

Using Articulation Agreements to Facilitate Ordered Transfer Policy Development and Program Growth

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Articulation agreements with two-year institutions provide four-year institutions with a source for growth and a means for sustaining it. This paper presents and discusses the guiding philosophies used to develop these agreements during a formative stage of a construction management program's growth. These philosophies led to ordered transfer policies which, for more than 10 years, have served as catalysts for sustained enrollment and growth. Benefits for the students and articulating institutions, resulting from implementation of the policies, are also discussed. The impact of the agreements on graduate class size and makeup is also presented.

Key Words: construction management major, partnerships in education, CMGT collaborations, articulation

Introduction

In the late 1990's, the Northern Kentucky University's (NKU) Construction Management (CMGT) program began to grow and expand. The growth was precipitated by deliberate decisions to professionally develop its curriculum, and pursue professional accreditation from the American Council for Construction Education (ACCE). As a result, the program began to attract more students from in, around, and outside of the northern Kentucky and greater Cincinnati, Ohio region. Many of the students transferred in from technical, two-year, and/or other institutions.

The program coordinator, whose responsibilities included advisement of all students matriculating within the program, quickly identified the need for a quick and uniform process for transferring credit on a fair and equal basis for each student entering the program. This led to the development of articulation agreements with transferee institutions that (1) fulfilled the aforementioned need, (2) provided clarity on course requirements (Procter, 2001), and (3) effectively served as a contract between the transferee and the CMGT department for degree completion. NKU's construction management program benefited from the agreements because (1) the agreements provided additional sources of students, (2) students had content at the transferring school that provided them with the background to successfully transfer into the NKU program and matriculate (Reese, 2002), (3) transferring programs knew what was required for their students (Owens, Chen, Green, King, and Christy, 2010), and (4) adherence to the agreements fostered goodwill between the participating schools; this led to more students and sustained growth. The structure and underlying philosophies guiding the development of the articulation agreements developed with the participating institutions are discussed below.

Background

Northern Kentucky University (NKU) and the Construction Management (CMGT) program have always had transfer students. Transfer courses for each student had to be accepted by NKU Admissions for credit toward degree completion. Transfer course credits fulfilling the university's general studies requirements were approved by Admissions using an approval process developed by the College of Arts and Sciences. Course credits considered departmental in nature (i.e., technical related courses) were sent to the departments for evaluation and acceptance. The chair, program coordinator, or evaluator reviewed the courses to determine if they matched the content of the

courses in the major (i.e., such as those required for NKU CMGT degree fulfillment). In some instances, catalog statement(s) from the transferring institution, a syllabus, and/or other documentation were needed for proper evaluation. The process was time consuming, inefficient, and provided opportunity for inconsistent treatment of transferees.

The aforementioned process was “manageable” for the “occasional” transfer student, something the NKU CMGT department had always had. However, starting in the early to mid 1990’s, students from Cincinnati State Technical and Community College (CSTCC) Civil Engineering Technology (Cincinnati, Oh.) programs started transferring to the NKU CMGT program. After a few students transferred and considered it a success, more students began to transfer. Thus, the process for handling transfer student credit described above became unmanageable and unwieldy due to the number of transfer students enrolling into the program. A better process had to be developed due to the time inefficiencies and treatment inconsistencies mentioned above. Consistency and fairness in granting transfer credit was also required (O’Meara, Hall, & Carmichael, 2007). A new process was needed.

A chance encounter at a conference occurred between the coordinator of the NKU CMGT program and the Chair of the CSTCC Civil Engineering program. Ensuing conversation led to discussion of student transfers between the two institutions, as well as discovery of mutual interest in formulating parameters for transfers. Subsequent meetings and discussions led to a formal articulation agreement between the two programs, the first formal agreement of this sort for the NKU CMGT program. Instrumental in the agreement were development of guiding philosophies that provided the framework for subsequent articulation agreements the NKU CMGT department made with other institutions (see table 1). These guidelines (1) aided sustained growth in the NKU CMGT department, (2) provided uniformity in assessing and assigning of transfer credit for students transferring into the department, and (3) served to assure that transferees had the foundational requirements needed to successfully matriculate through and finish degree requirements in the NKU construction management program. Additionally, the guidelines provided a means of letting students know, when entering the NKU CMGT program, exactly what courses they needed to take to finish their degree (Owens, Chen, Green, King, and Christy, 2010). Finally, the guidelines helped to eliminate unnecessary course duplication and other institutional barriers (Proctor & McElvey, 2001), (Hyslop, 2008). The philosophies and their impact on growth in the NKU CMGT program are discussed below.

