan to organize the various parts of the paper. Preparing an outline will help you think over your notes, consider them from several perspectives, and devise/revise an organizational plan appropriate to your topic, audience, and assignment. An outline that accompanies the final draft of a paper can also function as a table of contents for the reader.

When you think of outlines, you usually think of an organizational plan to help you draft a paper, but you can outline at any one of the several stages of the writing process. At each stage, the outline serves a different function and helps you answer different writing questions:

USING OUTLINES IN RESEARCH

While you are researching a topic, you can make a tentative outline--a plan for your paper based on what you are learning from your research. This kind of outline helps you answer the questions: What do I know a lot about already? What do I need to research more?

Here is an example of a tentative outline a student used to begin doing research for an essay comparing three different political theories: neo-Marxism, pluralism, and elitism. The writer already knew about two of the theories, but needed more information about the third.

Neo-Marxism

- power to minority
- emphasizes economics

Pluralism

- power to interest groups
- shifting coalitions of groups

Elitism

- definition
- description

Analysis: United States

- neo-Marxist
- pluralist
- elitist

PRE-WRITING WITH OUTLINES

During pre-writing, you can make a working outline--an outline that guides you in your drafting. It helps you answer the question: How am I going to present my information, given my thesis, my assignment and my audience?

The student who wrote the tentative outline above also wrote the one below before beginning her essay. She wanted to describe the three political theories and then compare them by using each to analyze the government of a particular country, arguing that neo-Marxism is the most useful theory. Her working outline isn't very formal, but it fulfills the functions of a good outline.

- It supports the thesis.
- It establishes the order and relationship of the main points.
- It clarifies the relationship between the major and minor points.

Here's what the student's second outline looked like:

*** Introduction**

- theories are simpler than real life
- theories are tools

*** Three Political Theories**

- Neo-Marxism
 - power to minority
 - importance of economic control
- Pluralism
 - power to interest groups
 - interest groups form coalitions
- Elitism
 - power to elite
 - how elite is defined

*** Compare analysis of United States**

- Neo-Marxist
- Pluralist
- Elitist

Your job as the writer is to think through the relationship between your ideas. For example, is one idea similar to or different from another? Is one a cause of another? An effect? An example? Is one idea the solution to another? Do two points represent different categories of a larger idea? In other words, do your ideas fall into one of the conventional approaches to thinking about an issue: cause-effect, problem-solution, comparison-contrast, definition, classification? You can use these standard approaches to help you think through your ideas and come up with a logical plan. That plan then becomes your outline.

While drafting, you can make a draft or descriptive outline--an outline that is based on your draft. It describes each of your paragraphs so that you can critique your organization. It helps you answer the questions: Does my draft flow logically from point to point? Have I discussed similar ideas in the same section or do I seem to jump around?

This is a draft outline the above-mentioned student made after writing the first draft of her paper. She summarized the draft, paragraph by paragraph, and then took a look at what the outline revealed.

Paragraph 1 -- General introduction to political theories, Thesis: neo-Marxism most useful
Paragraph 2 -- Description of neo-Marxism
Paragraph 3 -- Description of pluralism
Paragraph 4 -- Coalitions of interest groups
Paragraph 5 -- Description of elitism
Paragraph 6 -- Pluralist analysis of U.S.
Paragraph 7 -- Neo-Marxist analysis of U.S.
Paragraph 8 -- Strengths of neo-Marxist analysis, Weaknesses of neo-Marxism and Pluralism
Paragraph 9 -- Weaknesses of elitism
Paragraph 10 -- Conclusion

She noticed that the descriptions of neo-Marxism and elitism were each in a single paragraph, but the description of pluralism took two paragraphs. She decided to be consistent by combining paragraphs 3 and 4. She also noticed that the second half of the paper seemed to jump around from theory to theory, presenting each theory's analysis and then each theory's weaknesses. She decided to put the pluralist analysis of the U.S. and the weaknesses of the analysis together in paragraph 6, the elitist analysis and its weaknesses into a paragraph together, and then devote two paragraphs to the neo-Marxist analysis and its strengths and weaknesses.

MAKING AN OUTLINE TO HAND IN

Finally, you may also be required to write a formal outline--an outline that serves as a guide to your paper for your reader. If you haven't already been making formal outlines, this outline will be a formal version of your previous notes; it lays out your main points and subpoints for your reader. Generally, this kind of outline uses conventions of formal outlining: Roman numerals, letters and indentations. Sometimes this sort of outline can be produced after you have written your essay.

Formal outlines can be written in two ways. In topic outlines, the ideas are expressed in parallel phrases (in other words, they are expressed in the same grammatical form--as noun phrases, as verb phrases, etc.). Topic outlines have the advantage of being brief. In sentence outlines, on the other hand, the ideas are expressed in complete, though not necessarily parallel, sentences. Sentence outlines give the reader a clearer idea of what you will argue.

