Going After the Gold:  
A State Wide Pilot of Transferability

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ABSTRACT:

The Course Applicability System (CAS) is a student-driven web access to transfer articulation and degree audit information. Creation of the software is a result of the joint efforts of institutions in the state of Arizona and Miami University, Oxford, OH. Access to CAS for students, advisors, or casual inquirers is gained via the internet through a web browser. Transfer articulation and degree audit tables are maintained by institutions using the Degree Audit Reporting System (DARS).

Currently, seven institutions in the State of Ohio are involved in a pilot project using the software. A premise behind CAS is that a prospective transfer student could not only determine current course evaluation and application, but also successfully plan for future transfer. The goal of the pilot will be for a prospective student to evaluate his/her course portfolio to determine course acceptability, equivalency and applicability within any of the seven institutions.
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INTRODUCTION:

The Course Applicability System, known as CAS, is a student-driven web accessed transfer course evaluation system. CAS was built upon existing information systems, such as the degree audit and transfer articulation, and accessed via the internet and web, which provides for near universal access. Advisors, students, and prospects will all have access to the information, which will aid in planning their academic experience.

The project started in the state of Arizona. They currently print a Course Equivalency Guide (CEG) and a Transfer Guide (TG) to aid students who intend to transfer from a community college to one of the three, state assisted four year institutions. The CEG informs the student of which courses will transfer while the TG lets them know the courses that are needed to fulfill a particular degree. The process to generate these documents is labor, time and paper intensive. Also, the guides have limited usefulness because they are out of date as soon as they are published, distributed late to students, not readily accessible, and multiple documents must be consulted to obtain the complete picture. Therefore, the state of Arizona desired to put this information on-line to make it readily accessible and more up-to-date.

In September of 1995, the Arizona Board of Regents and the State Board of Directors of Community Colleges started the Request For Proposal process for an on-line system to replace the paper documents. This led to Miami University being chosen, due to their robust degree audit and transfer articulation software, for a joint development project. In May of 1996 the Ohio Transfer Articulation Council also saw the value of such a project and recommended that the Ohio Board of Regents support it. In June, all the players were identified and July marked the start of the project. September of 1996 the storyboard, depicting the functionality of the project was developed and placed on the web for review. The actual development then took place over the next several months.

The initial prototype was available for review in March of 1997. Also, that month the first workshop for the State of Ohio was held. Representatives from the state assisted institutions attended, found out what CAS was designed to do, and gave their input to make the system better. Throughout the state of Arizona several site visits were done to involve the state institutions and to obtain their feedback as well. During the summer and fall of 1997 the prototype was redesigned based on the reviews received by both states.

GOALS:

The overall goal of the CAS prototype is to provide a statewide decentralized electronic transfer and advising system. It will provide support for the development and maintenance of the transfer articulation agreements and offer convenient access to all users (administrative, students, and anyone else who has web access) to view timely, accurate and reliable information about course equivalencies. Also, it will provide a place into which transcripts can be entered or fed electronically for evaluation, and produce a degree audit which will let the student not only know what courses they still can take at their institution prior to transferring, but also, where they stand with respect to obtaining a degree from the transfer institution. It will provide more timely and accurate data for administrative functions such as transcript evaluation, transfer admission and student advisement for their academic program plan and allow more time for the analysis of the transfer data. Ultimately, it will facilitate students transferring among institutions allowing them to personalize their academic experience.

FUNCTIONALITY:

The CAS system allows for four levels of access: Guest, Student, Administrator and Super User. The Guest Access includes the ability to view how specific courses taken at one institution will transfer to
another institution; view the academic programs offered by a specific institution; and view the available course descriptions. A guest is the only level that does not require the operator to login. The Student Access is allowed to perform all the guest access features plus has the ability to enter and save their course work, allowing them to track their progress as courses are completed, and also allows them to do “what if” scenarios; and they can then use the entered course work to create a personal transfer planning aid showing how it will apply to a specific academic program. The student access requires a login so that their previously entered course work can be retrieved. The Administrator Access can perform all the guest access features, the student access features on behalf of the student and communicate with any/all of the registered administrators. The Super User Access can do all of the above mentioned features, plus perform the necessary functions to keep the CAS information current and available to the community.

