

# Harnessing technology for evidence use

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# Workshop 1: searching methods

- 1 Why use evidence?**
- 2 Does searching for evidence properly matter?**
- 3 Searching theory**
- 4 Sensitivity and specificity (precision)**
- 5 Boolean searching**
- 6 Practice!**

# Why use evidence?

## **Two examples:**

- ‘scared straight’
- blood alcohol limit laws

**As well as using evidence, we need to think about its source and reliability**

Welcome to the United States Department of Justice - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.justice.gov/iso/opa/ag/speeches/2011/ag-speech-110307.htm

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(Untitled) Beyond Scared Straight's Real-Life ... Beyond Scare



THE UNITED STATES DEPARTMENT OF JUSTICE

Beyond Scared Straight: Experts Alarmed by New Show and Impact on Kids | Juvenile Justice Information Exchange - Mozilla Firefox

http://jjiie.org/scared-straight-story-2/8693?utm\_source=newsletter&utm\_medium=email&utm\_campaign=c2updat

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(Untitled) Beyond Scared Straight: Experts ... Welcome to the United States Depa...

**Juvenile Justice** INFORMATION EXCHANGE

HOME ABOUT NEWS RESOURCES FOR PARENTS RESOURCES FOR PROFESSIONALS DIRECTORY

You Are Here: Home - News - The System - Beyond Scared Straight: Experts Alarmed by New Show and Impact on Kids

**Beyond Scared Straight: Experts Alarmed by New Show and Impact on Kids**  
Written by *Ryan Schill* on Jan 11, 2011

Seventeen cocky teenagers are about to get a wakeup call. They're locked inside Rahway State Prison in New Jersey, with a group of inmates who call themselves the "Lifers." These are guys doing 25 years to life for serious crimes like murder and armed robbery. Their job is to scare these troubled kids away from a life of crime by showing them the reality and the horror of prison. They call the program "Scared Straight!" For the next few hours, the Lifers will yell and curse at these kids. They push them around and get in their faces. The intimidation tactics include physical threats and descriptions of prison rape in painful and explicit detail. The Lifers do everything they can to scare these kids into never coming back.

Now *Scared Straight!* is making a comeback as a dramatic and in-your-face weekly series on the A&E cable network in a new series called *Beyond Scared Straight*. This time the show features children and prison inmates around the country. It debuts January 13. Many child advocates and juvenile justice experts are alarmed to see it return. They point to numerous research studies that show the traditional Scared Straight style of intervention doesn't work, and they are organizing to educate the public and policy-makers about what they believe is a bad program that may do more harm than good.

Beyond Scared Straight Preview

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Beyond Scared Straight's Real-Life Controversy - The Daily Beast - Mozilla Firefox

http://www.thedailybeast.com/blog-and-stories/2011-02-23/beyond-scared-strights-real-life-controversy/2?utm\_medium=email&utm\_campaign=c2updat

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**THE DAILY BEAST**

READ THIS SKIP THAT

**Beyond Scared Straight's Real-Life Controversy**  
by *Andy Delmonico*

Follow @great@beast on Twitter

Although the programs may have changed, their critics remain unconvinced of their effectiveness. One of the op-ed's authors, Jeff Slowikowski, the acting administrator for the Office of Juvenile Justice and Delinquency Prevention, wrote in a statement to The Daily Beast: "Reviews of research on the effects of crime-prevention programs have found deterrence-oriented programs like Scared Straight are ineffective (Sherman et al 1997, Lysay 1992). Even with an added counseling component, the Texas Face-to-Face Program" that concluded there were no statistically significant differences between those in the 13-hour program and those that received no treatment."

One of the Campbell Collaboration study's authors, Anthony Petrosino, who's now a senior research associate at WestEd, said the report examined nine randomized studies of scared-straight participants. He confirmed that the studies he and his colleagues examined are now at least 19 years old, spanning from the late 1960s to 1992. But he said that "the burden is on the new generation of scared-straight programs." "If you had nine randomized trials that said kids were more likely to be harmed by the intervention than helped, probably the FDA wouldn't allow it to go forward."

Petrosino said because scared-straight is "such a powerful program" and "such a powerful idea," he thinks "they should test it, because maybe the counseling is the effective thing, and you don't really need the scare-straight aspect." He added that "I went into that with my colleagues with no axe to grind, with no pre-conceived notions if that program worked, my goodness, what a great benefit to society because you'd have inmates helping kids for very little money. But unfortunately, it didn't come out that way."