Regardless of the kind of formal outline you choose, convention states that you begin with a statement of your thesis and indicate increasing levels of support in this order: I., A., 1., a., (1), (a). In scientific papers, however, a decimal system is also commonly used. A topic outline follows:

Thesis: Among the pluralist, elitist, and neo-Marxist political theories, neo-Marxism provides the most powerful analysis of the current political scene.

- I. Functions of political theories
 - A. Tools to help understand governments
 - 1. Categorization
 - 2. Comparison
 - B. Limitation: Over-simplification
- II. Three political theories
 - A. Neo-Marxism
 - 1. Definition
 - 2. Description
 - B. Pluralism
 - 1. Definition
 - 2. Description
 - C. Elitism
 - 1. Definition
 - 2. Description
- III. Comparative analysis of U.S. government
 - A. Pluralism
 - 1. Analysis
 - 2. Weaknesses
 - B. Elitism
 - 1. Analysis
 - 2. Weaknesses
 - C. Neo-Marxism
 - 1. Analysis
 - 2. Critique
 - a. Strengths
 - b. Weaknesses
- IV. Conclusion

Notice in a formal outline, whenever a point is subdivided, there are at least two subpoints. Logic and convention state that when you divide a point, you can divide it into no fewer than two subpoints.

Remember, depending on how your research or writing is going, you may need to make use of any or all of the outlines described in this article.

Source:

The Trustees of Indiana University. 2003. "Using Outlines".
<http://www.indiana.edu/~wts/wts/outlines.html> (31 Jan. 2004).

8-4. Everything you ever wanted to know about PREPARING A BIBLIOGRAPHY

A BIBLIOGRAPHY is a list of resources designed to fulfill a need. It may be the list of sources cited in a paper or book. It may also be a document of intrinsic worth and usefulness. This MMC NOTE includes guidelines in producing several types of bibliographies. Some bibliographies are for the use only of the writer. Others are meant for use by students and scholars.

Organizing and retrieving information for use in one's occupation and personal life is increasingly necessary. Bibliographies offer a way of organizing. If stored electronically, information can be searched and manipulated for many uses.

The American Library Association's **Guidelines for the Preparation of a Bibliography (1992)** is the major source used for this NOTE.

TYPES

1. **Enumerative bibliographies** are just lists of citations. They list everything available on a topic in a given timespan, journal, library, etc. A standard bibliographic format suitable to the subject or discipline should be used. Examples are the APA Publication format and the MLA style (MMC NOTES 15 & 19.) Other recognized styles may also be used.

2. **Annotated bibliographies** include notes about the items. Clear concise writing is desirable. Some writers include lengthy annotations. The length of the comment is determined by the writers purpose. Or in the case of a class assignment, the parameters set by the instructor. The notes may be of several kinds. An annotation can include one or more of these types.

A. *Informative notes* offer explanations of the reason for including the item.

B. *Descriptive annotations* include information about the contents. They may include subject matter, research type, author affiliations, or any information related to the purpose of the bibliography. The type of descriptions in a bibliography are often commented on in the introduction.

C. *Critical evaluations* describe the place of the item within the literature and assesses its value. The appropriateness of research methods may be included if it is a bibliography of research. The critical comments may be positive or negative. Comparisons to other similar works are sometimes commented upon.

ORGANIZATION

Lengthy bibliographies usually include an index. However, it should be organized so that it can be used without an index. It may be organized alphabetically by author, or by topic, or by media/format, or other specified arrangement. This should be

indicated in the introduction. Whatever the arrangement, it should be easy to understand and use.

The introduction to the document should give the rationale and anticipated use(s) for the bibliography. It should state its limitations and any special features.

EXAMPLES OF CONTENT

Suggestions for materials to be included in a bibliography follow. Some or all may be appropriate to a topic. The physical arrangement is determined by the anticipated use.

These are typical groupings or arrangements in bibliographies.

Works by and about a person:

1. Primary Sources
 - A. Books
 - B. Shorter works
 - C. Essays, articles, nonfiction
 - D. Audiovisuals by type
2. Secondary Sources
 - A. Biographical
 - B. Interviews
 - C. Book Reviews
 - D. Criticism
 - E. General books & articles

Subject matter resources

These may be lists of resources grouped by category or they may be pathfinders. A subject matter bibliography can be a precursor to an review of literature essay. It can be as narrow or broad as the subject matter under consideration. It can be limited to books or journals or other media or be inclusive. This is determined by the writer.

Pathfinders are bibliographies designed to introduce the novice to a discipline. They often start with reference materials, lists of subject headings, lists of periodicals and lists of periodical indexes useful for that subject, in addition to some of the following:

1. General Books
 - A. grouped by content
 1. primary
 2. secondary
 - B. grouped by audience
 - C. support or pariferal materials
2. Professional Books
 - A. pedagogy
 - B. technology
 - C. standards or licensing

3. Reference Books

- A. handbooks
- B. almanacs
- C. dictionaries
- D. encyclopedias
- E. directories
- F. bibliographies
- G. government publications

4. Audiovisuals by type

ACCURACY

The usefulness of a bibliography is dependent on the accuracy of the information. Effort should be made to have complete citations with no typographical or content errors. Notes or annotations should be factually correct and grammatically sound. Well-turned sentences and interesting imagery is to be encouraged in annotations.

