
 | Fling, R. Michael. "Computer-Assisted Instruction for Music
 | Uniform Titles." Public-Access Computer Systems Review 1, no.1
(1990): 23-33.

The Bibliographical Environment

Despite its lack of relevance to many of the problems that beset the world, music, by its global appeal in many styles and forms has achieved status as a subject for both formal and informal study. Although it is one of the most widely loved and practiced of the arts, it remains one of the most obscure because of a technical language that sets it apart from literature and the visual arts. Yet its language is an international one. English-speaking musicians can play from French, German, or Soviet editions even though they may be unable to read the title pages. Recordings may set forth a composition's title or text in assorted tongues depending upon where the discs are produced or marketed, even though the musical content is unchanged. Richard Wagner's opera Goetterdaemmerung is just as likely to be identified as Twilight of the Gods or Crepuscule des Dieux.

Print formats of musical works also may vary in order to serve differing study or performance needs, and these sundry formats usually have a variety of library classification numbers and shelving locations. Consider the multiform print versions of Mozart's opera The Magic Flute (i.e., Zauberfloete) found in the Indiana University Music Library:

Table 1. Multiple Formats of Music Scores.

FORMAT	CLASS NUMBER	DEFINITION or USE
Full score	M 1500	Large score used by the conductor (includes music for all singers & players).
Study score	ms M1500	Full score reduced in size for portability.
Vocal score	M 1503	Voice parts with orchestra music arranged for piano accompaniment.
Orchestra parts	M 999	Music for individual orchestra members (e.g. trumpet music only).
Chorus score	M 998	Music for chorus singers, with piano accompaniment.
Libretto	ML 50	Text only.
Piano score	M 33	Full score reduced for piano solo (no

Excerpts	M 1004	singers). E.g., the Overture published separately.
Facsimile	ML 96.5	Reproduction of the composer's original manuscript.

These diversities of language and format have implications for library users, and would be major obstacles to accessing printed scores and recordings in libraries were it not for one of the master achievements of music librarianship: the uniform title for music. Uniform titles are a vexation to music catalogers, who must spend considerable time on authority work to establish them. They are a menace to unwary patrons not thoroughly schooled in their arcane structure and application. However, they are absolutely necessary to bring together in logical order in the catalog all of the different editions of the same composition.

An example of the chaos that results when uniform titles are disregarded can be seen in The National Union Catalog: Pre-1956 Imprints, in which uniform titles are ignored in the filing sequence. The entries for Wolfgang Amadeus Mozart fill 260 pages, and they are listed, for all practical purposes, in random order.

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The Instructional Environment

The music librarians at Indiana University have experimented with several methods for teaching music majors some basic skills for using the library. In recent years, slide presentations, videotape showings, printed guides, walking tours, and classroom lectures have been used, all with varying degrees of success. The slide and videotape presentations were expensive to update, noninteractive, and too condensed to be very effective. While walking tours provide opportunities for question-and-answer, they are practical only with small groups of students. Classroom lectures with follow-up hands-on exercises in the library are an efficient instructional technique in theory, but they have had limited success at Indiana due to the large enrollment in the School of Music. Registration in core classes for freshmen and sophomore majors typically numbers in the hundreds. Herd behavior usually brings these students to the library to do their assignments in large groups. The competition is intense for access to a limited number of tools and resources, and the sharing of answers is rampant.

In the mid-1980s, the installation in the Music Library of a laboratory of eight IBM-compatible EMPAC microcomputers provided the opportunity to experiment with something new. CAI, it seemed, offered several advantages: (1) students could be involved in an interactive learning experience with immediate feedback about correct and incorrect responses; (2) they could control the sequence and pacing of the lessons; and (3) individual computer time

could be scheduled and reserved in advance. There were also disadvantages: (1) there would be no personal contact between students and librarians; (2) students would be working at video screens rather than turning the pages of real encyclopedias or searching actual catalogs and indexes; and (3) no appropriate software existed. The librarians would have to design and program the system locally.

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Program Design

Observation over the years of how undergraduates use the Music Library at Indiana University suggested that catalog use ought to take precedence over other aspects of bibliographic instruction. While research papers usually are not assigned until well into undergraduate studies, the emphasis on instrumental and vocal performance at Indiana means that freshmen need to locate scores and recordings in the library from the very beginning of their studies. One of our driving forces was the sight of new students standing before open catalog drawers, scratching their heads in bewilderment. Many of their inquiries to the reference librarians indicated that there was a high rate of failure to locate even the most standard of musical repertoire. Early instruction in the use of uniform titles was deemed to be crucial to successful use of the Music Library's collections, and consequently it was our choice as the prime component of a computer-assisted bibliographic instruction program.

