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Building an Access Database for Cookstove Research

Margaret L. Weddle

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Building an Access Database for Cookstove Research

Building an Access Database for Cookstove Research

Margaret L. Weddle

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Abstract

This paper takes the reader through the thought process and actual instructions to create your own Microsoft Access database, or how to use the one provided with this paper. Also, instructions to use the HBLL resources of Compendex and RefWorks are covered. While this work was built specifically for Cookstoves research, it could be adapted to any research where you would need to maintain a record of the journal articles that you are using. It has been discovered that building a database is a time consuming and difficult work, but once done, Access provides an easy way to work with your information.

Building an Access Database for Cookstove Research

It has been my observation that many of the professors at Brigham Young University (BYU) travel to remote places around the world to do much of their research. They, along with their research assistant students, study and learn while in locations that have neither cell phone coverage nor internet access. My project was to provide a method of storing research reference information in such a way that they can either read on their computer (if they have access to electricity), or print a form that is easy to take, read & sort through. Microsoft Access is my database of choice for many reasons: 1) It is readily available on all BYU campus computers. 2) The student edition of Microsoft Office, which is available through the BYU Bookstore, comes with Access. 3) Access provides a method of storing, sorting, and printing data in such a way that it becomes easy to use. 4) Even though Access is not builder-friendly, it *is* user-friendly, making it a program that can be used by most people, once the original format has been set up. 5) Access has a large storage capacity, making it almost endless in its years of use.

This paper will discuss my processes of building the database, instructions for use, and possible further development of the database.

Building the Database

The idea of building a database came from Dr. Matthew Jones (Jones, 2012), who had several uses in mind when he asked me to look into the project. His ideas became my guiding principles as I made decisions in building the database.

As I worked with Peter Zuber (*Zuber, 2012*), the Engineering & Computer Science Librarian at HBLL, he was invaluable in guiding my research, looking for similar articles, and finding the resources I would use both to design the database and to fill it with articles for Dr. Jones's research group.

My first project was to decide on the database program for use. I considered OpenOffice's Base (Apache OpenOffice Base, 2013), Google's Spreadsheet (Google Drive, 2013), and Microsoft Access (Microsoft Office Access, 2013). I chose Access, as it seems like it will be around and available for a long time, while I was unsure of the others. Also, it has been my experience with other Microsoft programs that they are easy to use and understand.

My original intent was to zip through the programming part of this project, then fill the database with journal articles for Dr Jones's research, and move on to the next project. I thought through what I wanted the database to do for me, and began looking for directions to do each part. The in-program Help was not very helpful, but it got me started. I found a dozen Access help books in the Herald B Lee Library (HBLL) e-book collection, but had trouble understanding the technical jargon, remembering where I last saw an item, and feeling very overwhelmed with the whole process. I then found a copy of the Microsoft Access 2010 Bible (Groth, 2010) in the library, and subsequently bought a copy. In this, I could add my penciled notes and stickers to find my place again.

I began with Dr. Nick Ball (Ball, 2012), who ran me through a half-semester overview course in a couple days, teaching me the basics of Access. His help and direction was invaluable in my initial stages.

I soon discovered that unlike most Microsoft programs, Access is not an easy program to use, if you are building the database. However, once a database has been designed, putting the data into it is as easy as the designer made it to be. In my search for help, I found very few people who knew anything about designing a database, and most of them knew only what they had been taught in an overview class. Luckily, at the end of my timeline, I found *one person*, Jim Brown, who built Access databases for a living, and could point me in the correct directions

to finalize my project. He told me two things that made my frustration reasonable: 1) He said that, “You can do 90% of the programming in the first 10% of the time and then it takes 90% of your time to do the final 10% of the work!” and 2) “Because Access is so difficult, this is why you can make big bucks!” (Brown, 2013). I am very grateful for his help.

Some sources suggested that I would need several tables to add the various pieces of information about each journal article; however I wanted to keep it all in one table to simplify my understanding. Others suggested that I would need to build several linking tables and queries, but again, I wanted to simplify my work space. I began by following all their suggestions, and ended up not using most of them. However, the process of building the tables and queries was educational and valuable, some of which I used in my final result.

Adding new articles to the database is an essential part of this program, so I wanted to ensure that it was an easy process. However, I did not want someone to accidentally (or maliciously) mess up the data that was already there. To ensure both easy and secure, I set the form so that no one can change the information, once it is in the database.

I wanted to make a simple search bar that would be familiar to users who would be using familiar Boolean search terms. This became a larger project than I realized. I thought of making a drop-down list of all the data, but that became rather large in scope very quickly. I finally decided that a simple “search through the data” page would have to be my solution. This is not my favorite result, but with my limited knowledge and time, it was the best solution.

I wanted to make the data easy to read and print, as one of the fundamental ideas of being able to take it on the road. Therefore, the format for printing was easy to decide on. It dawned on me that whoever would use my database would need some directions, so I created the forms in such a way that the directions for use were very simple. Also, I included those

directions right on the page where they would be adding or searching, eliminating the possibility of losing or forgetting them.

I did end up using a query in the search process. This allows the user to view or print only one reference, as opposed to all of them.

While only one journal reference might be wanted at a time, I assumed that the user would probably want all references available to him also. This called for an option to view and print all references without having to search them all out separately.

I finalized the project with several journal articles discussing “cookstoves” already entered into the database, as this is the direction of Dr. Jones’ research. I created a couple PowerPoint presentations that give extensive, detailed directions to use the database and finding more articles that a user might want to add. These presentations are included digitally next to the Access database, as well as summarized in the next section of this paper.

How To – Step-by-Step to Build the Access Database

When you open Microsoft Access, it begins in the New page, allowing you to choose your basic design. I chose a Blank Database to create.

1) The first task is to build a Table. Labels go across the top of the page (I used A, B, C, D, etc), with your data underneath. If you need to rename a column, right click on the current title and choose Rename Field, then type what you want. Tab between columns, and Enter to drop to the next line. When you get to a comfortable spot with your Table, right click on the tab to save it (I used the default, Table1), but leave it open. It might be helpful to add a few rows of data so you can see it working.

2) On the top Ribbon, click Create, then choose Query Design. When the popup shows up, you can close it with the X in the corner, then right click on the tab to change to the SQL view. Then type the following:

```
SELECT Table1.*  
FROM Table1  
WHERE (((Table1.A)=[Forms]![Search for an Table1]![A]));
```

Once again, right click on the tab and save (I used the default, Query1), then close the Query. Note that this query searches by the data in the first column. If you want to search by other data, list that column field name instead.

3) Next we'll build a Form to see all the data from the Table. On the top Ribbon, click Create, then choose Form. Access will automatically take all the column labels from your table and create a Form using them as labels for the Fields. You will see the first row of data from your table; to see other rows of data, click on the forward or backward arrow at the bottom of the page. Once again, right click on the tab at the top to save the Form; I chose the default, Form1). Note that at this stage, you can edit the data from this form.

To change how this form looks and works, right click on the top tab and choose Design View. Ensure that the Property Sheet button is on from the Ribbon across the top of the page. This is where most of the changes happen.

Note that the page will be broken into Form Header, Detail, and Form Footer. The Header and Footer information show up on every page, so this is where things like page titles, numbers, etc. show up. The bars that separate the sections are click & drag, so are easy to resize.

4) To create a button on the Form, look under the Form Design Tools tab (the default location when you enter Design View), then on the Controls section of the Ribbon, choose the Button icon (it looks like 4 x's inside a box), and place it wherever you'd like it to show up. At

any time, you can go back and forth between the views to ensure it looks right. When you place the Button, the Command Button Wizard box will popup and lead you through the process of giving the button an assignment. Browse through the categories to become familiar with them. In this case, I will choose the Form Operations category, then choose the action of Print Current Form. Click next & decide if you want words or a picture on your button, and click next. Give your button a real name that makes sense to you, as Command31 doesn't really mean much to most people. Then click Finish. On the tab, right click to Save your work, then return to the Form View & try it out. At this point, you may want to play with the several options of the Button Wizard, and choose the procedure you really want.

