MAKING TRANSFER HAPPEN:

Lessons Learned from a National Science Foundation- funded CPATH Community-Building Project

CSITES: Seamless Information Technology Education for Students

Background Information:

CSITES: Seamless Information Technology Education for Students (CCF 0722237) partnered four-year universities and feeder community colleges from three geographical regions: Eastern Massachusetts (University of Massachusetts Boston and Bunker Hill Community College); Northern Virginia (George Mason University and Northern Virginia Community College) and Northwestern Indiana (Purdue University Calumet and Ivy Tech Community College of Indiana). These partners have worked collaboratively within and across regions to analyze seamless transfer attributes and models for 2- and 4- year transfer within their respective institutions and to implement processes that can aid in transfer. In era of every more constrained budgets, the substantial efficiencies that can be realized by facilitating transfer between lower division community college Computer Science and IT courses and corresponding upper division university programs are not to be underestimated. As colleges come under increasing scrutiny of effectiveness metrics, methods and practices that facilitate community college transfer and university degree completion can positively impact institutional effectiveness measures by improving time to degree, persistence, and graduation. This document represents the collective learning that has resulted from this work.

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Section I. Types of Transfer

Students enroll in different types of degree programs at the community college. These programs can generally be classified into three categories:

1. General Education Transfer Degree – This type of degree is usually an **Associate of Science Degree (AS)** and is awarded for the completion of two-year curricula in a variety of pre-baccalaureate programs. The AS degree is designed for those students who plan to transfer to a four-year, degree-granting institution for the completion of a Bachelor of Science (BS) degree. Students enrolled in an AS degree program complete the general education courses required by the community college as well as the remaining credits required for graduation which are mostly general electives. The electives they choose should be matched with the lower-level major requirements at the receiving institution. This is best accomplished when the two institutions have established an articulation agreement mapping equivalent major courses at each institution. If such an agreement is in place, students graduating with an AS degree should be able to begin the four-year program as a junior.

2. Information Technology Transfer Degree – This degree is awarded for the completion of the Associate of Science (AS) degree in Information Technology (IT). This degree is designed for those who plan to transfer to a four-year college or university to complete a baccalaureate degree program in Information Technology.

3. Non-Transfer Degree – This degree is awarded for completion of a two-year curriculum that is designed to prepare the student for employment in a technical field immediately following graduation. This type of degree is sometimes called an **Associate of Applied Science Degree (AAS)** and is not designed for transfer to a four-year college or university. However, in some limited cases, there may be articulation agreements with four-year institutions for specific courses and thus, only those specific courses will transfer.

It is also worth noting that transfer is not the primary purpose of an AAS-type degree program. In these types of programs students usually take more IT classes than in an AS degree since they do not need as many general education courses. Students in these non-transfer programs take some concept-based IT classes but focus more on skill-based IT classes which are generally not transferable to a 4-year institution. Students graduating with an AS degree take more general education classes and concept-based IT classes, all of which are more likely to transfer and they take fewer skill-based IT classes. This puts them in a much better position to transfer. In addition, many 4-year institutions will

waive all their general education requirements if a student has an AS degree (as opposed to a non-transfer degree). Thus, there is less of a requirement that each non-major course taken at the 2-year institution match up with a specific non-major course at the 4-year institution.

Transfer Trends

- A significant percentage of new students previously earned credits at one or multiple higher education institutions. This includes not only traditional transfer pathways, but the increased focus of dual enrollment which allows students to take college-level courses while in high school.

- Student transfer is multidirectional. They may take a community college course after enrolling at a 4-year institution.

- Community college students tend to transfer prior to earning an associate degree.

- Students mostly transfer within their geographical region although this varies depending on location and access of "flagship" institutions.