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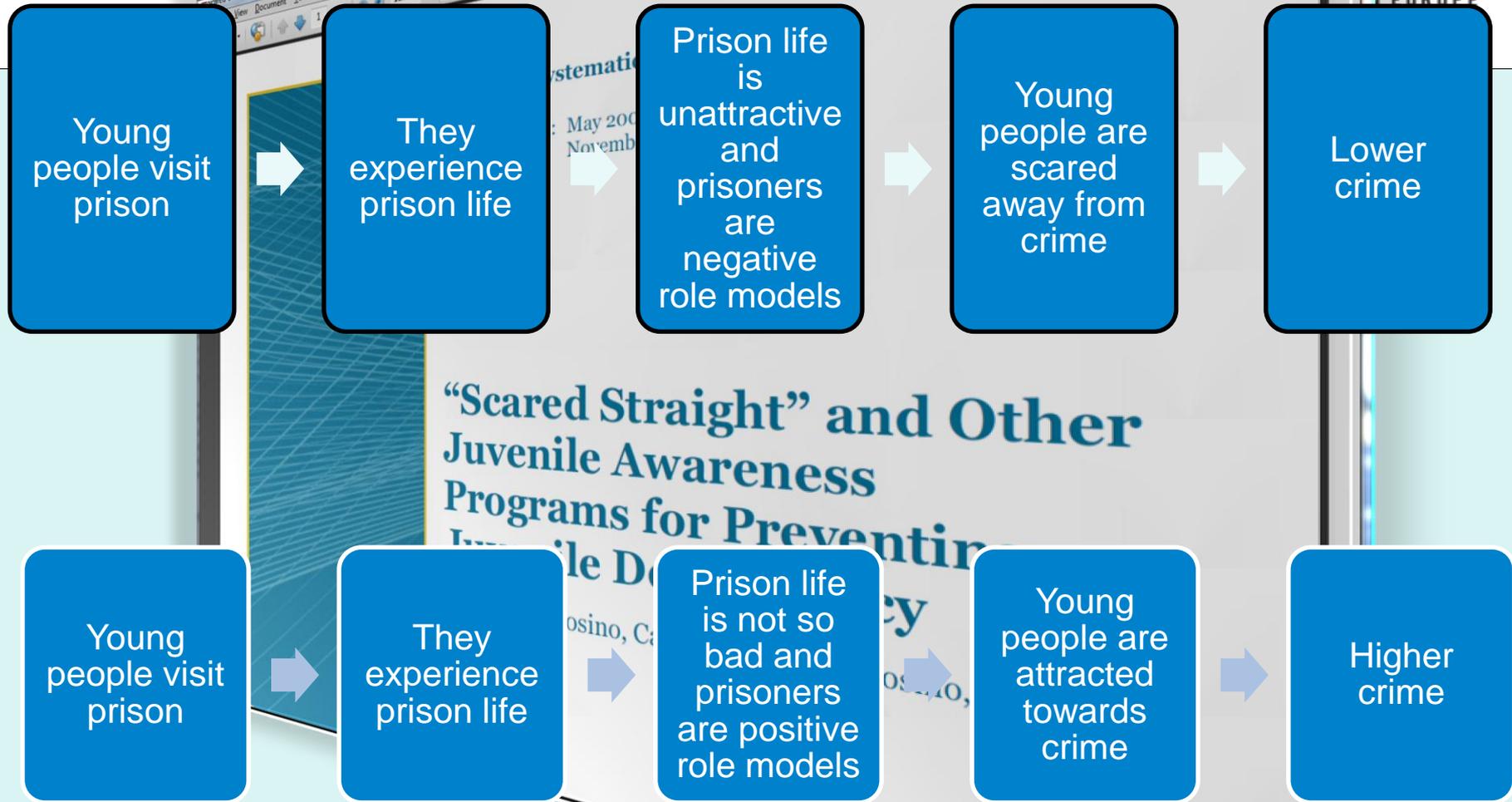
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# The research says...