5) Last, create a Report to show your data the way you want it. On the top Ribbon, choose Create, then choose a Report wizard to help you through. If you choose the first, Report, it will create the simplest design the computer can think of – it looks much like your Table. If you choose Report Design, it will give you a blank form complete with Page Header, Detail, and Page Footer for you to drag your Table Fields onto & design as you wish. If you choose Blank Report, it will show you the margins for your printed page, and allow you to drag the Table Fields wherever you wish.

Again, you can add a Command Button to print, if you so desire.

Instructions for Use

I have created two PDF files, entitled 1) [How Do I Find Articles to Add Into My Database](#), and 2) [How To – Working With the Research Papers Database](#). Both files provide an easy, visual, step-by-step method of finding, using, and working with this database. Their contents are somewhat replicated below.

How Do I Find Articles to Add Into My Database?

If you know the specific journal or article you are looking for, you can go there directly from BYU's Herald B. Lee Library (HBL) web site, <http://lib.byu.edu/>. On the home page, find Journal finder (for when you know which journal you are looking for), or ScholarsArchive (for research and journals by BYU faculty or students) to find information to the physical location or online copy.

If your search is more broad or less specific you can search for a keyword. Log in to the HBL web site with your MyBYU login data, then choose a Subject Guide; I chose Mechanical Engineering. In the Subject Guide, there are tabs across the top of the page; choose "Get Journal Articles", then click on the link to Compendex. Compendex is a part of Engineering Village, a database of journal articles that are available for your use. You will probably have to sign in again to have the free access that the HBL offers for free for BYU's students, staff, and faculty.

Once in the Compendex web site, put a keyword into the search box, and click the Search button. Once the results come up, you can filter them by several choices in the left-hand column, and sort them by different choices from the dropdown arrow on the right. At this point, you have a couple options to choose from: you can open an electronic copy of the article through the BYU HBL web site by clicking on the button that says "Get It at BYU", or you can export the information to another program – specifically RefWorks.

If you choose to export the information into RefWorks, click on the hyperlink "Download", where a popup window will take you through the next steps. In the Record Output, choose "detailed record", and click on "RefWorks direct import", then click on the button "Download". This will take you to the RefWorks web site, where you will be asked to log in or create an account (also free). During the login process, you may be asked for the Group Code.

This may be found back on the library web site, under the Subject Guide / Bibliographic Help / under RefWorks, there is a link to a PDF file entitled “How to Import into RefWorks...”. The Group Code is on that document. Double check the document periodically, as the code may change. Continue logging in, as usual.

If you are importing from Compendex, the web sites do it pretty automatically – just follow the directions on the screen. Don’t forget to check for duplicates – this is a great place to get that done. If you are going into RefWorks directly from the HBLL web site, you will be able to see all your saved data.

When a group of data is imported into RefWorks, it initially all goes into a temporary folder called “Last Imported.” Be sure to move your data into another folder, or it will be overwritten the next time you import something. To create a new folder to put your information into, click on the folder icon at the top of the page and choose “New Folder.” Rename your new folder as you wish, & move your data into it. Once again, you can change how you view the information – Standard view, One Line view, Full view, or as a citation in AMA format. Choose what works best for your current job, as you can always change it.

Once again, if you want a copy of the entire article, you can open an electronic copy of it through the BYU HBLL web site by clicking on the button that says “Get It at BYU.”

From the data in RefWorks, you can get the information you will use to put data into the access program.

Use your Subject Librarian – listed on the home page of the Subject Guide. He or She can guide you through the process!

Read first; ask questions after! Don't ask someone else to do your work for you – they have already done it & all you need to do is read!

There are LOTS more resources on the HBLL site! Like a Treasure Hunt, you must look around, explore, and discover!

Working with the Research Papers Database

Begin by downloading the Access program to your computer. Thus any changes you make will be uniquely yours.

Right-click on tabs to Save or Close – do not go into the other views, as small changes in the program tend to make huge changes in results, which tend to be a bear to fix!

When you open the Research Papers Database, it will automatically open to the Article Chooser page. To view the various articles, you can spin your mouse wheel or pull on the slide bar on the right of the screen.

If you would like to print only one article's information, highlight the title of the article and copy it (Ctrl + C). Click on the button at the top of the screen that says "Preview Article Info," and paste (Ctrl + V) the title into the popup box, and click OK. Your selected article will result, ready for you to read or print. To either print or close the selection, click the Print Preview tab at the top of the screen, and choose your action. When you close the tab, it will take you back to the Article Chooser tab, as at the beginning.

If you would like to add new information to the database (such as from your RefWorks import), double-click the Add New Articles option in the left-hand column, which will open a new tab. Carefully add the new information to the form, tabbing from field to field, and ensuring

that each piece of information is in the correct place. Once you click the forward button at the bottom of the form (>|), the data is saved into the database & cannot be edited or deleted. The forward button also will take you to another blank form to add more information.

When you are finished adding new articles, left-click on the Add New Articles tab, then Save, then Close. To see your new data in the Articles Chooser tab, you will need to close that tab too, and then reopen it.

If you are heading out into the remote places in the world or would simply like to have a printed hard copy of the information to write notes on, dogear the pages, and use in non-internet places in the world, click on the report View or Print All Articles. Once the print preview opens up, if the print ribbon is not showing, click on the down arrow in the upper right corner to open it. From there, you can print or close the preview.

Discussion - possible further development

If someone was to rebuild or even update the database that I designed, I would recommend that they first go through the series of magazine articles by Patricia Cox in *Strategic Finance* magazine, which begins in the November 2008 issue. (Cox, 2008) At the time of writing this paper, the series was still continuing. I recommend that you go through the entire series, creating the Access file as you go – this will help immensely in your understanding of the program.

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Quantification of Improved Projects

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Roughly half of the world's population burns solid biomass fuel for cooking and heating needs. Throughout poor, rural areas of sub-Saharan Africa, biomass is the dominant fuel and cooking is usually performed using a simple three-stone fire or "open fire" (see Fig. 1). Particularly in high-altitude areas, where nighttime temperatures are low, cooking is often performed in poorly ventilated structures. Incomplete combustion of these fuels and poor ventilation are high indoor concentrations of these fuels and poor ventilation are particulate matter and carbon monoxide pollutants result in health (Botté, 2005). In addition, especially in regions where biomass is scarce, time and effort spent gathering firewood can be a substantial burden on households, particularly children and women (Botté et al., 2005).

The cookstove study described here was undertaken as part of the Millennium Villages Project (MVP), a multi-annual development project spanning 14 sites in 10 countries throughout sub-Saharan Africa. The MVP supports interventions in areas of agriculture, health, education, infrastructure and environment, conducted as a partnership among the Earth Institute at Columbia University, Millennium Promise, the United Nations Development Programme (UNDP) and other local partners, in cooperation with domestic government and MVPs work in the area infrastructure and energy consists of testing and introduction of improved biomass cookstoves. Two stove research efforts were carried out in MVP village areas in Uganda and Tanzania in 2008.

Efforts to design, build and promote improved stoves have been undertaken in many communities throughout the world in recent decades resulting in the development of a wide variety of stove types employing a range of materials, design features and production processes. Some stove models are made by local artisans in or near the home using locally available materials such as mud, dried grasses and natural/termed oil. These artisanal stoves may also include factory-produced elements which are often stoves made elsewhere and transported to villages, such as high-temperature bricks, liners made of fired clay or metal fuel shelves. Other models, referred to here as "manufactured" stoves, are produced entirely in factories, either domestic or international, then transported to villages as a finished product (McCarty et al., 2010).