Guiding Philosophy I: Equitable Relationships and Interactions Between Institutions Entering Agreement

When an institution is developing an articulation agreement, the following philosophies should be considered:

- **Apply the Golden Rule:** The receiving institution should treat transferring students fairly. This means that transfer credits should be evaluated and accepted within the guidelines and procedures established by the articulation agreement. The receiving institution’s treatment of the transferring student’s courses and credits should be fair and balanced. Apply the golden rule; the student be treated the way one would want a student transferring from his/her institution to be treated at another school.
- **Avoid Program Elitism:** After transfer agreements are reached and agreed to, transfer students meeting the requirements should not be treated differently from, or as inferior to, native students (Purcell, 2006). Native students are defined here as students who began their college education at the host or accepting institution. Size of program, course content coverage/perceived complexity, faculty credentials, etc., and other factors associated with “higher program status,” both real and perceived, should not factor into treatment of transferring students once the articulation agreement criteria has been established by the institutions that formed the agreement, nor after the requirements articulated by the agreement have been met by the transferring student(s) (Purcell, 2006). Concerns regarding discrepancies between programs, or suitability of content in courses designated for transfer credit, should be discussed and remedied during discussions establishing articulation agreement parameters. Agreed upon remedies to any issues should be included within the agreement, and methods to measure the effectiveness of the remedies should be included, also.

Table 1

***Northern Kentucky University Construction Management Department Articulation
Agreements With Two-Year Degree Programs***

School	Program(s)	Date of Agreement	Location of Program
Cincinnati State Technical and Community College (CSTCC)	Construction Management; Architectural Technology; Surveying Technology	May, 1998	Cincinnati, Oh.
Sinclair Community College (SCC)	Civil Engineering Technology; Civil engineering Technology- Construction Management; Architectural Technology	Feb, 2003	Dayton, Oh.
Columbus Community College	Construction Management	April, 2006	Columbus, Oh.
Bluegrass Technical and Community College	Construction Management	April, 2006	Lexington, Ky.
Bluegrass Technical and Community College	Architectural Technology	April, 2002	Lexington, Ky.
IVY Community College (IVY)	Design Technology-Architectural Specialty	Sept, 2003	Southeast, In.
Kentucky Community and Technical College System	Construction Technology	Jan., 2007	Kentucky

- **Review the Total Program:** While a course by course review of content must start the process, the content offered across the entire curriculum must also be evaluated and considered. The American

Council for Construction Education (ACCE) master matrix for program accreditation evaluation is an invaluable tool for this assessment. It allows the faculty (1) to view where content is being taught, (2) to see if there is overlap, lapse, or weaknesses in content coverage, and (3) to determine if content is being covered properly. This tool can also, be used to help develop an articulation agreement. It provides the receiving institution with a means for determining what is being taught at the sending school and where it is being taught (i.e., in which course). The old a phrase “do not judge the book by the cover” applies here; look inside for the content. If the content is covered within the acceptable agreed upon standards set by the schools entering into the agreement, then it should be accepted. If, later, transferring students are found not to have the needed background to succeed, the articulation agreement should be revisited, and if necessary, modified or canceled.

- **Equitable Treatment of Students:** Transfer students should/must be treated the same way native students are treated. Special rules or requirements, different from those applied to native students, should not be imposed on transferring students. For example, minimum grade requirements for transferees should be the same as those established for native students once transferees have been accepted into program through the articulation agreement.

Guiding Philosophy II: Key Elements of an Articulation Agreement

Curriculum content is at the heart of any articulation agreement. The following philosophies with regard to curriculum content guided the development of the agreements the NKU CMGT department made with those institutions it entered into agreements with.