# The programme-maker's perspective

**Shapiro: “the programs’ existence proves they work. “If none of these programs were working, and were hurting kids, and were producing only negative results, why would judges, and police officers, and teachers, and school counselors, why would they keep sending kids to these programs month after month, and year after year, if they were not seeing positive results?”**

# US Congress in the late 1990s

- “Overall, the evidence does not conclusively establish that [blood alcohol limit] laws, by themselves, result in reductions in the number and severity of alcohol-related crashes,”  
General Accounting Office’s narrative review of individual studies
- Report seen as favouring the alcohol industry,
- A subsequent systematic review suggested such laws could be expected to drop alcohol-related traffic fatalities by about 7 percent.
- “When you looked at all of the data, aggregated into the same table, it became very clear that whatever problems the studies had, they were all coming to roughly the same conclusion.”
- Findings sent to federal legislators
- Congress then withheld federal highway construction funds from states that did not pass such laws.
- Thought to save at least 400-600 lives each year

# The bottom line

**Unsurprisingly –**

- if you conduct partial searches, you only get a partial view of the literature

# Searching is a skilled and time consuming activity

**Tap into the skills of information, subject and systematic review specialists, to:**

- Identify sources to search
- Deal with technicalities (e.g. of databases)

**Plan time for developing and testing searches**

# Challenges of comprehensive searching (1)

## Findings evade us:

- Profusion of published and unpublished material
- Much hidden: only 50% abstracts presented at conferences are later published in full
- Different databases use different terms to classify studies
- Different databases cover different, largely discrete areas of literature
- As individuals we are constrained by our own disciplinary and policy area knowledge (which journals, which books, which databases?)

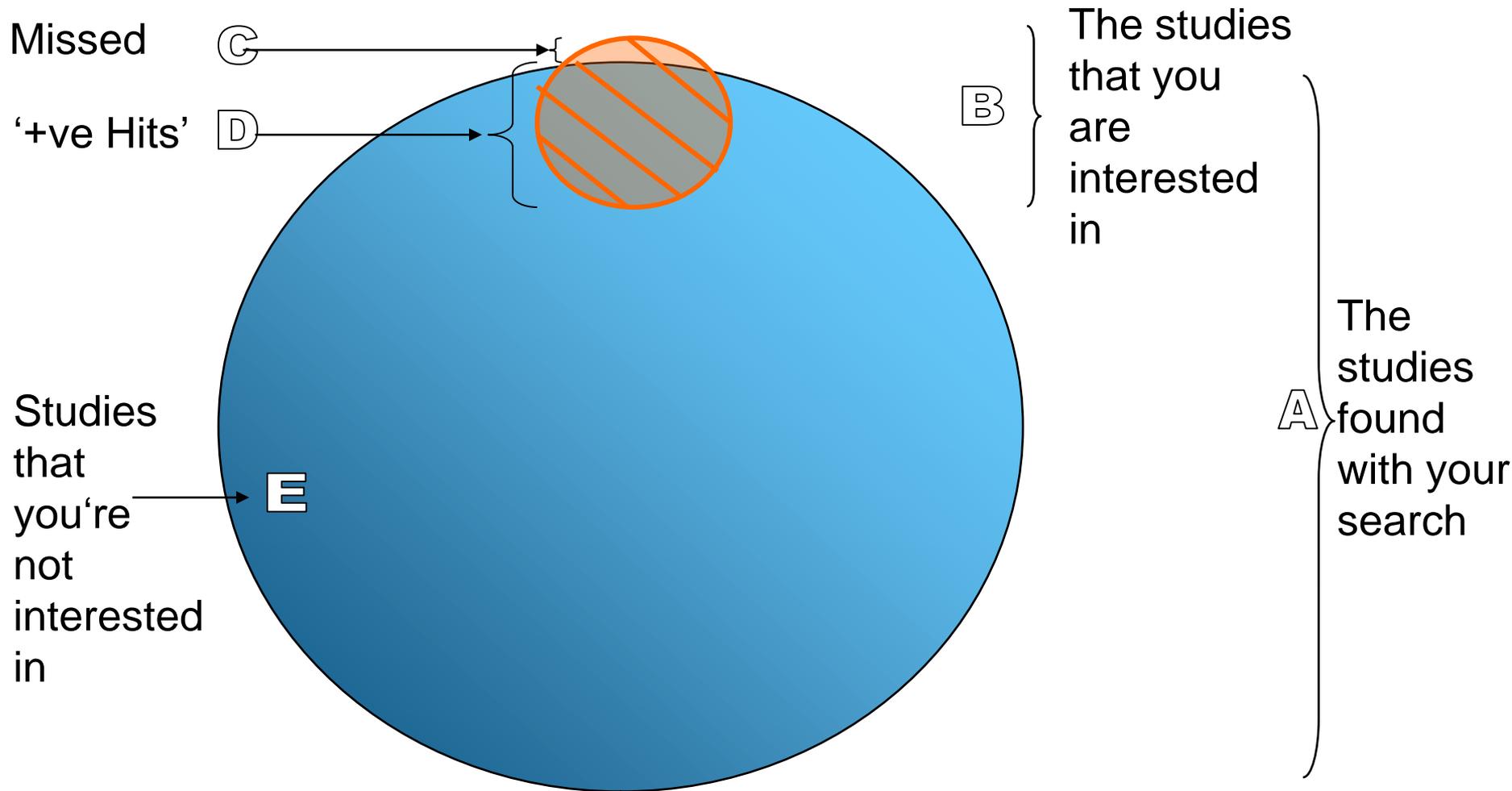
# Challenges of comprehensive searching (2)