The first feature of the CAS system is the ability to view how specific courses taken at one institution will transfer to another institution. This is known as the Course Equivalency Guide (CEG) or simply the Transfer Articulation Tables. It is a user friendly view of the tables that are stored in a relational database. The operator must first identify which institution they are interested in transferring to; then, the institution they are transferring from; and finally, the time-frame they are interested in. Since institutions offer several courses, the operator then can hone down the table in one of three ways: 1) by a specific course; 2) a range of courses; or 3) a category/department. Once they have selected the course(s) they are interested in seeing how it will transfer, the web screen on the following page will be displayed. In addition to the course equivalency, the operator may click on the NOTES button for further information or restrictions about a particular equivalency.

The second feature of the CAS system is the ability to view the academic programs offered by a specific institution. This is known as the Transfer Guide (TG) in Arizona or is simply a degree audit with no courses. It displays for the operator the requirements that must be met in order to obtain a particular degree from that institution. This typically is in that institution’s course identity. Since CAS uses DARS as the backbone of it’s process, this can also contain the courses that the operator/student can still take at their current institution to fulfill a requirement at the transfer institution. This feature is referred to as a Reference Articulation. However, CAS was designed to allow participating institutions to use whatever degree audit software they chose. Therefore, there are interface points, where the information can be sent from CAS to the institution’s degree audit process. Then, only if their chosen degree audit allows for a reference articulation of some sort, will they be able to display similar information. This feature displays audits that have been pre-run. Therefore, whether an institution uses DARS or another degree audit software, they should run the audits and store them in the relational tables. This means that the person responsible for maintaining the encoding of the requirements should rerun any programs that change in order to display the current programs. The operator/student, after identifying the institution they are interested in, selects a particular program to view. Since CAS has the ability, via DARS, to provide the reference articulation feature, the operator now will have a list of the selected program to choose from – each entry will differ only in the referenced institution. Once the program they are interested in is selected, the pre-run audit will be displayed, showing what they will need to do to fulfill this particular program.

The next feature of CAS is the ability to view information about a course. There are two ways this can be done: either an institution’s already defined course information that resides on the web, or through CAS where the information is stored in the relational tables. Either way the operator must first select the institution that offers the course. If the institution already has course information on the web, then control will be passed from CAS to that institution’s web page. Otherwise, the operator will be asked to specify a date range for which they are interested, then a category. This limits the display to a more manageable size. CAS is designed to hold whatever information the institution chooses to store, such as prerequisites, co-requisites, description, syllabi, etc… The operator can choose to view one type of information or all of the information available.
The next feature of CAS is the ability of the student to maintain their course portfolio. In the initial prototype, this will be done by the student entering their courses and events that have a bearing on the articulation process, such as obtaining a degree, manually. This is known as “self reported”. However, CAS is designed to include two other ways for the course portfolio to be entered: 1) downloaded from the participating institution’s student system; or 2) sent via EDI to the CAS server. Whichever way the course portfolio is entered into the system, the student has the ability to display their courses, add additional

The final student feature in CAS is the ability to create a personal transfer planning aid and to

will be applied to a particular degree. It will also show them what they have left to do. Furthermore, if they have asked for the audit to contain a reference articulation, it will also show them what courses they

Below is a sample Transfer Planning Aid showing only a small selected portion of the program Salado Community College. This sample planning aid does include the reference articulation feature, with Salado Community College, which is designated in the first bolded section of the audit. The next bolded section explains how this feature will be depicted on the audit. are separated by the double lines. The first requirement shows the student how courses will be accepted by Arizona State University. The next two requirements show where those courses will be applied and what they still need to do to fulfill the they can take at Rio

one and a many to one articulation/relationship.

09:00                          Bet-h -
NOT ON FILE. INQ.
PROGRAM CODE: CLASENGLISH       CATALOG YEAR: 1996
=================================================================
THIS REPORT HAS BEEN PREPARED FOR THE STUDENT USING AN WORLD WIDE WEB SYSTEM - AND IS UNOFFICIAL!
=================================================================
TAKEN AT: RIO SALADO COMMUNITY COLLEGE
=================================================================
THIS AUDIT SHOWS COURSES WHICH MAY BE TAKEN AT ANOTHER COLLEGE PRECEEDING ARIZONA STATE UNIVERSITY COURSE.