FORMAT

The format of the document itself should be attractive and clear. Many computer word processing packages have a selection of page layout possibilities. It is possible to emulate the simpler ones on a typewriter. Computers also allow for the use of several typefaces to are emphasis and subdivide the bibliography. Visual components can make a document more or less accessible to the reader. White space and margins on the pages are important. If it is a working document, space for personal notes is appreciated.

Source:

Mount Mercy College.2001. "Everything you ever wanted to know about Preparing a Bibliography". <http://www.mtmercy.edu/lib/note21.htm> (4 Feb. 2004).

8-6. Style Sheets for Citing Internet & Electronic Resources: Humanities (MLA & Chicago), Scientific (APA & CBE), and History (Turabian)

Introduction

The following contents are taken from *The Columbia Guide to Online Style*

The Elements of Citation

Documenting Sources in the Text

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Introduction

Basic Humanities and Scientific citations. The following basic guidelines for formatting citations from a variety of electronic resources was created by Janice R. Walker and is adapted from the Columbia Guide to Online Style, one of the most thorough guides to citing electronic resources available. The complete book is available in the Library Information Center and several other campus libraries at the call number PN171.F56 W35 1998. Guidelines for citing almost all types of electronic sources are described in generic formats on this page for both "humanities" researchers (MLA and Chicago styles) and "scientific" (APA & CBE styles). The original version of this style sheet, with the most recent updates, is available at http://www.columbia.edu/cu/cup/cgos/idx_basic.html

Footnote formats are not explicitly addressed in the text below. In-text citations and bibliography listings are. The footnote format is a variation in the order and punctuation of bibliographic citations. These variations are summarized succinctly in the Teaching Library guide to citation formats. For most electronic sources, page numbers (of vital importance when citing print resources) are irrelevant because documents that appear in a screen or other device do not page in any way meaningful to your reader.

A guide for **history** citation using the Turabian style sheet for Internet citations is available at <http://www.people.memphis.edu/~mcrouse/elcite.html>

The Elements of Citation

The primary elements of a bibliographic reference are the same for most styles of documentation, although the order in which they are presented may vary. These elements include the name of the author, the title, the place of publication, the publisher's name, the date of publication, and a designation of the location, or page number, of a reference. Many

styles also include a designation of the publication medium. For electronic sources, however, some elements may be missing or must be translated into elements that make sense in a new era of publishing. For example, in place of an author's name, online authors may only use login names or aliases. Instead of a title, there may only be a file name. The place of publication and the name of the publisher are replaced online by the protocol and address, and, rather than a date of publication, the date you access the site may be the only means of designating the specific "edition" of an online work. On the WWW, a given site is always one page, regardless of its length. Pagination is thus an element of print publication that has little or no meaning in electronic documents or files. Since most Web browsers, word processing packages, and text editors allow the reader to search for specific words or phrases within a document, designating the location of a specific reference within an electronic document or file may be redundant.

When in doubt, it is better to give too much information than too little. For more information, see *The Columbia Guide to Online Style*.

Documenting Sources in the Text

Parenthetical or in-text references to print publications usually include the author's last name and the page number of the reference (humanities styles) or the author's last name, the date of publication, and the page number of the reference (scientific styles). Often, for electronic sources, some or all of these elements may be missing. Thus, parenthetical references to electronic sources will usually include only an author's last name or, if no author's name is available, the file name, and, for scientific styles, the date of publication or the date of access if no publication date is available.

For files with no designation of author or other responsible person or organization, include the file name in parentheses (i.e., cgos.html). For scientific styles with no designation of publication date or date of last revision or modification, include the date of access instead, in day-month-year format (i.e., 16 Aug. 1996).

List navigational aids such as page, section, or paragraph numbers, if they are included in the original text, at the conclusion of the citation, separated by commas. For most electronic sources, however, navigational aids will not be included.

In citations of print sources, subsequent references to the same work need not repeat the author's name, instead giving the different page number or location, if applicable. With electronic documents that are not paginated or otherwise delineated, however, repeating the author's name may be the only way to acknowledge when information is drawn from a given source.

For a more complete discussion of parenthetical and in-text citations, see *The Columbia Guide to Online Style*.

Preparing the Bibliographic Material

Bibliographic listings of electronic sources follow the format for whatever style you are using for print sources, i.e., humanities styles, such as *MLA* or *Chicago*, or scientific styles, such as *APA* or *CBE*. The basic formats for citing electronic sources are:

Humanities Style

Author's Last Name, First Name.

"Title of Document." *Title of Complete Work* [if applicable].

Version or File Number [if applicable]. Document date or date of last revision [if different from access date].

Protocol and address, access path or directories (date of access).

Scientific Style

Author's Last Name, Initial(s).

(Date of document [if different from date accessed]).

Title of document. *Title of complete work* [if applicable].

Version or File number [if applicable]. (Edition or revision [if applicable]).