## **Some evasion is systematic\***

- E.g. statistically significant, 'positive' results more likely to be:
  - Published
  - Published rapidly
  - Published in English
  - Published more than once
  - Cited by others

**\*work cited in Egger M et al (2003) . How important are comprehensive literature searches and the assessment of trial quality in systematic reviews? Empirical study. Health Technology Assessment 2003; Vol. 7(1)**

# Comprehensive searching – a picture of a sensitive search



# Sensitivity and specificity

## Sensitivity

- Ability to locate all studies of interest
- = the number of relevant studies located as a proportion of all that exist (D/B)
- **Low sensitivity means that many relevant studies missed by search**

## Specificity

- Accuracy of the search strategy in identifying studies of interest
- = the proportion of the total number of studies identified by search which are deemed 'relevant' (D/A)
- **Low specificity means that the search identified many irrelevant studies.**

**There is always a trade off between sensitivity and specificity**

# The importance of searching a range of sources

**How are decisions made about the entry of people aged 65+ to care services?**

	<b>SSCI</b>	<b>Medline</b>	<b>CINAHL</b>	<b>Caredata</b>
<b>Unique articles retrieved</b>	237	182	27	16
<b>Unique relevant articles</b>	116	73	24	15

Taylor B, Dempster M and Donnelly M (2003) Hidden Gems: systematically Searching Electronic Databases for Research Publications for Social Work and Social Care. *C J Social Work*, 33:423-429.

# The importance of using a variety of search terms

	<b>Detail of search strategy</b>	<b>Total number of citations</b>	<b>Number of relevant studies</b>	<b>Sensitivity %</b>
<b>1</b>	<b>31 terms</b>	<b>1048</b>	<b>72</b>	<b>100</b>
<b>2</b>	<b>11 terms</b>	<b>669</b>	<b>64</b>	<b>89</b>
<b>3</b>	<b>7 terms</b>	<b>385</b>	<b>47</b>	<b>65</b>

\*Adapted from: Harden A, Peersman G, Oliver S, Oakley A (1999) Identifying primary research on electronic databases to inform decision-making in health promotion: the case of sexual health promotion. *Health Education Journal* 58: 290–301.

# The basics of bibliographic databases

**Indexers use standardized lists of ‘controlled terms’ to describe key features of papers.**

- E.g. ‘Descriptors’ in ERIC
- A ‘thesaurus’ or index and ‘scope notes’ explains to indexers (and you) the meaning of each controlled term