Despite years of research, not all stove programs are supported by careful performance and user preference studies, and stove programs have sometimes resulted in introduction of models that underperform



Energy for Sustainable Development

Field testing and survey evaluation of household biomass cookstoves in rural sub-Saharan Africa

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ABSTRACT

This paper presents the results of two studies conducted to evaluate the performance and usability of household biomass cookstoves under field conditions in rural sub-Saharan Africa. Cooking tests and qualitative surveys compared improved, manufactured stove models based on the "rocket" design with the traditional three-stone fire. All tests and interviews took place in household kitchens in two village areas in Western Uganda and Western Tanzania. The performance parameters: fuel gathered information about specific fuelwood consumption and cooking time. Surveying of household cookstoves in cooking time were results showed that the manufactured stoves, in general, yield a substantial reduction in specific fuelwood consumption relative to the three-stone fire, with results varying by stove type and type of food cooked. Survey data suggests that while cooks recognize fuelwood savings as an important benefit, overall stove preference depends upon a combination of the and other factors, including cooking time, stove size and ease of use. These findings highlight the importance of testing multiple cookstoves for preparation of a variety of food items, as well as combined use of quantitative stove tests in combination with qualitative surveys in efforts to determine suitability of cookstoves for household use in a given community.

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Background

Roughly half of the world's population burns solid biomass fuel for cooking and heating needs. Throughout poor, rural areas of sub-Saharan Africa, biomass is the dominant fuel and cooking is usually performed using a simple three-stone fire or "open fire" (see Fig. 1). Particularly in high-altitude areas, where nighttime temperatures are low, cooking is often performed in poorly ventilated structures. Incomplete combustion of these fuels and poor ventilation are high indoor concentrations of these fuels and poor ventilation are particulate matter and carbon monoxide pollutants result in health (Botté, 2005). In addition, especially in regions where biomass is scarce, time and effort spent gathering firewood can be a substantial burden on households, particularly children and women (Botté et al., 2005).

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Efforts to design, build and promote improved stoves have been undertaken in many communities throughout the world in recent decades resulting in the development of a wide variety of stove types employing a range of materials, design features and production processes. Some stove models are made by local artisans in or near the home using locally available materials such as mud, dried grasses and natural/termed oil. These artisanal stoves may also include factory-produced elements which are often stoves made elsewhere and transported to villages, such as high-temperature bricks, liners made of fired clay or metal fuel shelves. Other models, referred to here as "manufactured" stoves, are produced entirely in factories, either domestic or international, then transported to villages as a finished product (McCarty et al., 2010).

Despite years of research, not all stove programs are supported by careful performance and user preference studies, and stove programs have sometimes resulted in introduction of models that underperform

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How do I find articles to add into my database?

Using resources from the HBL website

“Let’s start at the very beginning – a very good place to start...”

Working in the HBLL web site

<http://lib.byu.edu/>

The screenshot shows the Harold B. Lee Library website in a browser window. The address bar displays "lib.byu.edu". The page features a dark blue header with the library's name and navigation links: Home, Services, Events, Exhibits, About, and Help. A search bar is prominently displayed with a dropdown menu set to "All" and a magnifying glass icon. Below the header, the page is organized into several columns:

- Find Other Materials:** A list of links including Byugle (Streaming Video), CDs & Audio, Course Reserve (Electronic & Print), Dissertations & Theses, DVDs & Videos, eBooks, Interlibrary Loan, Maps & Gazetteers, Music Scores, News Resources, Other Libraries, Quick Facts, and Research Starter Guide.
- Subject Guides:** A section with a "Browse All" link and a dropdown menu labeled "Choose a subject guide...". Below it, it lists "Course guides" and "Step-by-step guides".
- Unique Collections:** A list of links for Library Catalog, Family History, Special Collections, Digitized Collections, and ScholarsArchive, each with a brief description.
- Today:** A section showing the current date and time (7 am - 12 midnight) and a list of events: "Final Cut Pro 7 - Basics" at 12:00 pm and "Photoshop Basic run down" at 1:00 pm. A "See all events" link is provided.
- Services:** Links for "Ask a Librarian" (with options for TXT, Email, Chat, Phone, and FAQ), "Reserve a Study Room", and "Floor Maps".
- Database Finder and Journal Finder:** Two search sections at the bottom, each with a search bar and a magnifying glass icon.

A banner at the bottom right of the page reads "NEED HELP? Ask a Librarian! *Click Here*" with a blue background and white text.

The screenshot shows the Harold B. Lee Library website. At the top, the browser address bar shows 'lib.byu.edu'. The website header includes the university name and navigation links like 'Home', 'Services', 'Exhibits', 'About', and 'Help'. A search bar is present with a dropdown menu set to 'All'. Below the search bar, there are sections for 'Subject Guides', 'Unique Collections', 'Database Finder', and 'Journal Finder'. An 'Events' section titled 'Today' lists 'Final Cut Pro 7 - Basics' at 12:00 pm and 'Photoshop Basic run down' at 1:00 pm. A 'NEED HELP? Ask a Librarian!' banner is at the bottom right. Two orange arrows are overlaid on the page: one pointing to the 'Login' button in the top right, and another pointing to the 'Subject Guides' dropdown menu.

1. Log in

2. Choose your subject guide
(I like Mechanical Engineering)

Subject Guides Browse All

Choose a subject guide...

Course guides • Step-by-step guides

Unique Collections

- > **Library Catalog**
Search local library materials
- > **Family History**
Resources for doing genealogical research
- > **Special Collections**
Rare books, manuscripts, and special materials
- > **Digitized Collections**
Materials scanned by BYU
- > **ScholarsArchive**
Research by BYU faculty and students

Database Finder Browse All

Search bar for Database Finder

Journal Finder Browse by Subject

Search bar for Journal Finder

Today Hours: 7 am – 12 midnight

12:00 pm	Final Cut Pro 7 - Basics
1:00 pm	Photoshop Basic run down

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Get Journal Articles

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Article Databases are selected for this particular discipline. The databases below are selected for this particular discipline. If you use them, look for the "Get it at BYU" or PDF link within the article, the call number for the print article if not available at BYU. ILL requests a copy of a print article even if BYU has more information or to answer at your preference. If you use them, look for the "Get it at BYU" or PDF link within the article, the call number for the print article if not available at BYU. ILL requests a copy of a print article even if BYU has more information or to answer at your preference. If you use them, look for the "Get it at BYU" or PDF link within the article, the call number for the print article if not available at BYU. ILL requests a copy of a print article even if BYU has more information or to answer at your preference.

Comments (0)

Journal Finder

Journal Finder

If you have an article reference in hand, enter the Journal's name to find it at the HBLL.

Article Databases

Best Journal Article Databases

- Compendex**
- Tutorial - Terms - Description

Database Legend

- ACM Digital Library - All full text. Has both peer reviewed and non-peer reviewed content.
- BYU Scholars Archive - All full text. Has both peer reviewed and non-peer reviewed content.
- Computers and Applied Sciences Complete (EBSCO) - Can limit search to full text. Can limit search to peer reviewed only.
- Compendex - Full text if BYU has rights, else ILL. Has both peer reviewed and non-peer reviewed content.
- Dissertations & Theses (ProQuest) - All full text. All peer reviewed.
- Electronic Theses and Dissertations - BYU - All full text. All peer reviewed.
- IEEE Xplore - All full text. Journals, transactions, letters, and magazines are all peer reviewed. Conferences are usually peer reviewed, but verify to be sure.
- Materials Research Database (ProQuest) - Full text if BYU has rights, else ILL. Can limit search to peer reviewed only.





[Search](#) | [Selected records](#) | [Settings](#) |

Quick Search

Expert Search

The

DATABASE



All



Compendex

Using Compendex

Part of Engineering Village – a database of journal articles

BYU BRIGHAM YOUNG UNIVERSITY


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Warn me before signing me into other sites.