The initial challenge was to identify and extract from the cataloging rules those properties of uniform titles that seem most basic. We defined three categories of music uniform titles (see Table 2), and characterized them as form titles (those based on the name of a musical form or a medium of performance), distinctive titles, and collective titles (those for collections of multiple works by a composer in a single bibliographic entity). Finally came descriptions of those additions to titles that help distinguish among different editions and formats of the same musical work, such as "Vocal score," "Libretto," and language designations.

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Table 2. Sample Music Uniform Titles.

Form Titles:

Bartok, Bela.
[Quartets, strings, no. 6]
String quartet number six . . .

Beethoven, Ludwig van.
[Sonatas, piano, no. 14, op. 27, no. 2, C-sharp minor]
Piano sonata number 14 ("Moonlight") . . .

Distinctive Titles:

Mozart, Wolfgang Amadeus.
[Zauberfloete]
The magic flute . . .

Berlioz, Hector.
[Symphonie fantastique]
Phantastische Symphonie, op. 14 . . .

Collective Titles:

Bach, Johann Sebastian.
[Organ music]
Complete organ works . . .

Mozart, Wolfgang Amadeus.
[Works]
Neue Ausgabe saemtliche Werke . . .

Additions to Titles:

Kodaly, Zoltan.
[Psalmus hungaricus. Vocal score]
Psalmus hungaricus: fuer Tenorsolo . . .

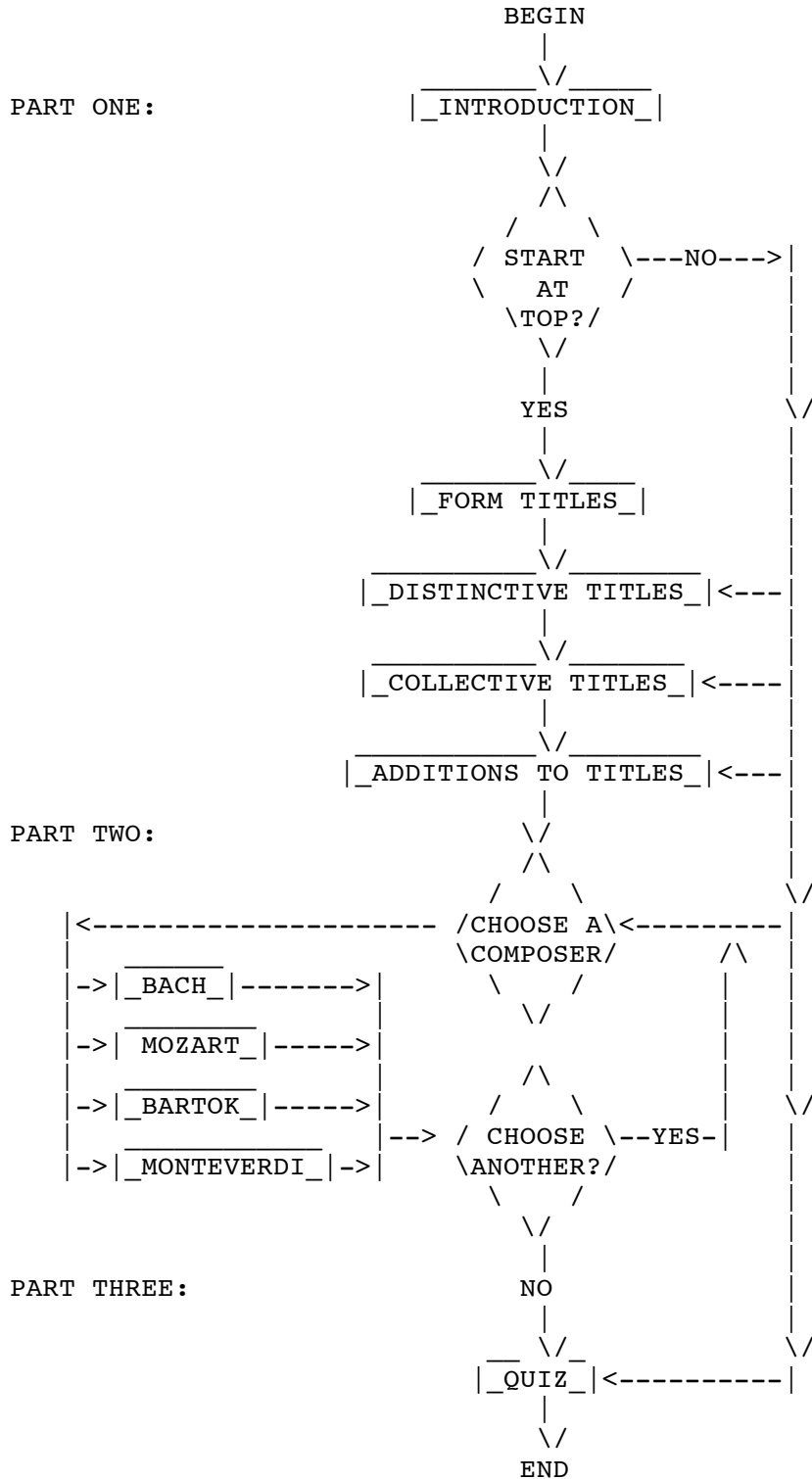
Bizet, Georges.
[Carmen. Libretto. English & French]
Carmen: an opera . . .