**Identify controlled terms for each of the concepts in your review**

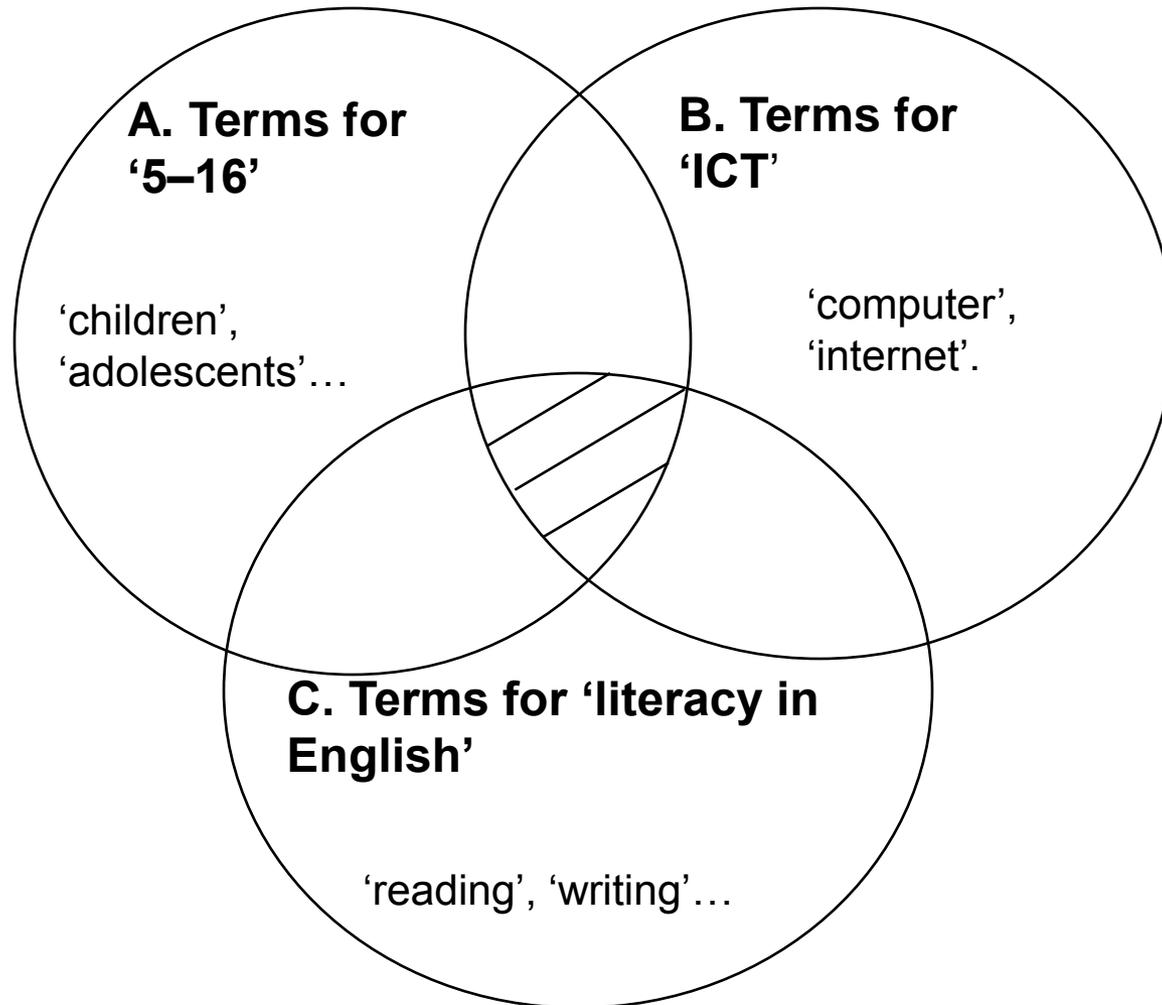
**Build searches using these controlled terms**

- Check search terms against controlled terms for known relevant studies

**Supplement searches for controlled terms with searches for terms in titles and abstracts (‘free-text’)**

# 'What is the impact of information communication technology (ICT) on 5-16 year olds' literacy in English?'

\*- Concepts and search terms



\*Andrews R et al (2002) A systematic review of the impact of networked ICT on 5–16 year olds' literacy in English. In: *Research Evidence in Education Library*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

‘What is the impact of information communication technology (ICT) on 5-16 year olds’ literacy in English?’- **Controlled terms**

**Start search with ‘controlled terms’**

**Use thesaurus to identify terms relevant to each concept**

**Combine terms  
using ‘logical  
operators’  
(OR, AND)**

Controlled terms for ‘Literacy’ from ERIC

- Adult literacy
- Functional literacy
  - Functional reading
- Reading
  - Beginning reading
  - Early reading
  - Critical reading
- Writing composition
  - Abstracting
  - Basic writing
  - Content area writing

# Thank you

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# Workshop II: the EIPPEE Portal