Protocol and address, access path, or directories (date of access).

For print publications, use the hanging indent feature of your word processor to format the bibliographic entries. Note that some word processors will automatically format Internet addresses, changing their color and underlining them. Use these defaults if available. For hypertext files, the hanging indent feature is not necessary; instead, bibliographies may be formatted using the list feature or by including an extra line space between entries. For more information, see Part 2 of *The Columbia Guide*.

The following examples are grouped according to method of access, or protocol, which is a key element in locating and accessing electronic documents and files. This site provides the general format for each of these types of sources. For a more complete listing and further information, see *The Columbia Guide to Online Style*.

2.8 The World Wide Web (WWW)

Humanities Style

To cite files available on the WWW, give the author's name, last name first (if known); the full title of the work, in quotation marks; the title of the complete work (if applicable), in italics; any version or file numbers; and the date of the document or last revision (if available). Next, list the protocol (e.g., "http") and the full URL, followed by the date of access in parentheses.

Burka, Lauren P. "A Hypertext History of Multi-User Dimensions." *MUD History*. 1993. <http://www.utopia.com/talent/lpb/muddex/essay> (2 Aug. 1996).

Scientific Style

Give the author's last name and initials (if known) and the date of publication in parentheses. Next, list the full title of the work, capitalizing only the first word and any proper nouns; the title of the complete work or site (if applicable) in italics, again capitalizing only the first word and any proper nouns; any version or file numbers, enclosed in parentheses; the protocol and address, including the path or directories necessary to access the document; and finally the date accessed, enclosed in parentheses.

Burka, L. P. (1993). A hypertext history of multi-user dimensions. *MUD history*. <http://www.utopia.com/talent/lpb/muddex/essay> (2 Aug. 1996).

2.9 Email, Discussion Lists, and Newsgroups

Humanities Style

Cite the author's name (if known) or the author's email or login name (the part of the email

address before the @ sign), followed by the subject line of the posting, enclosed in quotation marks; the date of the message if different from the date accessed; and the name of the discussion list (if applicable), in italics. Next, give the address of the list, or the protocol and address of the newsgroup, followed by the date accessed in parentheses.

Crump, Eric. "Re: Preserving Writing." *Alliance for Computers and Writing Listserv*. acw-l@unicorn.acs.ttu.edu (31 Mar. 1995).

Scientific Style

Include the author's name and initials (if known) or the author's alias; the date of the message in parentheses, if different from the date accessed; and the subject line, only first word and proper nouns capitalized. For discussion lists and newsgroups, include the name of the list (if applicable), capitalized as just described and italicized; the list address; and the date accessed, in parentheses.

Crump, E. Re: Preserving Writing. *Alliance for Computers and Writing listserv*. acw-l@unicorn.acs.ttu.edu (31 Mar. 1995).

2.10 Information Available Using Gopher Protocols

Humanities Style

List the author's name (if known), last name first; the title of the paper or file, enclosed in quotation marks; the title of the complete work (if applicable), in italics; and the date of publication (if known), including any previous publication information (if applicable). Include the protocol (i.e., "gopher"), the address, the gopher search path or directories followed to access the information (if applicable), and, in parentheses, the date the file was accessed (if applicable).

African National Congress. "Human Rights Update for Week No. 10 from 5/3/96 to 11/3/97." gopher://gopher.anc.org.za: 70/00/hrc/1997/hrup97.10 (1 Jan. 1998).

Scientific Style

List the author's name (if known), last name first and then initials; the date of publication or last revision (if known), in parentheses; the title of the paper or file, capitalizing only the first word and any proper nouns; and the title of the complete work (if applicable), in italics and capitalized as just described. Include any previous publication information if applicable, then cite the protocol (i.e., "gopher"), the address, the gopher search path or directories followed to access the information; and, in parentheses immediately after the gopher path, the date accessed.

Perry, T. The quick and dirty guide to Japanese. gopher://hoshi.cic.sfu.ca: 70/00/dlam/misc/Japanes.lang (12 Jun. 1997).

2.11 Information Available Using File Transfer Protocols (FTP)

Humanities Style

Give the author's name (if known), last name first; the full title (of a shorter work in quotation marks; of a larger work, in italics); and the document date (if available). Next, give the protocol (i.e., "ftp") and the full FTP address, including the full path needed to access the file. Last, list the date of access, enclosed in parentheses.

Johnson-Eilola, Johndan. "Little Machines: Rearticulating Hypertext Users." 3 Dec. 1994. <ftp://ftp.daedalus.com/pub/CCCC95/johnson-eilola> (14 Aug 1996).

Scientific Style

Give the author's last name and initials; the document date (if known), in parentheses; the title of the document or file; the title of the complete work (if applicable), in italics; any previous publication information; the protocol and address; the directory path; and, in parentheses, date of access.

Johnson-Eilola, J. (1994). Little machines: Rearticulating hypertext users. <ftp://ftp.daedalus.com/pub/CCCC95/johnson-eilola> (14 Aug. 1996).