- **General Education:** These requirements are established by the university; hence, individual departments usually have little influence over these courses. The receiving institution can usually make recommendations in this area. For instance, the receiving institution can make recommendations to the sending institutions regarding particular courses to be considered for meeting general education requirements, especially if they are program specific and necessary to meet accreditation requirements, and/or, if the sending institution's general studies requirements dictate coverage of specific content offered only in certain courses. The receiving institution, for example, might make a recommendation regarding a math or science that should be considered at the sending institution when multiple options exist at the sending institution for filling the sending institution's degree requirements. Recommendations like this, when made to the sending institutions, help make students aware of choices that will ensure future transference of credits and maximize the benefits that they can provide.
- **Program Specific Courses (Technical Courses):** Participating institutions must agree on what courses transfer and for what. Completion of this content at the sending institution eliminates the need to take the content at receiving institution.
- **Electives:** Electives should be discussed. The receiving school should provide a list of acceptable electives for their program. If the sending school has comparable courses, and course content, and if the credits will transfer to the receiving institution, the transferring student will receive the additional benefit of more transferring credit(s). Policies made regarding electives and the transfer credit allowed for them should be listed in the articulation agreement.
- **Scholarship Availability:** If scholarships are available for native students, efforts should be made to make some, if not all, of them available to students transferring in through the articulation agreement who qualify for them. The criteria for qualification should be the same as that used to evaluate native students regardless of where course content was taken (i.e. sending school or receiving school).

Benefits for the Student(s) and Articulating Bodies

The following benefits result for institutions and their students when articulations agreements are developed and implemented using the principles presented above:

- **Facilitates Enrollment:** As shown in table 2, good sound articulation agreements can facilitate growth. Enrollment can improve considerably at the junior level.
- **Students Know What Courses Are Required At Each Step:** A path is laid out for students. They understand clearly what courses are required at each point along the matriculation process.
- **Transfer Credit Clarity and Grade Acceptance:** Students know which courses will supply transfer credits necessary for completing degree requirements at the receiving institution and sending institutions. Additionally, they have the assurance that successful completion of the courses at the sending institution will guarantee acceptance of the credit(s) and grade(s) at the receiving institution, as long as both confirm to guidelines established within the articulation agreement.

- **Pre-requisites Resolved:** Students transferring from two-year institutions with an associate degree enter the accepting institution at a junior level status with pre-requisites resolved. Transferring students, regardless of transfer status, also know that they have the proper background to continue matriculation through the program structure at the receiving institution.
- **Program Protection:** NKU CMGT articulation agreements include provisions that stipulate that transferring students can only receive full benefit of the agreement if and when a student completes all of the requirements of the sending institution. For instance, many of NKU's agreements grant in-state tuition for out-of-state students transferring with associate degrees completed at schools with articulating agreements. If the associate degree is not completed at the sending institutions, the student must pay out-of-state tuition when transferring to NKU. This one item discourages students jumping ship from their associate degree program to the transferring school prior to completion of the associate degree, and fosters positive relationships with the sending institutions.

Table 2

Program Graduates 1995 - 2011

Graduation Year	Total No of Graduating Seniors	Native Senior Graduates	Non-Articulating Agreement Transfer Graduates	Articulating Agreement Transfer Graduates
1995-1996	10	9	1	
1996-1997	14	6	8	
1997-1998	11	7	4	
1998-1999	38	21	17	
1999-2000	21	14	7	
2000-2001	22	12	10	
2001-2002	27	11	12	4
2002-2003	32	11	14	7
2003-2004	25	8	9	8
2004-2005	31	14	12	5
2005-2006	42	13	16	13
2006-2007	66	30	15	21
2007-2008	52	17	17	18
2008-2009	48	15	17	16
2009-2010	63	19	20	24
2010-2011	83	16	22	45
Grand Total	585	223	201	161

Articulation Agreements

Northern Kentucky University (NKU) Construction Management (CMGT) program has developed sixteen (16) articulation agreements within the last 10 years. Most were developed at six area institutions with two-year associate degree programs. The majority of the articulation agreements with the two-year associate degree programs are 2 + 2 agreements. One, in Surveying, is a 2 ½ + 1 ½ agreement. Transferees into the surveying program can fulfill the requirements of Bachelors degree at NKU completely online. A list of the two-year associate's degree programs with articulation agreements with NKU is shown in table 1.