- **The vision for the EIPPEE Portal**
- **How it works**
- **Functionality**
- **Using the portal**
- **Populating the portal**
  - Including – adding new sources today
- **Advanced use of the portal**

# The vision for the EIPPEE Portal



## Existing Tools

### 1. General Purpose Search Engines:

- Good Sensitivity
- Generally low specificity (high noise)

### 2. Specialised Databases:

- Good Sensitivity
- Potential bias towards US/North America
- Fragmentation
- Results duplication

### 3. Specialised Search Engines:

- Potentially Low Sensitivity or/
- Very High Development and Maintenance Costs

# The vision for the EIPPEE Portal



## Aims:

### 1. High Specificity

- Search only Relevant Sources

### 2. Reduce or Manage Regional Bias

- Specialise on European Sources
- Encourage the Growth of the Sources Base

### 3. Reduce Costs

- Use Existing Search Engines to Provide Results
- Crowd-sourcing Model to populate the portal

### 4. Enhanced results

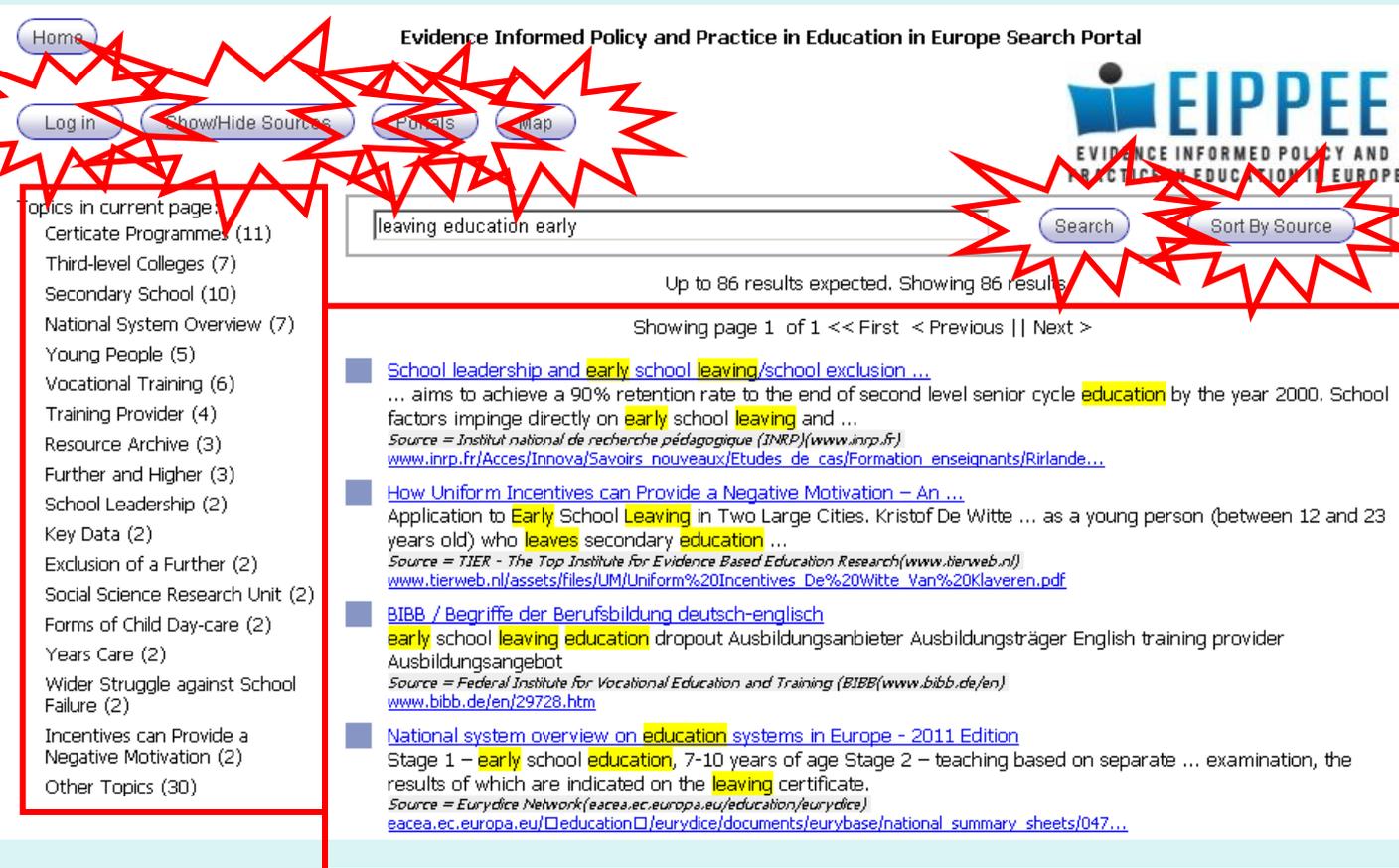
- Text Mining – Topic Identification
- Identify Relevant Sources