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The program design that resulted after several weeks of collective brainstorming is quite simple, due partly to a desire to keep programming costs low, but also because it seemed that a straightforward design would teach as effectively as one with a lot of bells and whistles. The program is in three parts (see Figure 1). Part one is a tutorial which introduces the concept and purpose of uniform titles, then describes the four categories of titles shown in Table 2. Examples in each category are drawn from Indiana's catalogs, and each section intersperses related question-and-answer teasers. Part one is written with the idea that the four sections will be taken in the sequence shown in Figure 1, but the student also has the option of skipping or repeating sections.

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Figure 1. Program Flowchart.



In part two, the student chooses one of four composers to work with: J.S. Bach (1685-1750), Mozart (1756-1791), Bela Bartok

(1881-1945), or Claudio Monteverdi (1567-1643). These particular composers were selected for the program because of the multiplicity of forms, genres, and languages in which they set their music. Also, the titles of many of their compositions already would be familiar to the students. After choosing a composer, the student is shown two or three screens of "hints" about the languages and musical forms commonly used by that composer, and about any unique numbering schemes used in cataloging his works. Then follow about fifteen multiple-choice questions about titles of various works by that composer. The questions are somewhat more difficult than those in part one. In a typical question, an abbreviated title-page transcription is displayed, with three uniform titles from which one is to be selected (see Figure 2). After the student makes a choice, a "CORRECT" or "INCORRECT" response appears on the lower half of the screen, with a brief explanation.

Figure 2. Sample Screen.

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**SELECT A NUMBER, THEN PRESS CARRIAGE RETURN KEY**  
  
Bach, Johann Sebastian.  
Six cello suites, transcribed for trombone solo.  
  
1. [Suites, trombone]  
2. [Violoncello music; arr.]  
3. [Suites, violoncello; arr.]  
  
* * * * *  
{Response after choice is made}  
  
3: CORRECT.  
  
Because all of the works in this collection are suites, the name  
of the form begins the uniform title. This is followed by the  
*original* instrumentation, and the "arr." designation,  
indicating that the music has been transcribed or "arranged" for  
a different instrument.  
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Alternatively, a uniform title may be shown, with three short descriptions of a hypothetical edition from which one is to be selected (see Figure 3).

Figure 3. Sample Screen.

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**SELECT A NUMBER, THEN PRESS CARRIAGE RETURN KEY**
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Mozart, Wolfgang Amadeus.
[Piano music. Selections]

1. A selection from his piano sonatas.
2. The complete piano music.
3. Selected piano sonatas, preludes, variations, etc.

* * * * *

{Response after choice is made}

1: INCORRECT.

"Piano music" indicates that this collection contains a variety of forms of piano music, and not just Sonatas. "Selections" identifies a collection of fewer than *all* of his piano works.

After completing the questions about one composer, the student may choose to continue with another, to quit, or to go on to part three, which consists entirely of quiz questions. These final questions are structured like the ones already described, with examples drawn from many different composers and illustrating all periods and styles of "serious" music. No hints are provided. The quiz is programmed to display up to about sixty questions in random order so that a student sampling the quiz a second time is likely to get many different examples. When exiting the quiz, a tally of correct and incorrect responses is displayed, along with a percentage score for that session.

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Although designed with the undergraduate in mind, the program also has proven useful for graduate instruction and for training of library student assistants. It is a required component of the graduate course "Introduction to Music Bibliography," and of the training of students who do pre-order searching.

Indiana's CAI program for music uniform titles (Making the Most of the Music Library: Using Uniform Titles) was designed and written by two music librarians (the author, and David Fenske, head of the Music Library), and two graduate students in music librarianship (Shirlene Ward, now a music librarian at Northwestern University, and Brenda Nelson-Strauss, archivist for the Chicago Symphony Orchestra). Programming (in Turbo Pascal) was done by John Schaffer, now a member of the music faculty at the University of Wisconsin--Madison.

A copy of the program can be obtained by sending a blank formatted 5-1/4" diskette to the author.

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