The CMGT program has also developed statewide articulation agreements with Area Technical Centers (ATC) and Career Technical Centers (CTC), secondary programs in the Commonwealth of Kentucky. These articulation agreements provide six to twelve semester hours of credit into the NKU CMGT program. High school students

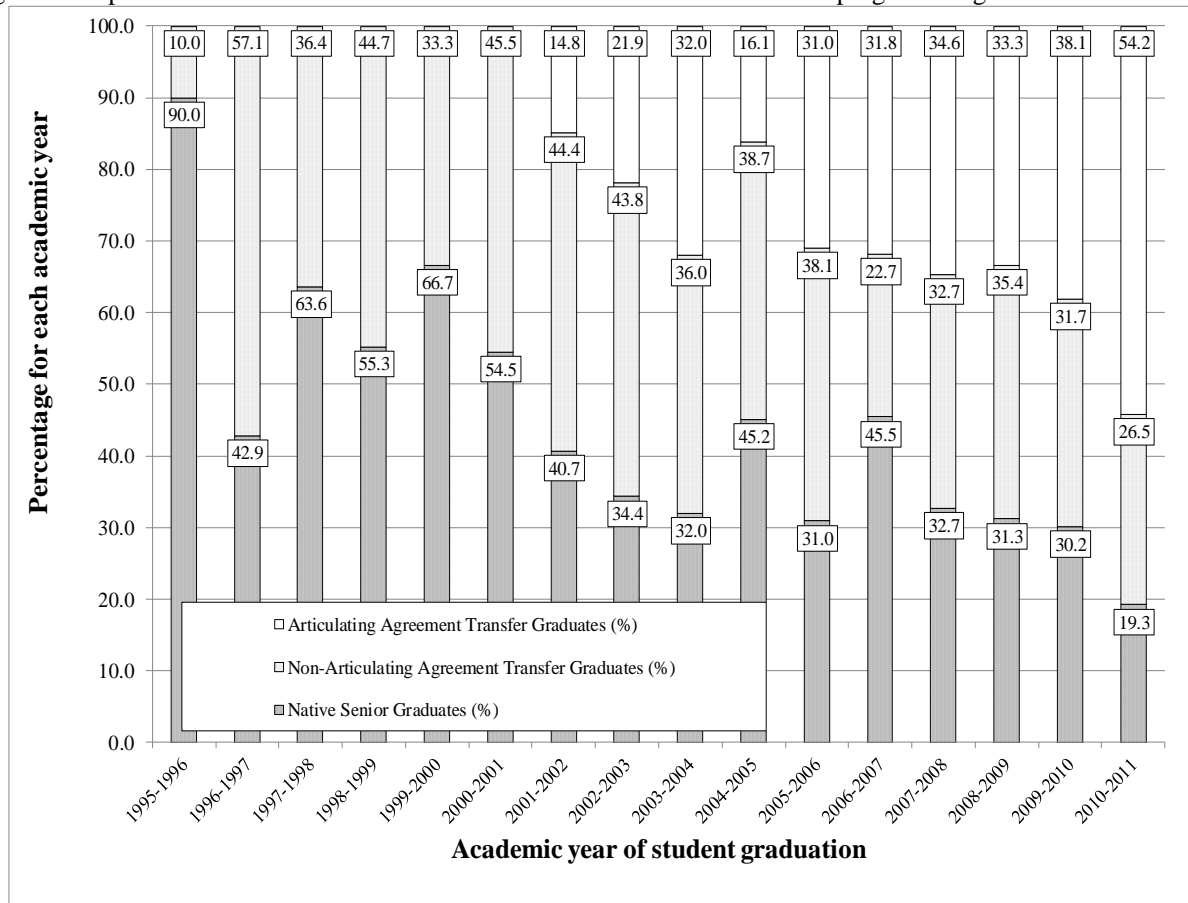


Figure 1: Graduation Percentage by Type of Student

taking advantage of this agreement must enroll at NKU without deficiencies, and must declare CMGT as their major. The articulation agreements with these programs were the first of their kind in the Commonwealth of Kentucky.