# EIPPEE Portal: How it works



- 1. Portal includes a list of known sources (websites)**
- 2. Users can select/deselect and add their own sources.**
- 3. Search is sent to Bing™ to retrieve results.**
- 4. Results are Analysed to Extract Common Topics**
- 5. Results are Shown, Along with Extracted Topics**

# EIPPEE Portal: Functionality



Home Log in Show/Hide Sources Portals Map

Evidence Informed Policy and Practice in Education in Europe Search Portal

leaving education early

Search Sort By Source

Up to 86 results expected. Showing 86 results

Showing page 1 of 1 << First < Previous || Next >

- [School leadership and early school leaving/school exclusion ...](#)  
... aims to achieve a 90% retention rate to the end of second level senior cycle education by the year 2000. School factors impinge directly on early school leaving and ...  
Source = Institut national de recherche pédagogique (INRP)(www.inrp.fr)  
[www.inrp.fr/Acces/Innova/Savoirs\\_nouveaux/Etudes\\_de\\_cas/Formation\\_enseignants/Rirlande...](http://www.inrp.fr/Acces/Innova/Savoirs_nouveaux/Etudes_de_cas/Formation_enseignants/Rirlande...)
- [How Uniform Incentives can Provide a Negative Motivation – An ...](#)  
Application to Early School Leaving in Two Large Cities. Kristof De Witte ... as a young person (between 12 and 23 years old) who leaves secondary education ...  
Source = TIER - The Top Institute For Evidence Based Education Research(www.tierweb.nl)  
[www.tierweb.nl/assets/files/UM/Uniform%20Incentives\\_De%20Witte\\_Van%20Klaveren.pdf](http://www.tierweb.nl/assets/files/UM/Uniform%20Incentives_De%20Witte_Van%20Klaveren.pdf)
- [BIBB / Begriffe der Berufsbildung deutsch-englisch](#)  
early school leaving education dropout Ausbildungsanbieter Ausbildungsträger English training provider Ausbildungsangebot  
Source = Federal Institute for Vocational Education and Training (BIBB)(www.bibb.de/en)  
[www.bibb.de/en/29728.htm](http://www.bibb.de/en/29728.htm)
- [National system overview on education systems in Europe - 2011 Edition](#)  
Stage 1 – early school education, 7-10 years of age Stage 2 – teaching based on separate ... examination, the results of which are indicated on the leaving certificate.  
Source = Eurydice Network(eacea.ec.europa.eu/education/eurydice)  
[eacea.ec.europa.eu/education/eurydice/documents/eurybase/national\\_summary\\_sheets/047...](http://eacea.ec.europa.eu/education/eurydice/documents/eurybase/national_summary_sheets/047...)

Topics in current page:

- Certificate Programmes (11)
- Third-level Colleges (7)
- Secondary School (10)
- National System Overview (7)
- Young People (5)
- Vocational Training (6)
- Training Provider (4)
- Resource Archive (3)
- Further and Higher (3)
- School Leadership (2)
- Key Data (2)
- Exclusion of a Further (2)
- Social Science Research Unit (2)
- Forms of Child Day-care (2)
- Years Care (2)
- Wider Struggle against School Failure (2)
- Incentives can Provide a Negative Motivation (2)
- Other Topics (30)

Use as any other  
Search engine

Add your private  
sources / Submit  
sources to portal

Select / Deselect  
Sources

Change Sub-Portal

View Sources Map

Browse Results

Filter by Topic

Sort by Source

# Using the EIPPEE Portal



# Populating the EIPPEE Portal



1. Log On, click “Add Source”
2. Fill all fields & “Add”

Welcome **Sergio Graziosi**. [Edit Profile](#) [Close 'New Source' panel](#)