 **Security:** BYU protects personal information by restricting network access to individuals with an authorized username and password. The username is a unique, personal network identifier called a Net ID and is assigned to each BYU patron.

For security reasons, please sign out and Exit your web browser when you are finished accessing authenticated services!

Sign In again

The HBLL has an agreement with Compendex that allows you to use their resources for free, instead of buying your own license.

Get Journal Articles - Medl x Engineering Village - Quic x

www.engineeringvillage.com.erl.lib.byu.edu/controller/servlet/Controller?CID=quickSearch&database=000001

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Engineering Village

Search | Selected records | Settings | Tags & Groups

Quick Search | Expert Search | Thesaurus Search | eBook Search

DATABASE All Compendex NTIS

SEARCH FOR

AND

AND

All fields

Search

Limit to

All document types

All treatment types

All Languages

1969 TO 2013

1 Updates

Publication year

Autostemming off

Search Reset

Type in a keyword

And search

Browse Indexes

- Author
- Author affiliation
- Controlled term
- Source title
- Publisher

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- USPTO

Search history

Combine	Search	Results	Database	Delete
You have not performed any searches in this session				

[View Saved Searches](#)

Note: This Search history will contain the latest 50 searches you perform in this session.

Choose your sort and filters

Look how many there are!

The screenshot shows the Engineering Village search results page. The browser address bar displays the URL: `www.engineeringvillage.com.erl.lib.byu.edu/controller/servlet/Controller?CID=quickSearchCitationFormat&database=1&SEARCHID=M3956830113ecc37b5c96abprod3con1&i`. The page header includes navigation links: Register | Login | End Session. Below the header, there are tabs for 'Selected records', 'Settings', and 'Tags & Groups', along with a 'Help | Ask an expert' link.

The main content area features a 'Quick Search' section with the text: '137 articles found in Compendex for 1969-2013: ((Cookstove) WN All fields)'. Below this, there are options for 'New Search', 'Edit', 'Save Search', 'Create Alert', 'RSS feed', and 'Search history'. The 'Display: 25 results per page' is shown, along with 'Go to page: 1 of 6' and 'Next >'.

On the left side, there is a 'Refine results' panel with 'Limit to' and 'Exclude' buttons, and an 'Add a term' input field. Below this, various facets are listed with bar charts and dropdown menus: Author, Author affiliation, Controlled vocabulary, Classification code, Country, Document type, Language, Year, Source title, and Publisher. At the bottom of this panel, there is a 'Run new search with selected facets' section with a 'Search' button.

The main results area shows a list of search results. The first result is: 'Domestic absorption refrigeration system powered by heat loss of woodburning cookstove' by Pereira, G. (UNICAMP, Campinas, Brazil); Martins, G. Source: *AMA, Agricultural Mechanization in...*. The second result is: 'Performance of Mohini-U, a single pot mud cookstove' by Sharma, S. (Panjab Univ, Chandigarh, India); Wanchoo, R.K.; Chopra, Suneeta. Source: *Proceedings of the Intersociety Energy Conversion Engineering Conference*, v 4, p 2269-2273, 1996. The third result is: 'Some simple economics of improved cookstove programs in developing countries' by Jones, Donald W. (Oak Ridge Natl Lab, United States). Source: *Resources and energy*, v 10, n 3, p 247-264, Sep 1988.

Annotations on the page include an orange arrow pointing to the search results with the text 'Look how many there are!', and another orange arrow pointing to the 'Sort by' dropdown menu with the text 'How do you want it sorted?'. The 'Sort by' dropdown menu is open, showing options: Relevance (selected), Date (Oldest), Date (Newest), Author (A-Z), Author (Z-A), Source (A-Z), Source (Z-A), Publisher (A-Z), and Publisher (Z-A). A third orange arrow points to the 'Refine results' panel with the text 'Filter by a number of choices'.

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Engineering Village

Search | Selected records | Settings | Tags & Groups

Quick Search
137 articles found in Compendex for 1969-2013: ((Cookstove) W

New Search Edit Save Search Create Alert

Refine results

Click on your favorite articles

Display: 25 results per page

Select: Selected Records (25) Delete Selected Records

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- Domestic absorption refrigeration system powered by heat loss of woodbu
Pereira, J.T.V. (UNICAMP, Campinas, Brazil); Martins, G. Source: *AMA, Agric*
- Thermal efficiency test of a home gas cookstove in
Li, Zhaojian (Department of Building Science, School of Architecture, Tsinghua
Xuebao/Journal of Basic Science and Engineering, v 14, n 3, 2010, pp 368-374, Sept
- Performance of Mohini-U, a single pot mud cookstove
Sharma, S.K. (Panjab Univ, Chandigarh, India); Wanchoo, R.K.; Chopra, Sune
2273, 1996
- Some simple economics of improved cookstove programs in developing c
Jones, Donald W. (Oak Ridge Natl Lab, United States) Source: *Resources a*

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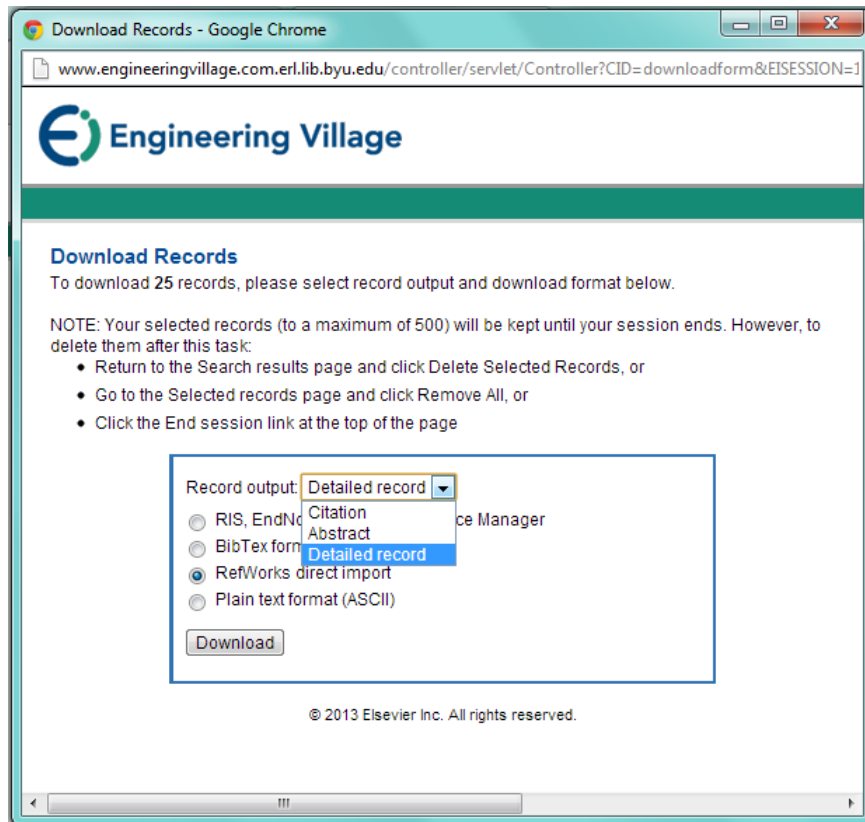
Download to Refworks

Click here to get the article

Run new search with selected facets

Search

Use the popup window to transfer data into RefWorks



- I prefer to take all data into RefWorks – in this case, more is better!



Working with RefWorks

Either transferring data from Compendex or going straight into Refworks from the HBLL web site

Group code??

How do I get in?!



Login to Your RefWorks Account

New to RefWorks?
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Reference Examples

APA in-text citation examples
How citations (in-text markers) should look in APA style

APA reference style examples
How APA references should look

MLA in-text citation examples
How citations (in-text markers) should look in MLA style

MLA reference style examples
How APA references should look

Reference Styles

Literary Styles and their application

APA = used in the sciences, education, engineering, and business.