In addition, the CMGT program also provides credits for industry experience. Portfolios documenting the experience are submitted by the student and course credit is provided based on evaluations of the documented work. This provides students with experience in industry, the military, apprenticeships, and trades to benefit from their previous work history and efforts.

Program Growth Impact

Graduation rates for students majoring in construction management for the years, shown in table 2, were compiled by the Northern Kentucky University Information Technology Prism project. Note that the impact of the first articulation agreement is not seen until academic year 2001-2002, two years after its establishment (see table 1). Prior to its implementation, the program sustained a modest average graduate class size of about 11 students (table 2, the period between academic years 1995-1996 to 1997-1998). Native graduates made up, approximately, 64% of the classes at that time (see figure 1). Since NKU CMGT had no formal articulation agreements during the period, the remaining graduates were slotted as transfers from non-articulating schools.

A significant increase in graduates began in 1998-1999 academic year. This might be attributed to, in part, and precipitated by the CMGT department's deliberate decision to professionally develop its curriculum and pursue professional accreditation from the American Council for Construction Education (ACCE). ACCE's site visit for

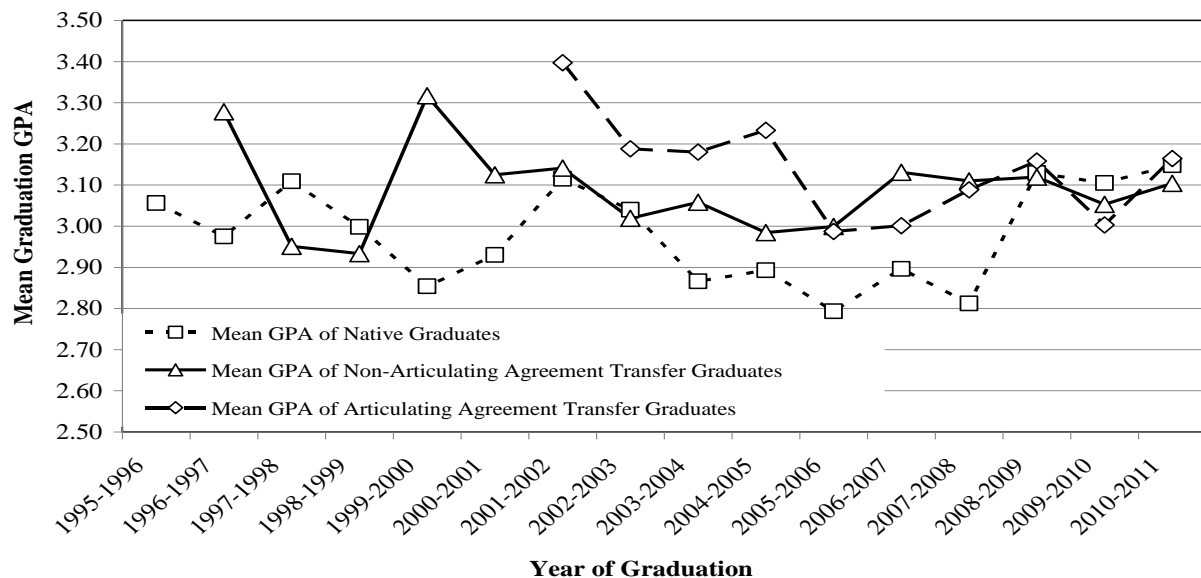


Figure 2: Overall GPA at Graduation by Type of Student

initial accreditation occurred in 1999; approval occurred in 2000. Upgrades in the NKU CMGT program to the standards required by ACCE began more than five years prior to the visit. Also, the department's intent to seek accredited status was common knowledge to other institutions and stakeholders both in and around the region. Hence, it is reasonable to assert that the decision to seek professional accreditation, and its influence on program quality, might be a factor in the growth in graduates seen between academic year periods 1998-1999 and 2000-2001. The average number of graduates between academic years 1998-1999 and 2000-2001 grew to about 27 students during this period. Native students, on average, accounted for, approximately, 56% of those graduating classes.