2.12 Information Available Using Telnet Protocols

Humanities Style

List the author's name or alias, last name first (if known); the title of the work (if applicable), in quotation marks; the title of the full work or telnet site (if applicable), in italics; the date of publication or creation (if known); and finally the protocol (i.e., "telnet") and complete telnet address, any directions necessary to access the publication, and the date of the visit, enclosed in parentheses. Separate commands from the address with a single blank space.

traci (#377). "DaedalusMOO Purpose Statement." *WriteWell*. telnet://[moo.daedalus.com:7777](telnet://moo.daedalus.com:7777) help purpose (30 Apr. 1996).

Scientific Style

List the author's last name and initial(s) or alias (if known); the date of publication (if known and if different from the date accessed), in parentheses; the title of the work; the title of the site or complete work (if applicable), in italics; and the protocol and complete telnet address, including the port number (if applicable), any necessary directions to access the publication, and the date of the visit, enclosed in parentheses.

traci (#377). DaedalusMOO purpose statement. *WriteWell*. telnet://[moo.daedalus.com:7777](telnet://moo.daedalus.com:7777) help purpose (30 Apr. 1996).

2.13 Synchronous Communication Sites

Humanities Style

Include the name or alias of the author or speaker (if known); the type of communication (i.e., "Personal interview") or, for synchronous conferences, the session title (if applicable), enclosed in quotation marks; the site title (if applicable), in italics; the protocol and address, including any paths or directories, the command sequence (if applicable), and, in parentheses, the date of the conversation.

Kiwi. "Playing the Jester Is Hard Work." *DaMOO*. telnet://[damoo.csun.edu:7777](telnet://damoo.csun.edu:7777) (4 Dec. 1996).

Scientific Style

Include the name or alias of the author or speaker (if known); the type of communication (e.g., Personal interview) or, for conferences, the session title; the site title (if applicable), in italics; the protocol and address, the command sequence (if applicable), and, in parentheses, the date of the conversation.

Kiwi. Playing the jester is hard work. *DaMOO*. telnet://damoo.csun.edu:7777 (4 Dec. 1996).

2.14 Online Reference Sources

Humanities Style

Give the author's name (if known); the title of the article, in quotation marks; the title of the complete work, in italics; any print publication information, including the date; information concerning the online edition (if applicable); the name of the online service, in italics, or the protocol and address and the path or directories followed; and, in parentheses, the date of access.

"Fine Arts." *Dictionary of Cultural Literacy*. 2nd ed. Ed. E. D. Hirsch, Jr., Joseph F. Kett, and James Trefil. Boston: Houghton Mifflin. 1993. INSO Corp. *America Online*. Reference Desk/Dictionaries/Dictionary of Cultural Literacy (20 May 1996).

Scientific Style

Give the author's last name and initials; the publication date (if known and if different from the date accessed); and the title of the article. Then cite the word "In," followed by the name(s) of the author(s) or editor(s) (if applicable) and, in italics, the title of the complete work; any previous print publication information (if applicable); identification of the online edition (if applicable); the name of the online service, in italics, or the protocol and address and the path followed to access the material; and, in parentheses, the date accessed.

Fine arts. (1993). In E. D. Hirsch, Jr., J. F. Kett, & J. Trefil (Eds.), *Dictionary of cultural literacy*. Boston: Houghton Mifflin. INSO Corp. *America Online*. Reference Desk/Dictionaries/Dictionary of Cultural Literacy (20 May 1996).

2.15 Electronic Publications and Online Databases

Humanities Style

List the author's name, last name first (if known); the title of the article, in quotation marks; and the title of the software publication, in italics. Next, list any version or edition numbers or other identifying information, the series name (if applicable), and the date of publication. Finally, cite the name of the database (if applicable) and the name of the online service—both in italics—or the Internet protocol and address, any other publication information, the directory path followed (if applicable), and, in parentheses, the date accessed.

Christopher, Warren. "Working to Ensure a Secure and Comprehensive Peace in the Middle East." U.S. Dept. of State Dispatch 7:14, 1 Apr. 1996. *FastDoc*. OCLC. File #9606273898 (12 Aug. 1996).

Scientific Style

List the author's last name and initials; the date of publication, in parentheses; the title of the article or file and, enclosed in parentheses, any identifying file or version numbers or other identifying information (if applicable); the title of the electronic database, in italics; the name of the online service, in italics, and access information or the protocol and address and any directory paths; and, in parentheses, the date accessed.

Warren, C. (1996). Working to ensure a secure and comprehensive peace in the Middle East (U.S. Dept. of State Dispatch 7:14). *FastDoc*. OCLC (File #9606273898). (12 Aug. 1996).

2.16 Software Programs and Video Games

Humanities Style

Cite the name of the author or corporate author (if available); the title of the software program, in italics; the version number (if applicable and if not included in the software title); and the publication information, including the date of publication (if known).

ID Software. *The Ultimate Doom*. New York: GT Interactive Software, 1995.