MLA = used in the humanities.


Turabian = used by historians.

Quick Tutorial on RefWorks

Use RefWorks to automatically generate references. You can even do it while you write your paper.

- 1) Read the "How to import into RefWorks from Compexend, IEEE, and ACM" to setup your account.
- 2) Download the Write-n-Cite software to your computer under "Tools".

RefWorks (we)



RefWorks is a web-based bibliographic management service that allows you to automatically build bibliographies and manage your citations.

[RefWorks Basics Tutorial](#)

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click on Go To
Login



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learn
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Login or
Sign Up for
a New
Account
(free) to
access
RefWorks

- If you are transferring data from Compendex, follow the directions on the screen (don't forget to check for duplicates!).
- If you are coming into RefWorks straight from the HBLL web site, you will see all your saved data.

In RefWorks

Easy to use, easy to work with!

RefWorks

Preferences View Search Bibliography Tools Help

Search your RefWorks data

Create Bibliography New Reference

Exact Duplicates

Organize & Share Folders

Sort by Authors, Primary Change View AMA - American Medical

Selected

378

1. Elairia MM, Elairia JC. Abatement cost of greenhouse gas emissions using charcoal cookstove in the philippines. *Nihon Enerugi Gakkaishi/Journal of the Japan Institute of Energy*.

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Ref ID 309 Journal Article Reference 2 of 31

2. Elairia MM, Elairia JC. Abatement cost of greenhouse gas emissions using charcoal cookstove in the philippines. *Nihon Enerugi Gakkaishi/Journal of the Japan Institute of Energy*. 2012;91(10):1016-1021.

University
Weddle.

Search

Click the folder to create a new location

Always move data from the Last Imported folder!

Or it will disappear when you next import

Choose the view you want

The screenshot displays the RefWorks web interface. At the top left is the RefWorks logo. The top right shows the user's name 'Brigham Y' and 'Welcome'. A navigation bar includes 'References', 'View', 'Search', 'Bibliography', 'Tools', and 'Help', along with a search box for the RefWorks database. Below this are buttons for 'New Folder', 'Create Bibliography', and 'New Reference'. The breadcrumb trail reads 'References > Last Imported > Exact Duplicates'. The main content area has tabs for 'References' and 'Organize & Share Folders'. Under 'References', there are radio buttons for 'Selected', 'Page', and 'All in List'. A 'Change View' dropdown menu is open, showing options: 'AMA - American Medical', 'Standard View', 'One line/Cite View', 'Full View', and 'AMA - American Medical Association, 10th Edition'. A black arrow points to this menu with the text 'Different views for different uses'. Below the menu, a reference entry is visible: '1. Elairia MM, Elairia JC. Abatement cost of greenhouse gas emissions using... Gakkaishi/Journal of the Japan Institute of Energy. 2012;91(10):1016-1021.' At the bottom left, there is a 'Last Imported:' section and a 'GET IT! @ BYU' button. On the right side, there is a sidebar with 'Announcements', 'Resources', 'Support Center', 'Webinars', and 'Folders'.

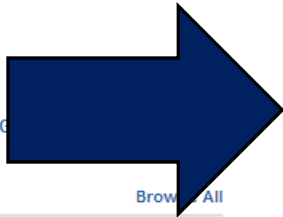


Getting the actual article

Different places to start from!

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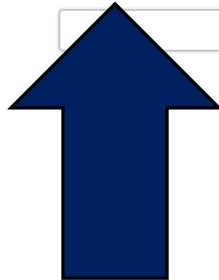
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The HBLL web site

When you know what you are looking for, consider the [HBLL Journal finder](#) (for when you know which journal you are looking for), or [ScholarsArchive](#) (for research and journals by BYU faculty or students)!!



Evolution of cookstove designs and manufacturing techniques



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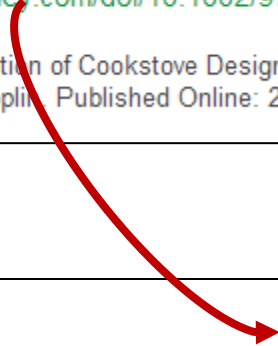
About 342,000 results (0.82 seconds)

Evolution of Cookstove Designs and Manufacturing Techniques ...

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by K Kopplin

Chapter 1. Evolution of Cookstove Designs and Manufacturing Techniques. William D. Faust. Kara Kopplin. Published Online: 28 MAR 2008 ...



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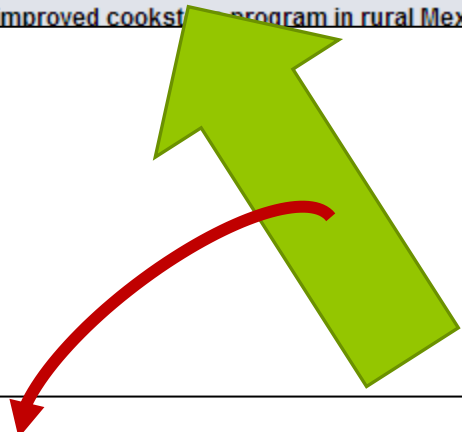
9. Evolution of cookstove designs and manufacturing techniques
 Kopplin, Kara (Custom Ceramic Coatings, Inc) Source: *Ceramic Engineering and Science Proceedings*, v 21, n 5, p 1-3, 2000
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10. Understanding an improved cookstove program in rural Mexico: An analysis from the implementers' perspective

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 Publication info: Westerville, OH: American Ceramic Society

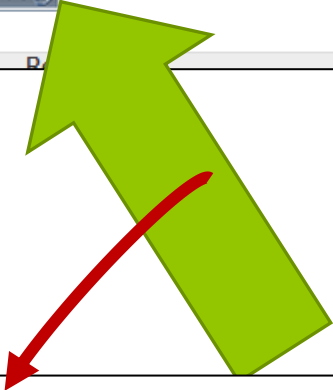


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7. Kopplin K. Evolution of cookstove designs and manufacturing techniques. *Ceram Eng Sci Proc.* 2000;21(5):1-3.

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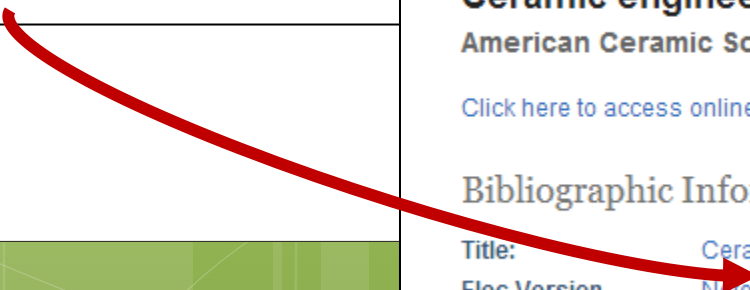
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Most of the time, you can link directly to the text online

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households of highland Guatemala
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The screenshot shows the ACS Publications website interface. At the top, there are navigation links for 'Log In', 'Register', and 'Cart'. The main header features the 'ACS Publications' logo and the tagline 'MOST TRUSTED. MOST CITED. MOST READ.' Below this, there are links for 'ChemWorx', 'ACS Books', 'ACS Style Guide', and 'C&EN Archives'. A search bar is visible with options for 'Search', 'Citation', 'DOI', and 'Subject Search'. The article title 'Carbon Monoxide As a Tracer for Assessing Exposure to Particulate Matter in Wood and Gas Cookstove Households in Highland Guatemala' is prominently displayed. Below the title, the authors' names and affiliations are listed. On the right side, there is a 'Tools' section with options like 'Add to Favorites', 'Download Citation', 'Email a Colleague', 'Permalink', 'Order Reprints', 'Rights & Permissions', and 'Citation Alerts'. At the bottom, there are 'SciFinder Links' and the 'SciFinder' logo.