IN THE 'SELECT FROM:' SECTION, THE ARIZONA STATE COURSES WHICH CAN BE USED TO SATISFY THE REQUIREMENT LISTED COURSE WHICH HAS AN EQUIVALENT COURSE (OR COURSES) FROM THE REFERENCED COLLEGE, THAT COURSE WILL BE LISTED ALSO. : '{EQUIVALENT REFERENCED COURSE}'. IF THERE IS MORE THAN ONE EQUIVALENT COURSE, THEN THEY WILL BE INCLUDED IN ONE COURSE MUST BE TAKEN FOR AN EQUIVALENCY, THEN THOSE COURSES WILL BE INCLUDED WITHIN THE '{...}' AND SEPARATED BY AMPERSANDS
'&'. OTHER CONTROL INFORMATION MAY APPEAR AS NEEDED.

REPORT OF HOW TRANSFER COURSES WILL BE ACCEPTED AT ASU

EARNED: 29.0 HOURS 2.97 GPA

--- THESE COURSES WILL TRANSFER WITH SPECIFIC ---
ASU COURSE EQUIVALENCIES

18.0 HOURS ADDED  6 COURSES TAKEN  3.00 GPA

1S91 HIS103 3.0 B  UNITED STATES HISTORY TO 1865
GLENDALE: HIS103

1S91 HIS104 3.0 B  U.S. HISTORY AFTER 1865
R-SALADO: HIS104

FA91 MAT106 3.0 C  INTERMEDIATE ALGEBRA
R-SALADO: MAT129

1S92 POS110 3.0 B  AMERICAN NATIONAL GOVERNMENT
R-SALADO: POS110

-- THESE COURSES WILL GIVE GENERAL ELECTIVE CREDIT --

11.0 HOURS ADDED  3 COURSES TAKEN  2.91 GPA

SP95 GEN100 4.0 C R  BEGINNING FRENCH
GLENDALE: FRE101

WN95 GEN100 4.0 B R  INTERMEDIATE FRENCH
GLENDALE: FRE201

FA92 MTH991 3.0 A  PLANE TRIGONOMETRY
R-SALADO: MAT160

-- THE EVALUATION OF THESE COURSES IS UNKNOWN --

SP95 ACC990 3.0 C  BEGINNING ACCOUNTING
GLENDALE: ACC101

SP95 ENG990 0.0 NT  INTRO TO ENGLISH
R-SALADO: ENG123

FIRST YEAR ENGLISH COMPOSITION
('C' OR BETTER GRADE REQUIRED)

NEEDS: 1 SUB-GROUP

+ 1) COMPLETE BASIC COMPOSITION COURSE

SP90 ENG101 0.0 C >X ENGLISH COMPOSITION
R-SALADO: ENG101

SP91 ENG101 3.0 B RP ENGLISH COMPOSITION
GLENDALE: ENG101

- 2) TAKE ONE OF THESE LITERATURE COURSES
SELECT FROM: ENG102=[ENG102],105

CORE AREA - NUMERACY
SIX SEMESTER HOURS -

NEEDS: 6.0 HOURS  2 SUB-GROUPS
-R 1) MATHEMATICS - PASS COLLEGE ALGEBRA EXEMPTION EXAM AND
YOU MAY TAKE ANOTHER MATH COURSE WHICH HAS COLLEGE ALGEBRA AS A PREREQUISITE

SELECT FROM: MAT114, 
{MAT155AA & 155AB & 155AC & 155AD},119={GBS222},
{MAT155 & 160} OR {MAT165},210={MAT210},242,260,
,290
- OR) TAKE COURSE IN COLLEGE ALGEBRA (MAT117) OR ANOTHER MATH

NEEDS: 1 COURSE
SELECT FROM: MAT117={MAT153} OR {MAT154} OR 
,114,117=
{MAT153} OR {MAT154} OR
,119={GBS222},
MAT170={MAT153 & 160} OR {MAT154 & 160} OR
,210={MAT210},242,260,
MAT270