Scientific Style

Cite the last name and initials of the author (if available); the date of publication or release, in parentheses; the title of the software program or video game, in italics; the version number (if applicable and if not included in the software title), in parentheses; and the publication information.

ID Software. (1993). *The ultimate doom*. NY: GT Interactive Software.

Source:

Barker, Joe. 1995. "Style Sheets for Citing Internet & Electronic Resources: Humanities (MLA & Chicago), Scientific (APA & CBE), and History (Turabian)". Berkeley: University of California, the Library.
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Style.html> (26 Jan. 2004).

۶. وب سایت منابع اطلاعات درس

۱. مقدمه

وب رسانه ارتباطی جوان و پویایی است که کارکردهای گوناگونی دارد. وب همچون ساختمانی است که می‌تواند برای اهداف متفاوتی مانند خانه، مدرسه، آزمایشگاه، رستوران، موزه و ... ساخته شود. از این نظر در مجموع وب سایتها در انواع مختلفی مانند وب شخصی، تجاری، آموزشی، خبری، تفریحی، درگاه^۱ و ... دسته‌بندی شده‌اند که هر کدام هدف ویژه‌ای را دنبال می‌کنند.

در این میان سایتهای آموزشی و درگاهها، وب سایتهایی هستند که نسبت به دیگر انواع وب سایتها در حوزه آموزش و یادگیری نقش بیشتری ایفا می‌نمایند و با رویکرد خاص این پژوهش همخوان هستند. از اینرو در این بخش پس از ارائه اطلاعات مختصری در خصوص ویژگیهای این نوع وب سایتها، الگو و ساختار وب سایت منابع اطلاعات درس سواد اطلاعاتی طراحی و ارائه شده است.

الف. وب سایتهای آموزشی

گروه اول یعنی وب سایتهای آموزشی که روند رشد و گسترش آنها بسیار سریع بوده است، در مجموع از سه طریق آموزش و یادگیری را پشتیبانی می‌کنند:

۱. به عنوان یک منبع اولیه یادگیری؛ از این طریق هر فرد می‌تواند به منابع مندرج در سایت به صورت پیوسته به عنوان یک منبع غنی اطلاعات دسترسی پیدا کند.
۲. به عنوان فضایی مشتمل بر مربیان و فراگیران و چارچوبی برای تبادل اطلاعات، مباحثه، ردگیری عملکردها، مدیریت دسترسی، و تولید انواع مختلف گزارشها؛ از این طریق مربیان و فراگیران می‌توانند با یکدیگر تعامل کنند. علاوه بر آن امکان برگزاری دوره‌های آموزشی پیوسته بدون نیاز به ارتباط رو در رو از جمله مواردی است که از طریق این گروه وب سایتها میسر است.
۳. و بالاخره این وب سایت به عنوان یک کلاس مجازی مانند کلاسهای درس واقعی که در ساعات مشخصی با گروهی از افراد تشکیل می‌شوند، آموزش و یادگیری را پشتیبانی می‌کنند؛ این قبیل کلاسهای درس مجازی این امکان را به فراگیر می‌دهند تا از طریق اتاقهای گپ‌زنی گروهی به تبادل عقاید، اطلاعات و اندیشه خود بپردازند.

ب. درگاههای اطلاعات

درگاههای اطلاعات هم به عنوان سایتهای پشتیبان یادگیری با فراهم آوردن امکان دسترسی کاربران به حجم عظیمی از اطلاعات کیفی طبقه‌بندی شده وب، امکان پژوهش و یادگیری را برای کاربران مهیا می‌کنند. این گروه از وب سایتها در مجموع به دو گروه قابل تقسیم هستند:

- **درگاههای عمومی.** که دربرگیرنده منابع اطلاعات در تمام زمینه‌های موضوعی هستند مانند Yahoo!
 - **درگاههای تخصصی.** که دربرگیرنده منابع اطلاعات مربوط به موضوعی خاص هستند مانند SOSIG
- (Jadav 2003, 13, 18).

¹ Portal

۲. روش ایجاد وب سایت درس

طراحی مؤثر هر وب سایت نیازمند درک مراحل اجرای آن، روابط بینایی این مراحل و وابستگی میان آنهاست. هر چند برای پدید آوردن پایگاههای وب فرایندهای گوناگونی توصیه شده است (December 2003; e-Agency 2003; Kentie 2002, 3-6; Lynch & Horton 2002, 1-16) اما می توان در مجموع پنج مرحله اساسی را در تمامی آنها بازشناخت که عبارتند از:

نیازسنجی

طراحی

تولید

ارزیابی

نگهداری

در این بخش مختصری درباره هر کدام از مراحل یاد شده برای ایجاد وب سایت درس سواد اطلاعاتی برای دوره های تحصیلات تکمیلی ارائه می شود.

۱-۲. نیازسنجی

مهمترین فعالیتها در مرحله نیازسنجی تعیین مخاطبان و هدفهای سایت هستند. برای تهیه وب سایت درس سواد اطلاعاتی ابتدا مخاطبان این سایت مشخص و براساس نیازهای آنان برای سایت هدفگذاری لازم انجام شد.