URL	New source name	Country	Language
<input type="text" value="www.someurl.com"/>	<input type="text"/>	<input type="text" value="United Kingdom"/>	<input type="text" value="English"/>
<input type="text" value="description (500 char. max)"/>			
<input type="button" value="Add"/>			

3. To submit a source to the portal, click “View sources” and submit.

<input type="checkbox"/>	Bing Community blogs	<a href="http://www.bing.com/community/site_blogs">www.bing.com/community/site_blogs</a>		English	United States	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Submit</a>
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- (Sub-)Portals are configurable, submissions may be disabled, subject to review (default), or direct.

# EIPPEE Portal: selecting the right source URL



**Bing™ comes with some limitations:**

- 1. Root URLs (i.e. [www.site.com](http://www.site.com)) are OK,**
- 2. Deeper paths can be used up to 3 levels can be used.**
  - [www.site.com/section/subsection](http://www.site.com/section/subsection) will work
  - [www.site.com/section/sub1/sub2](http://www.site.com/section/sub1/sub2) will NOT work
- 3. Specific pages, will yield no results:**
  - [www.site.com/page.html](http://www.site.com/page.html), [www.site.com/page.php](http://www.site.com/page.php), [www.site.com/page.aspx](http://www.site.com/page.aspx), [www.site.com/page.html?art\\_ID=12](http://www.site.com/page.html?art_ID=12) and [www.site.com/section/?art\\_id=1243](http://www.site.com/section/?art_id=1243) will NOT work
- 4. Sites that do not allow direct browsing, where content is accessed only through an internal search, will yield few or no results.**

# The EIPPEE Portal: Add your own sources.



## Sources should:

1. Be a root URL or end with a forward slash: [www.site.com](#) or [www.site.com/section/](#)
2. Avoid pointing to a single page or contain query strings:
  - ~~[www.site.com/?Art\\_ID=12](#) or [www.site.com/home.html](#)~~
3. Point to a browseable website

# Populating the EIPPEE Portal



1. Log On, click “Add Source”
2. Fill all fields & “Add”

Welcome **Sergio Graziosi**. [Edit Profile](#) [Close 'New Source' panel](#)

URL	New source name	Country	Language
<input type="text" value="www.someurl.com"/>	<input type="text"/>	<input type="text" value="United Kingdom"/>	<input type="text" value="English"/>
<input type="text" value="description (500 char. max)"/>			
<input type="button" value="Add"/>			

3. To submit a source to the portal, click “View sources” and submit.

<input type="checkbox"/> Bing Community blogs	<a href="http://www.bing.com/community/site_blogs">www.bing.com/community/site_blogs</a>		English	United States	<a href="#">Edit</a>	<a href="#">Delete</a>	<a href="#">Submit</a>
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- (Sub-)Portals are configurable, submissions may be disabled, subject to review (default), or direct.

# The EIPPEE Portal: Sources Map

The Map allows to view the sources information on a per Country/Region basis.

1) Click on the links on the map.

More links will appear as the portal is populated.

2) Select a country/region from the drop-down list. All sources are available through this list.

3) Personal sources are not listed

## Resources Map:

To view a list of sources available in each state, you may:

1. **Click on a link in the map.** Countries/regions that are not present will not appear on the map. Note that countries/regions outside this map will not appear here
2. **Select a country/region in the drop down menu below.** Note that all regions present in the current list will appear here.



European Community  
Denmark  
European Community  
France  
Germany  
Netherlands  
Norway  
Poland  
Portugal  
Romania  
Switzerland  
United Kingdom  
United States

Image courtesy of [Ssolberg](#) (Wikipedia) Distributed under [CC 3.0](#)

ID	Name:	URL:	Main Language:	Country/Region
486	Centre for Research on Lifelong Learning (CRELL)	<a href="http://crell.jrc.ec.europa.eu">crell.jrc.ec.europa.eu</a>	English	European Community

The Centre for Research on Lifelong Learning (CRELL) was established in 2005 in order to provide expertise in the field of indicator-based evaluation and monitoring of education and training systems and their contribution to the achievement of Community objectives specified in the Lisbon Agenda. CRELL combines expertise in the fields of economics, econometrics, education, social sciences and statistics in an interdisciplinary approach to research.

# Thank you

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