

# Objectives Online Web Service

## Purpose

The purpose of this document is to describe the web service interface to the Objectives of the Medical Council of Canada (MCC).

## Background

The MCC's publication "Objectives for the Evaluating Examination" was ported to the web in 2004 and dubbed the "Objectives Online." The current web interface allows users to easily consult the various Objectives documents, including roles and presentations (the latter considered part of the "Expert" role). A search facility allows both simple and complex searches.

There has been considerable interest in the Objectives Online from the medical community, particularly from Canada's medical schools, who use the Objectives as a tool for curriculum mapping. However, it has not been easy to link Objectives content in real time with other systems because there has been no programmatic interface.

To address this issue, the MCC has constructed a web service interface to the Objectives. This allows other computer applications to query and retrieve information about the Objectives in real time.

## Technical Details

The web service is programmed using Microsoft .NET 3.5. It follows standard SOAP web service protocols and should be useable by any application that understands them. It also accepts HTTP requests using GET (URL parameters) and POST, returning results in XML format.

The URL for the Objectives web service is:

<http://apps.mcc.ca/ObjectivesWS/ObjectivesWS.asmx>

An HTML interface is delivered to a browser visiting this address for the purpose of user testing.

## MCC ObjectivesWS

The following operations are supported. For a formal definition, please review the [Service Description](#).

- [GetHTMLObjective](#)  
Get a single MCC Objective presentation in HTML format
- [GetList](#)  
Get list of all MCC Objectives presentations (Expert role) in XML format
- [GetListWithRoleObjectives](#)  
Get list of all MCC Objectives, including Roles, in XML format
- [GetXMLObjective](#)  
Get a single MCC Objective presentation in raw XML format
- [Search](#)  
Search MCC Objective presentations using a variety of criteria. Output is a ranked list of presentations in XML format.

## Services

The web service offers four services:

- **GetList** returns a list of all Objectives presentations (Expert role).
- **GetListWithRoleObjectives** returns a list of all Objectives, including all Roles.
- **GetHTMLObjective** returns an Objectives document in HTML format.
- **GetXMLObjective** returns an Objectives document in XML format.
- **Search** returns an ordered list of Objectives documents matching the supplied search criteria.

### *GetList*

GetList returns a list of all Objectives presentations (Expert role).

#### **Input parameters:**

- lang (string)
  - "english" | "french" | "e" | "f"
  - optional with "english" as default
- sort (string)
  - "title" (currently, only option)
  - Optional; otherwise list will be in ID order

#### **Output:**

An XML document structured as follows:

```
<root>
  <results numResults="integer">
    <result>
      <role>string</role>
      <id>string</id>
      <title>string</title>
    </result>
    [...]
  </root>
```

#### **Notes:**

- The id element uniquely identifies an Objectives document and may be used to retrieve its contents using other services.
- The output of this service is intended to be useful to populate selection lists.

### *GetListWithRoleObjectives*

GetListWithRoleObjectives returns a list of all Objectives, including all Roles.

#### **Input parameters:**

- lang (string)
  - "english" | "french" | "e" | "f"
  - optional with "english" as default
- sort (string)
  - "title" (currently, only option)
  - Optional; otherwise list will be in ID order

#### **Output:**

An XML document structured as follows:

```
<root>
  <results numResults="integer">
```

```
        <result>
            <role>string</role>
            <id>string</id>
            <title>string</title>
        </result>
        [...]
    </root>
```

**Notes:**

- The id element uniquely identifies an Objectives document and may be used to retrieve its contents using other services.
- The output of this service is intended to be useful to populate selection lists.

### *GetHTMLObjective*

GetHTMLObjective returns an Objectives document in HTML format.

**Input parameters:**

- Id (string)
  - the unique id for the document
  - required
- lang (string)
  - "english" | "french" | "e" | "f"
  - optional with "english" as default

**Output:**

An XML document structured as follows:

```
<string>HTML</string>
```

**Notes:**

- The HTML represents a complete standalone document; i.e., it does not make any other calls for ancillary resources (CSS, JavaScript, images, etc.).
- The output of this service is intended to be useful to display in browser windows, iframes or other components that accept HTML content.

### *GetXMLObjective*

GetXMLObjective returns an Objectives document in XML format.

**Input parameters:**

- Id (string)
  - the unique id for the document
  - required
- lang (string)
  - "english" | "french" | "e" | "f"
  - optional with "english" as default

**Output:**

The complete underlying XML document for the Objectives document.

**Notes:**

- The XML structure is beyond the scope of this document.
  - A presentation document subscribes to XML schema Objective.xsd, which may be retrieved at [http://apps.mcc.ca/Objectives\\_Online/Objective.xsd](http://apps.mcc.ca/Objectives_Online/Objective.xsd)

- A role document subscribes to XML schema Role.xsd, which may be retrieved at [http://apps.mcc.ca/Objectives\\_Online/Role.xsd](http://apps.mcc.ca/Objectives_Online/Role.xsd)
- This service might be useful for an application that needed to extract, analyse or index the content of an Objectives document.

## Search

Search returns an ordered list of Objectives documents matching the supplied search criteria.

### Input parameters:

- allWords (string)
  - one or more keywords, all of which must appear in the document (logical "AND")
  - optional
- anyWords (string)
  - one or more keywords, any of which may appear in the document (logical "OR")
  - optional
- exactPhrase (string)
  - one or words that must appear exactly as entered in the document
  - optional
- withoutWords (string)
  - one or more words that must not appear in the document (logical "NOT")
  - optional
- lang (string)
  - "english" | "french" | "e" | "f"
  - optional with "english" as default

### Output:

An XML document structured as follows:

```
<root>
  <searchCriteria>
    <all_words>string</all_words>
    <at_least_one>string</at_least_one>
    <exact_phrase>string</exact_phrase>
    <without>string</without>
    <lang>string</lang>
  </searchCriteria>
  <results numResults="integer">
    <result>
      <role>string</role>
      <id>string</id>
      <title>string</title>
    </result>
    [...]
  </results>
</root>
```

### Notes:

- All search criteria are optional and may be combined in any way. However, if no criteria at all are supplied, 0 results will be returned.
- The searchCriteria section of the XML repeats the search criteria supplied

- The results are ordered by decreasing relevance. In other words, the best matches come first.
- The id element uniquely identifies an Objectives document and may be used to retrieve its contents using other services.

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