مخاطبان. مخاطبان رده اول این سایت، دانشجویان دوره های تحصیلات تکمیلی هستند و سایر دانشجویان و علاقه مندان به فراگیری توانمندیهای سواد اطلاعاتی مخاطبان رده دوم این سایت به حساب می آیند.

هدف. وب سایت منابع اطلاعات درس در واقع مکانیزمی است برای دسترسی وسیع و متمرکز دانشجویان این درس به منابع اطلاعات درس. بنابراین ارائه اطلاعات طبقه بندی شده ای از منابع و مراجع مورد نیاز هر سطح از توانمندیهای سواد اطلاعاتی برای تغذیه سرفصلهای مختلف درس و ایجاد امکان دسترسی دانشجویان به انواع منابع اطلاعات مورد نیاز برای رفع نیازهای اطلاعاتی آنها را می توان به عنوان هدف اصلی و عمده وب سایت درس سواد اطلاعاتی برای دوره های تحصیلات تکمیلی را تشکیل می دهد.

۲-۲. طراحی

برای طراحی درس ابتدا لازم بود اطلاعاتی متناسب با نیاز مخاطبان و هدف سایت شناسایی، گردآوری و دسته بندی شود. بنابراین براساس هدف و مخاطبان سایت، طرح درس و سرفصلهای درس، به دلیل وجود سابقه بسیار غنی در زمینه دوره های آموزشی سواد اطلاعاتی و منابع اطلاعات مربوط به آن در اینترنت، منابع

اینترنت و وب جهانگستر مورد جستجو قرار گرفتند و اطلاعات مناسب گردآوری، دسته‌بندی و براساس یک سیستم کدگذاری سازماندهی و در ساختار و قالبی یکسان در محیط Word تنظیم شدند.

برای طراحی ساختار محتوایی و معماری سایت نیز ابتدا چند وب سایت و درگاه مانند Big6², SOSIG, BUBLE³ و غیره که با هدف وب سایت این درس همخوان بودند مورد بررسی و مطالعه قرار گرفتند. علاوه بر این تعدادی از الگوهای از پیش طراحی شده مندرج در اینترنت مشاهده و الگوی متناسب با هدف سایت انتخاب شد. برای طراحی معماری سایت، سهولت و سرعت دسترسی به اطلاعات و رعایت سادگی مهمترین مواردی بودند که مدنظر قرار گرفتند. از اینرو تمام مطالب و اطلاعات گردآوری شده با توجه به سرفصلها و بخشهای مختلف درس به هفت گروه اصلی دسته‌بندی شدند و برای هر گروه عنوان مناسبی انتخاب شد که عبارتند از (تصویر ۱):

۱. درک سازمان دانش
۲. تعیین نیاز اطلاعاتی
۳. شناسایی اطلاعات مناسب
۴. جایابی اطلاعات
۵. ارزیابی اطلاعات
۶. سازماندهی و تلفیق اطلاعات
۷. استفاده مسئولانه اطلاعات

تصویر ۱. ساختار سایت

Understanding Organization of Knowledge	Source 1
	Source 2
	Source 3
Identifying Information Need	Source 1
	Source 2
	Source 3
Identifying Appropriate Sources	Source 1
	Source 2
	Source 3
Locating Information	Source 1
	Source 2
	Source 3
Evaluating Information	Source 1
	Source 2
	Source 3
Organizing and Synthesizing Information Effectively	Source 1
	Source 2
	Source 3
Using Information Responsibly	Source 1
	Source 2

² <http://www.du.edu/~miclark/tutorial/index.htm>

³ <http://www.hw.ac.uk/libWWW/irn/pinakes/pinakes.html>

طراحی ساختار راهبری سایت مرحله بعد بود که برای هدایت بازدیدکنندگان از سایت به نحوی که بتوانند به راحتی اطلاعات را بازیابی و در میان صفحه‌ها و بخشهای گوناگون آن حرکت کنند. ساختار راهبری به صورت ترکیبی از چهار ساختار خطی، سلسله مراتبی، و ابرمتنی طراحی شد (Rees, White, and (White 2001, 49-55; Rosenfeld & Mrville 1998, 36-40 لازم بود بازدیدکننده، اطلاعات را با ترتیبی از پیش تعیین شده بازیابی و مشاهده کند. ساختار سلسله مراتبی در مجموع محتوای سایت را می‌توان به سه بخش اصلی تقسیم نمود (تصویر ۲):

۱. معرفی، نقشه سایت، و نشانی‌های تماس با مدیر و پشتیبان سایت
۲. هفت موضوع اصلی که هر موضوع به منابع مرتبط و پشتیبان و پیوندهای مربوط به آنها متصل می‌شوند.
۳. سایتها و تورهای آموزشی مفید که دربرگیرنده پیوندهایی به سایتها و تورهای آموزشی مفید در زمینه سواد اطلاعاتی، پژوهش مبتنی بر وب، و ... است.
۴. اطلاعات مربوط به حقوق مالکیت معنوی پدیدآورندگان سایت