HBLL tools to make your work & your search easier

- Use your Subject Librarian – listed on the home page of the Subject Guide. He or She can guide you through the process!
- Read first; ask questions after! Don't ask someone else to do your work for you – they have already done it & all you need to do is read!
- There are LOTS more resources on the HBLL site! Like a Treasure Hunt, you must look around, explore, and discover!



Access



Working with the Research Papers Database in MS Access

When you open the database, it will automatically open the Article Chooser page

Research papers database : Database (Access 2007 - 2010) - Microsoft Access

File Home Create External Data Database Tools

All Access Objects << >> Article Chooser

Search...

Forms <>

- Add New Articles
- Article Chooser

Reports <>

- View or Print ALL Articles

View or Print an Article's Info

1. Choose the article you want to preview by scrolling through the Records;
2. Highlight the article title, and copy (Ctrl + C);
3. Click the Preview button to the right, and paste (Ctrl + V) the title into the popup box;
4. Click OK to view a Print Preview, which you can print.

Preview Article Info

Title: Analysis of the life-cycle costs and environmental impacts of cooking fuels used in ghana

Author 1	Afrane G;	Keyword 1	Environmental impact;	Publication Year	2011
Author 2	Ntiamoah A	Keyword 2	Biogas;	Published in	Journal of Industrial Ecology
Author 3		Keyword 3	Charcoal;	Citation	Afrane G, Ntiamoah A. Analysis of the life-cycle costs and environmental impacts of cooking fuels used in ghana. Appl Energy. 2012;98:301-306.
Author 4		Keyword 4	Efficiency;	HBLL web site	http://sfx.lib.byu.edu.erl.lib.byu.edu/sfx/lcl3?sid=Refworks%3A; charset=utf-8; _char_set=utf8; genre=article; aulist=Afrane; auinit=G.; title=Journal%20of%20Industrial%20Ecology; stitle=J. In d. Ecol. date=2011; volume=15; page
Author 5		Keyword 5	Eutrophication;	Abstract	Standard life cycle assessment (LCA) methodology has been used to determine and compare the environmental impacts of three different cooking fuels used in Ghana, namely, charcoal, biogas, and liquefied petroleum gas (LPG). A national policy on
Author 6		Keyword 6	Global warming;		
Author 7		Keyword 7	Life cycle;		
Author 8		Keyword 8	Liquefied petroleum gas;		
Author 9		Keyword 9	Toxicity;		
Author 10		Keyword 10	Wood fuels		
Author 11		Keyword 11			
Author 12		Keyword 12			
		Keyword 13			
		Keyword 14			
		Keyword 15			

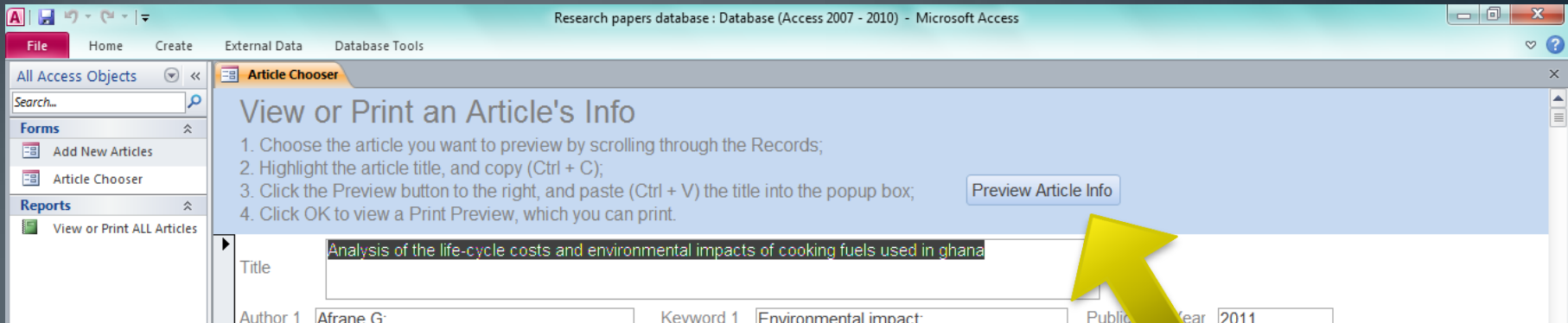
Record: 1 of 80 No Filter Search

Form View Num Lock

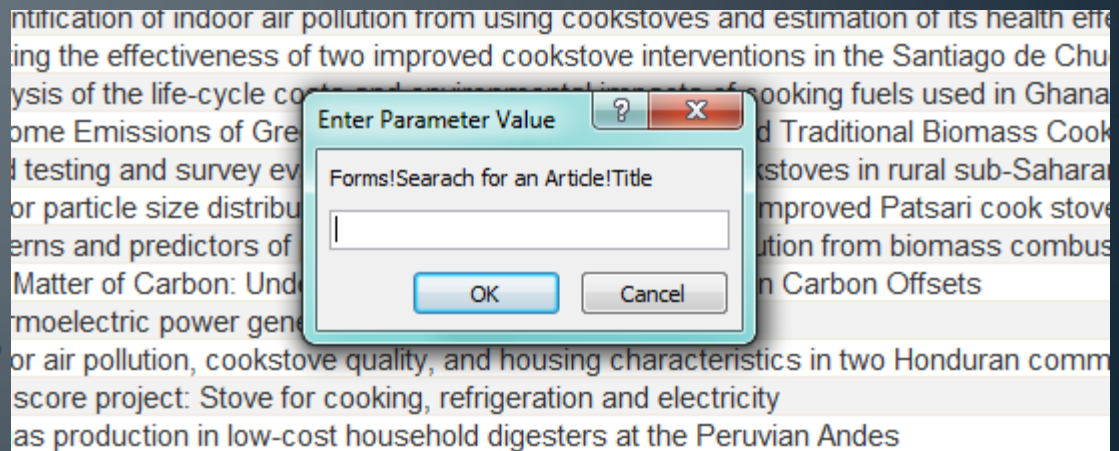
Spin the mouse wheel, or pull the right slider, to quickly scroll through the collection of records.



Highlight the title of the article you are interested in; Copy (Ctrl + C); click on the Preview Article Info button to open a popup.



Paste (Ctrl + V) the title of your selected article into the space provided. Click OK.



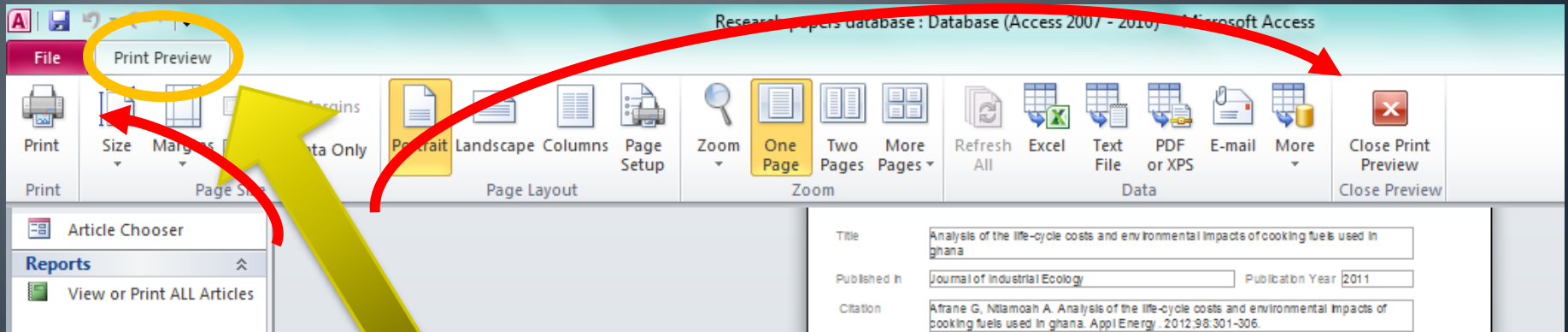
Your selected article's information will result, ready for you to read or print.