Academic year 2001-2002 was the first year students entering the CMGT program through articulation agreements graduated from the program. During the period comprising academic years 2001-2002 and 2004-2005, approximately 28 students graduated from the program. Of this, approximately six of the graduates, i.e., 21% of the total, were transfers from articulation agreement schools.

Another noticeable increase in the number of graduates occurs in the period between academic years 2006-2007 and 2010-2011. The average number of graduates during that period is 62, with native and non-articulating making up approximately, on average, 60% of the graduating classes during that time (31% and 29%, respectively). This is down almost 20% from the period comprising academic years 2001-2002 through 2004-2005, and illustrates the impact transfers from articulation agreement schools had had on program growth up to that point.

In academic year 2007-2008, the number of graduates which entered the program through articulation agreements surpassed the number of students who had entered the program as freshmen for the first time. That trend continued

for the remainder of the reporting period. In academic year 2010-2011, the number of graduates from articulation program schools made up more than 50% of the graduates. Note that the number of native and non-articulating program transfer student graduates in academic year 2010-2011 was the same as the average of these students graduating between academic year periods 2002-2006 and 2009-2010. This also illustrates the impact agreements with articulating schools have had on the NKU CMGT program.

Figure 2 shows the mean grade point average (GPA) of graduates completing the program. It is computed using only the courses taken at the receiving school. The mean for native students, non-articulation agreement students, and articulation agreement students is 2.976, 3.083, and 3.105 respectively. Standard deviation for each group, respectively, is 0.400, 0.445, and 0.444. Coefficient of variation for each group, respectively, is 13.4%, 14.4% and 14.3 %. Additionally, figure 2 shows that group with the high, middle, and low mean GPA varied during the study period. In aggregate, the results suggest that student outcome is not impacted by program origin, and hence, graduate quality is unchanged. This, too, supports the benefits of good, well implemented articulation agreements.

Summary

Articulation agreements the NKU CMGT department made with other institutions have significantly impacted its growth. Studies have shown that articulation agreements provide benefits to students and educational institutions. Benefits include (1) retention of students in the educational system, (2) savings of time and money, and (3) reduction, possibly, of remedial classes at receiving institutions (Reese, 2002). While the impact of the second benefit cited (i.e., money savings) might be one of the factors aiding the success of the articulation agreements NKU CMGT with, at least, one of its major supplier of transfer students (as noted, students from that out-of-state institution pay in-state tuition rates when successfully completing the associated degree program), the benefits of entering a well-structured program knowing exactly what degree completion requirements are cannot be overstated.

Articulation agreements should provide a seamless, easy, no-hassle path for students to transition from one-step to the next step without duplication (Purcell, 2006). They should show the educational path necessary for degree completion and the requirements needed to successfully complete it. Good agreements show what credit(s) will be accepted as transfer credit(s), and what is expected at each step needed for degree completion. The articulation agreements the NKU CMGT department has with the institutions it articulates with contain these elements.

However, it does not end there. The guiding philosophies discussed in this paper must be implemented. Institutions must live up to the expectations embodied in the agreements. All elements of the agreements must be honored. A deathblow to an agreement, and its effectiveness, occurs when institutions do not live up to the agreement's expectations and requirements. Periodic contact and interaction between faculty of the participating institutions, and/or formal and informal meetings to discuss the effectiveness of the agreements are all activities that foster collegiality and aid in continued successful implementation of the articulation agreement elements (Owens, Chen, Green, King, and Christy, 2010). NKU CMGT department engages in the aforementioned activities with the institutions it articulates with.

As illustrated herein, articulation agreements provided the path for ordered transfer policy development, and fostered program growth. In the last academic period, articulating agreement students made up over 50% of the graduates. NKU CMGT program's growth can be readily seen by means of the illustrations shown in table 2 and figure 1. The impact of these agreements on the program's growth is apparent.

Acknowledgements

The authors gratefully acknowledge Stephanie Streich and Andrei Grechko of the NKU Information Technology department for their assistance in extracting the raw student academic information used to prepare this paper.

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