تصویر ۲. نقشه سایت

[About](#)

[Contact](#)

Understanding Organization of Knowledge

- [The Organization of Knowledge](#)
- [Dewey Decimal Classification System](#)
- [Library of Congress Classification System](#)

Identifying Information Need

- [Wondering: Defining the Need for Information](#)
- [Planning \(Invention\): Thought Starters \(Asking the Right Questions\)](#)
- [Topic Exploration and Concept Mapping](#)
- [How to Write a Thesis Statement](#)
- [Directory of Scholarly and Professional E-conferences](#)
- [Controlled Vocabularies, Thesauri, and Classification Systems Available in the WWW. DC Subject](#)
- [Sub-Heading of Business](#)
- [Business and Economic Words](#)

Identifying Appropriate Information

- [Types of Information](#)
- [Identifying Primery and Secondary Sources: A Preliminary Guide](#)
- [Primary Sources](#)
- [Periodical Articles](#)
- [Government Information](#)
- [Statistical Information](#)
- [What is the Internet, the World Wide Web, and Netscape?](#)
- [Internet Histories](#)
- [Internet Resources Classification](#)

- [Definitions for Web-based Services](#)
- [Types of Internet Resources](#)
- [Information Sources on the Internet: Types and Examples](#)
- [Introduction of Resource Finding Tools: Directories and Subject Gateways](#)
- [How Libraries are Delivering Internet Information to Users? Case Studies](#)
- [Speciality Search Engines, Databases and People Finding Tools](#)
- [Recommended General Subject Directories](#)
- [The Best Search Engines](#)
- [Search Engines and Meta Search Engines](#)
- [Academic Info.: Reference Desk](#)
- [The Virtual Reference Desk](#)
- [General Resources for All Subjects: Useful Sources for Information in a Search Strategy Format](#)
- [The Gateway to Information](#)
- [Database Basic Contents](#)
- [Best Sources](#)
- [Sources of Business Information](#)
- [Internet Learning Materials for MBA Students](#)
- [Business Tour: Resource Types](#)
- [Business Sources](#)

Locating Information

- [Seeking: Locating and Accessing Resources](#)
- [The Five - Step Search Strategy](#)
- [Things to Know Before You Begin Searching](#)
- [Choose the Best Search for Your Information Need](#)
- [Finding Magazine & Journal Articles](#)
- [Research Methods](#)

Evaluating Information

- [Judging: Evaluating the Process and the Product](#)
- [Evaluating Information](#)
- [Evaluating Sources of Information](#)
- [Evaluating Information on the Web](#)
- [Evaluating Web Sites](#)
- [Evaluating Web Pages: Techniques to Apply Questions to Ask](#)
- [Web Page Evaluation Checklist](#)

Organizing and Synthesizing Information

- [Connecting: Organizing Information](#)
- [Producing: Communicating the Information](#)
- [Using Outlines](#)
- [Paragraph and Topic Sentences](#)
- [Writing Research Papers](#)
- [Writing Book Reviews](#)
- [Personal Statements and Application Letters](#)
- [Writing Resume and Cover Letter](#)

Using Information Responsibly

- [Understanding Plagiarism](#)
- [Avoiding Plagiarism: Practical Strategies](#)
- [Plagiarism: Its Nature and Consequences](#)

- [Guide to Plagiarism and Cyber - Plagiarism](#)
- [Copyright and Fair Use in the Classroom, on the Internet, and the World Wide Web](#)
- [Citing Sources and Avoiding Plagiarism: Documentation Guidelines](#)
- [Everything You Ever Wanted to Know about Preparing a Bibliography](#)
- [Citing Sources within Your Paper](#)
- [Interpreting Citations](#)
- [Style Sheets for Citing Internet & Electronic Resources: Humanities \(MLA & Chicago\), Scientific \(APA & CBE\), and History \(Turabian\)](#)
- [Citation Styles](#)
- [Style Manuals](#)

Some Useful Tours

- [Web Searching Tutorial](#)
- [The World Wide Web](#)
- [Internet Navigator](#)
- [Business Tour](#)
- [How to Do a Research?](#)

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۲-۳. تولید

برای تولید سایت فضایی لازم بود که این فضا در سایت «مرکز اطلاعات و مدارک علمی ایران» در نظر گرفته شد که نشانی آن www.irandoc.ac.ir/ILCP است.

۲-۴. ارزیابی

برای ارزیابی سایت، بخشهای مختلف سایت از نظر پیوندها، کامل بودن مطالب، سهولت دسترسی به پیوندها، کور نبودن پیوندها مورد بررسی قرار گرفتند.

۲-۵. نگهداری

برای نگهداری سایت، روزآوری مداوم و افزودن منابع اطلاعاتی مفید و مناسب جدید از ضروریات است که خود مستلزم نیروی انسانی متخصص در زمینه سواد اطلاعاتی و آشنا با ساختار وب است. تمهیدات این مسئله توسط مرکز اطلاعات و مدارک علمی ایران فراهم می آید.

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