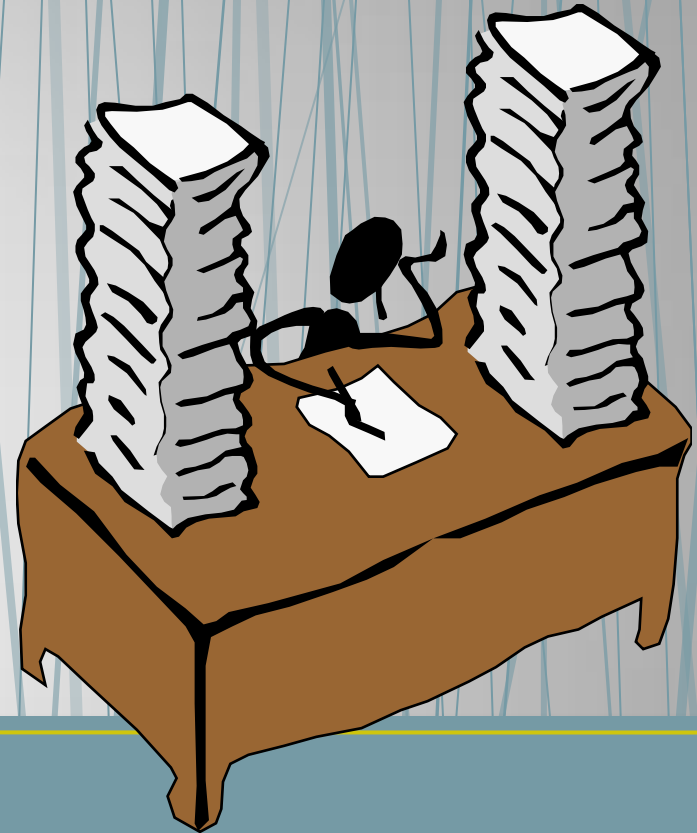
View or Print ALL Articles

Research Articles

Title	Analysis of the life-cycle costs and environmental impacts of cooking fuels used in Ghana	
Published in	Journal of Industrial Ecology	Publication Year 2011
Citation	Afrane G, Ntiamoah A. Analysis of the life-cycle costs and environmental impacts of cooking fuels used in Ghana. Appl Energy. 2012;98:301-306.	
Authors	Afrane G; Ntiamoah A	
Keywords	Environmental impact; Biogas; Charcoal; Efficiency; Eutrophication; Global warming; Life cycle; Liquefied petroleum gas; Toxicity; Wood fuels	
Abstract	<p>Standard life cycle assessment (LCA) methodology has been used to determine and compare the environmental impacts of three different cooking fuels used in Ghana, namely, charcoal, biogas, and liquefied petroleum gas (LPG). A national policy on the use of cooking fuels would have to look at the environmental, social, and cost implications associated with the fuel types. This study looked at the environmental aspect of using these fuels. The results showed that global warming and human toxicity were the most significant overall environmental impacts associated with them, and charcoal and LPG, respectively, made the largest contribution to these impact categories. LPG, however, gave relatively higher impacts in three other categories of lesser significance—that is, eutrophication, freshwater aquatic ecotoxicity, and terrestrial ecotoxicity potentials. Direct comparison of the results showed that biogas had the lowest impact in five out of the seven categories investigated. Charcoal and LPG had only one lowest score each. From the global warming point of view, however, LPG had a slight overall advantage over the others, and it was also the most favorable at the cooking stage, in terms of its effect on humans. 2011 by Yale University.</p>	
BYUWebPage	http://str.lib.byu.edu/erlib/byu.edu/str/1013?aid=Refwork%3A%20char%20set%20article%20a%20st%20Afrane%20au%20G%20title%20Journal%20of%20Industrial%20Ecology%20title%20J%20Ind%20Ecol%20date%202011%20volume%2015%20pages%20339-349%20issue%204%20issn%2010881980%20title=	

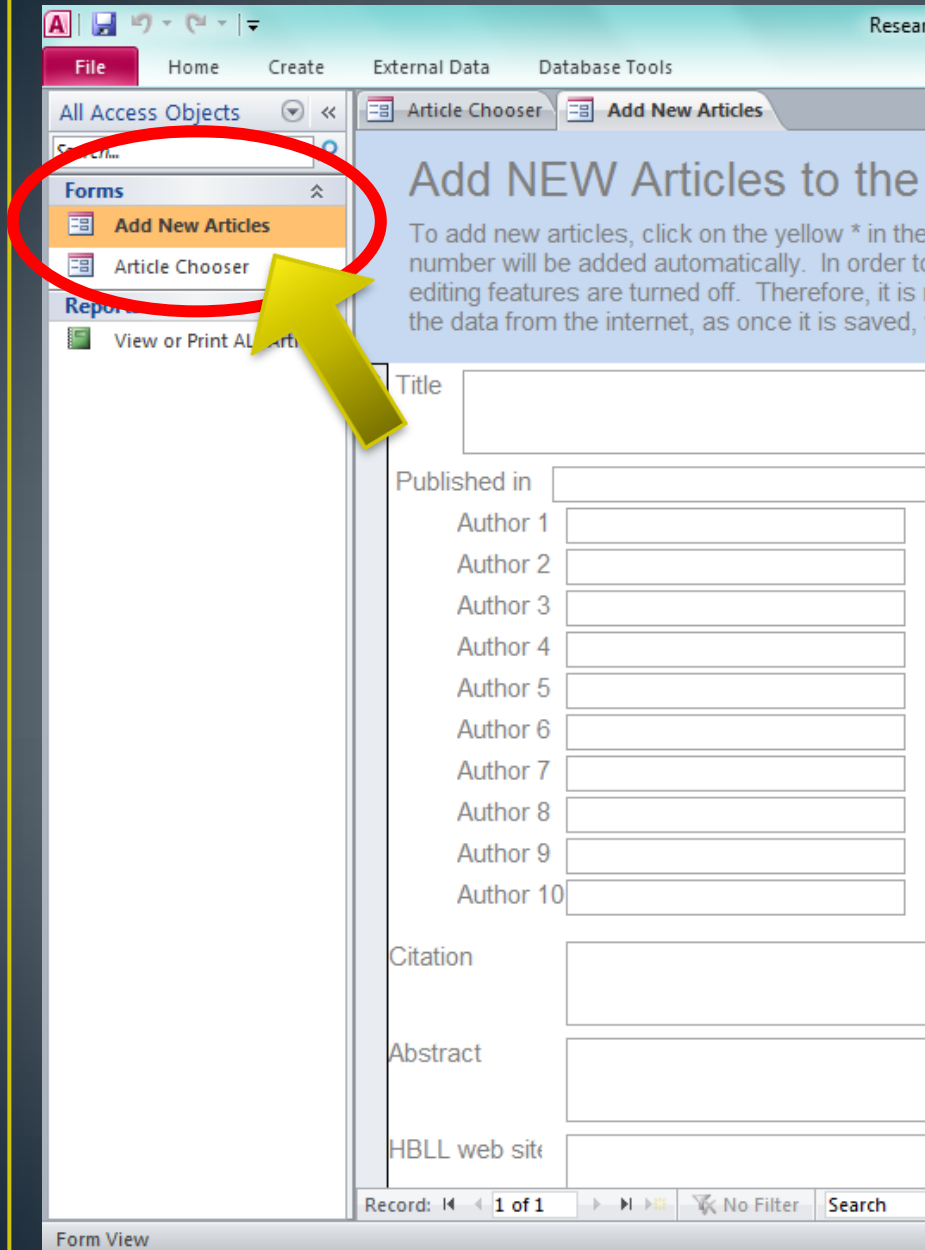
Click the Print Preview tab at the top left of your screen to either print or close the selection. When you close it, the program will take you back to the Article Chooser screen (at the beginning).