- 2) STATISTICS AND QUANTITATIVE REASONING
SELECT FROM:
GCU495 HIS382 IEE476 JUS302 MAT419,451 STP226,
,420
- 3) COMPUTER APPLICATIONS
,446 BIO420 CET150 CHE461 CIS200=
{BPC105} OR {CIS105}
{BPC105} OR {BPC110 & 110(3.00)) OR {CIS105},181,
,200,225,225 MAT464,465,466,467 STP429
=================================================================

and electronic chat. This feature connects all administrators throughout the participating institutions/states. It can take the shape of either a document that requires a response, known to the system as a form, or just a participants are, whether they are from their own institution or across institutions, what the topic is, and the initial information. The members that have been added to either a new chat or form will be notified of this via email. They can then ‘post’ their responses for everyone to see, by reviewing the chat/form and entering their comments. Or, they can start an ‘off line’ chat by emailing a pier and therefore, it will not be seen by all the participants. Once the form/chat is completed, it will be closed and eventually archived for

OHIO PILOT:

The Ohio CAS pilot is a twelve-month project of the Ohio Board of Regents’ (OBOR) ongoing formulation of a statewide agreement known as the Ohio Articulation and Transfer Policy (OATP). Designed to facilitate the transfer of students and credits, it encourages institutions to recognize comparable and provide nearly universal access to information for students and institutional representatives.

Two major provisions were born from the OATP. First, any student completing an associate degree college level courses they have passed. Second, the Ohio Transfer Module is a set of course categories that represent common general education requirements. Each institution is required to define a transfer module completed the receiving institution's transfer module.
In November 1997, OBOR sponsored a pilot workshop hosted by Miami University. Seven institutions accepted the invitation to participate in the pilot and joined the DARS Project in Oxford. They include:

- Cleveland State University- Cleveland, OH
- Columbus State Community College- Columbus, OH
- Cuyahoga Community College- Cleveland, OH
- Kent State University- Kent, OH
- Lorain County Community College- Elyria, OH
- The Ohio State University- Columbus, OH
- University of Akron- Akron, OH

The seven schools are grouped regionally into northern and southern groups. Activity is targeted for, but not limited to, regional interaction. Representatives from admission, advising, computer support, registrar, faculty and administration offices gathered to discuss the implementation strategy. Over the three-day period, issues, goals and a timeline were considered.

The discussions explored issues related to organization and implementation. A major focus centered on the input of information into the CAS tables. Each institution desired the control of initial course input to demonstrate proper data entry and ensure accuracy. Specifically, it is the responsibility of the transferring school to certify the Ohio Transfer Module and/or associate degree completion. As a result, the initial student-advisor visit could produce valuable feedback about the effectiveness of information. Another concern involves the maintenance of tables that store information about institutions and course equivalents. Not only are the course and policy changes at the home institution important, but also changes from six other institutions. This concern touches upon two issues - retrieval of information and personnel needed to enter data. The pilot institutions concluded that a streamlined method of transmitting data is necessary.

Two procedural challenges were also solved during the pilot workshop. The problem with a student-driven system is the possible inaccuracy of data input. Therefore, each institution is constructing a comprehensive disclaimer to be included with transfer reports. Although data output is based on official articulation tables, the reports rely on entry by students. The other challenge facing schools is the relationship between information obtained through CAS and information obtained at the time of official application for admission from the receiving institution. The solution lies within the creation of policies invoking catalog rights for students. If a student demonstrates the desire to transfer combined with a record of continuous attendance, then a student may enter the receiving institution with the privileges, restrictions and program definitions of the year/term of admission at the transferring institution.

After resolving issues raised during the workshop, the pilot group established goals and a tentative timeline for activity. During the month of December, representatives organized their campuses to accommodate the encoding of transfer rules and degree/program definitions. This included the coordination of personnel and computer resources and the review of articulation agreements and transfer policies. From January to April, each institution populated the necessary tables to evaluate transfer credit. As the tables were built, the information and procedures were tested and refined for use in a production environment. Students interested in transferring for the fall term are scheduled to utilize information in CAS. Notwithstanding a June 1 deadline for feedback, the pilot will continue until December.

Included in the feedback should be the status of goals set forth for the pilot. Most importantly, institutions should make available information that will show anyone how courses from one or more of the Ohio pilot institutions will transfer to and accepted by another Ohio pilot institution. Also, each institution should create or enhance programs to facilitate the transfer student process. Furthermore, a procedure to maintain the CAS tables is necessary for future success. From the pilot experiences, the OBOR should obtain information vital to future implementation groups.