Not enough?!

How to add to the database



Double-click on Add New Articles to open the database adder.

Enter the new article info in the appropriate spaces – be careful to place everything correctly, as once it is saved in the form, you cannot edit it.

Click the forward button on the bottom of the screen to add the information you just typed into the database & begin another article.

Research papers database : Database (Access 2007 - 2010) - Microsoft Access

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Forms

- Add New Articles
- Article Chooser

Reports

- View or Print ALL Articles

Add NEW Articles to the database

To add new articles, click on the yellow * in the lower left corner. The article ID number will be added automatically. In order to avoid mistaken editing or deleting, all editing features are turned off. Therefore, it is recommended that you copy and paste the data from the internet, as once it is saved, you cannot edit the information.

Title

Published in Publication Year

Author 1 Author 11

Author 2 Author 12

Author 3 Keyword Keyword

Author 4 Keyword Keyword

Author 5 Keyword Keyword

Author 6 Keyword Keyword

Author 7 Keyword Keyword

Author 8 Keyword Keyword

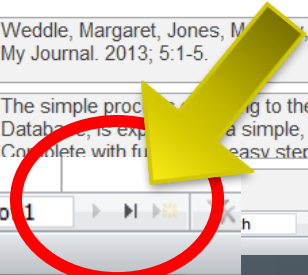
Author 9 Keyword Keyword

Author 10 Keyword Keyword

Citation

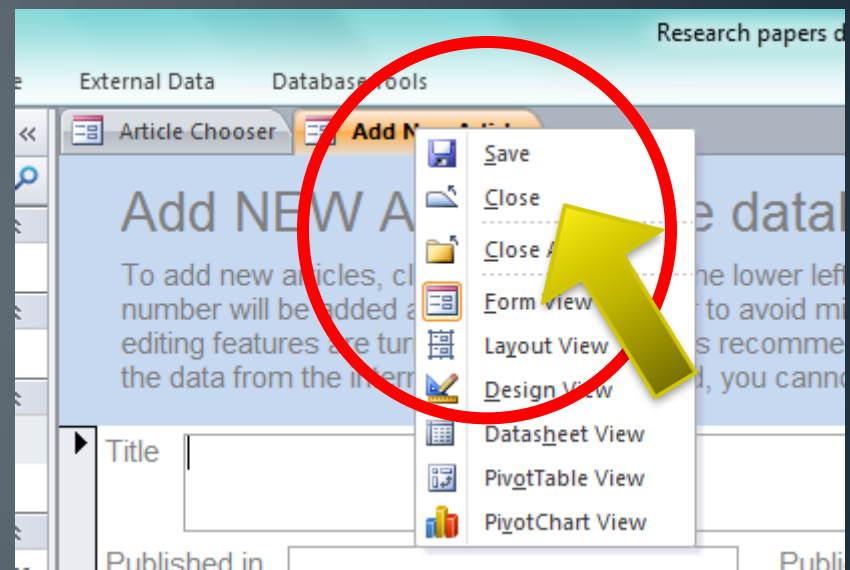
Abstract

Record: 1 of 1



When you are finished adding new articles, right-click on the Add New Articles tab & Save and Close.

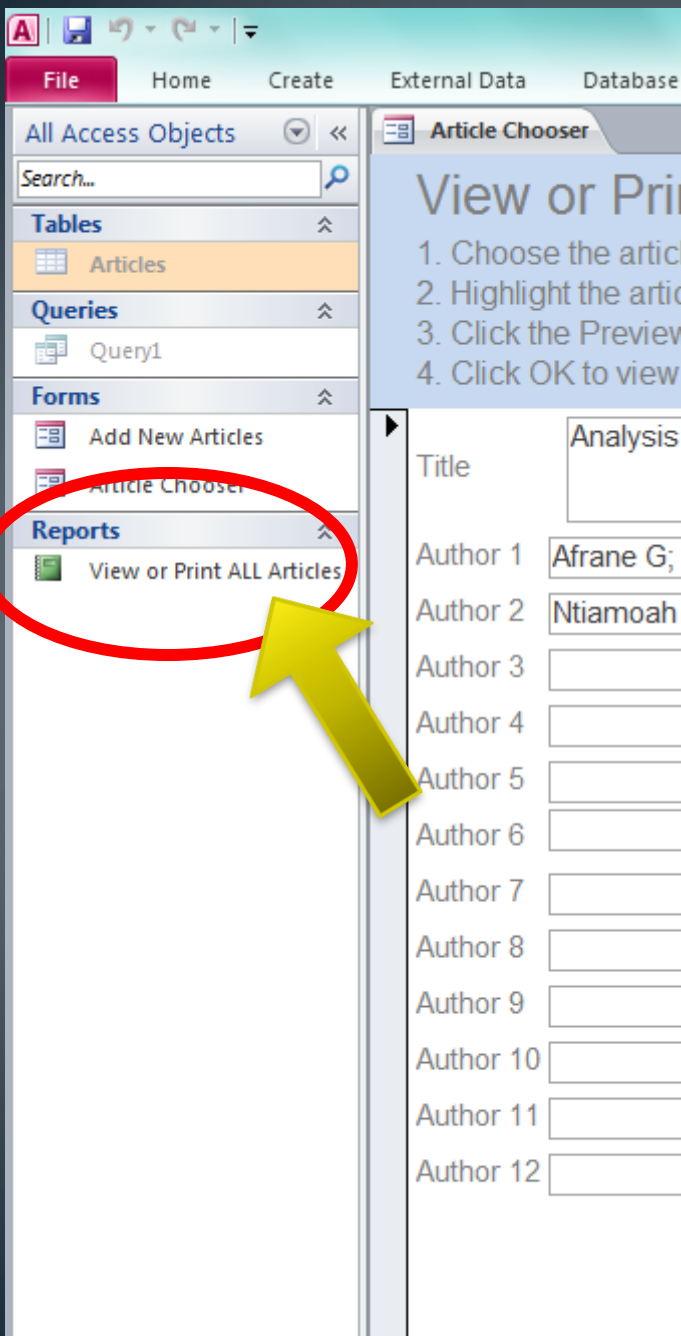
To see your new data in the Article Chooser, you will need to close that tab also, and then reopen it.





But wait! There's more!

Print everything that is in the database



Are you the type of person who prefers a printout to thumb through and write notes on? Click on the report View or Print ALL Articles for a print preview of all articles in the database. From there, you can print all of them in whatever format you choose.

Click the down-arrow to open the print ribbon, and print as usual.

The screenshot displays the Microsoft Access interface for a 'Research papers database'. The 'View or Print ALL Articles' ribbon is active, showing a 'Print' button in the 'File' group. A red arrow points from the text above to this button. A yellow arrow points to the down-arrow on the right side of the ribbon, which is circled in red. The main window shows two article records with their metadata and abstracts.

Research Articles

Title	Published In	Publication Year
Analysis of the life-cycle costs and environmental impacts of cooking fuels used in Ghana	Journal of Industrial Ecology	2011
A rapid assessment randomized-controlled trial of improved cookstoves in rural Ghana	Energy for Sustainable Development	2012

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Extra notes of worth:

- Download this Access program onto your computer, and work from there, saving as you go. Do not upload your changes to Dropbox, as there are others who are doing the same thing.
- Right click on tabs to save or close. Do not go into the other views.
- While you are probably a computer whiz, don't go into the background properties of this program. It changes drastically with the smallest adjustment & is a bear to fix!
- Have fun!