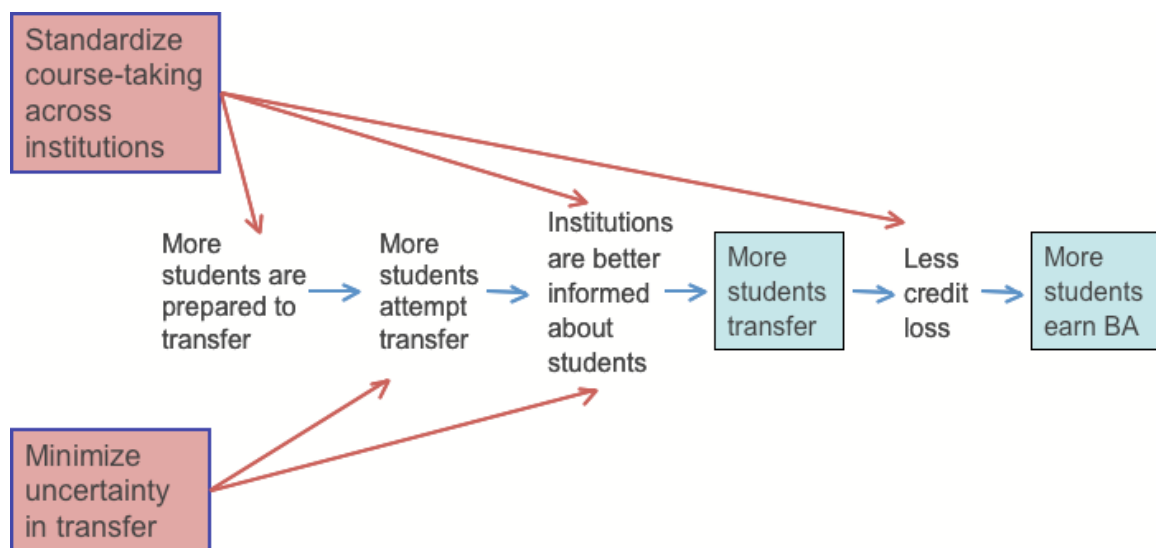## Theoretical Framework for Transfer

Figure 1. Increasing Student Transfers with Transfer and Articulation Policy: A Theory of Action (Gross and Goldhaber, 2009)

General Principles for Consideration

- State Transfer Policy is not enough; institutions must actively engage in the process

- Student success must be the major thrust and consideration

- Transfer as a shared responsibility

- Policy compatibility with academic quality and institutional integrity

- Comparability of general education program learning outcomes

- Acknowledgement of all institutional contributors when students earn degrees

- Faculty collaboration focused on common student learning outcomes

Section II. Stakeholders

A stakeholder is a person or group with a direct interest, involvement, or investment in a venture. For a transfer process to be successful, all stakeholders must be involved in the planning, implementation, and evaluation stages of the process. It is important to identify everyone who will be involved at some point. This includes *students, faculty, administrators and staff*.

The process should involve all interested students - those enrolled in an IT transfer degree, non-IT transfer degree, and non-transfer degree as well students not placed in a specific program. Faculty, both adjunct and full-time, from both the 2-year and the 4-year institution should be involved in the process. In addition, faculty from each IT concentration (ex. Database, Programming, Networking, etc.) should be included in the mix. Administrators should also be involved from both the 2-year and the 4-year institution including department and curriculum chairs and deans, and those responsible for overseeing articulation agreements and curriculum and enrollment services. Finally representatives, staff and administrators, from academic advising, admissions, and the registrar should be included as well.

Stakeholders Inter-related Relationships

The incoming students, advisors, faculty, admissions and registrar personnel must work together to review each student's incoming transcripts, determine transfer credit and next sequential sets of courses that each student is prepared

to enroll in. Coordinating the necessary tasks ensures that student success is able to be achieved and that redundant course taking by students is eliminated or at least minimized.

Convening Faculty

One of the most important keys to making transfer successful is to have accurate and sensible course mapping. This process will require a meeting of 2-year and 4-year IT Subject Matter Experts (SMEs).   Again, this meeting should be scheduled well in advance and in a central location so that maximum attendance is ensured.   Participants should include SMEs (within each IT concentration) from both institutions. This faculty will map the outcomes in each of their courses to outcomes specified in the approved SIGITE model curriculum. Participants should also include faculty and/or administrators that are responsible for creating and approving articulation agreements from each school within each identified concentration.

The timing for this meeting is critical as faculty will need ample time to complete this significant task. There is no one good time, but certainly the beginning and the end of a semester is not recommended. Prior to the meeting appropriate materials should be gathered and secured as follows:

- Catalogs from both schools

- Course syllabi from EVERY course

- Assessment plans for each course

- Textbooks

- SIGITE 2-year and 4-year model curriculum documents

In order for this process to be effective, there must be time (at least 3 hours) for discussion of specific content within each course.   By the end of the meeting, once agreements are made, those responsible for the decisions should sign a document indicating if the current articulated course agreement (if one exists) is intact or if changes must be made to maintain the agreement. Newly articulated course agreement documents should also be signed at this time.

Follow-up after the meeting should include:

- Identification of those responsible for making and reviewing any agreed-upon changes

- Establishment of a time-line for completion of any agreed-upon changes

- A plan for distribution of the new agreements, including an updated course articulation table

Identifying Content Related Documents

- Catalogs from both schools

- Course syllabi from EVERY course

- Assessment plans for each course

- Textbooks

- SIGITE 2-year and 4-year model curriculum documents

- Existing articulation documents

Convening the Broader Array of Stakeholders

Once the stakeholders are identified, they need to be brought together as a group as well as in subgroups to discuss barriers to, and enablers of the transfer process. It is helpful to get a group of students together from both the 2-year and 4-year institutions to brainstorm about their transfer experience and to offer and suggestions for improvement. Since it is not always easy to get students to come to meetings, the meeting may be scheduled over lunch or dinner and include a meal. Once input is received from students, another meeting should be organized with non-student stakeholders. This meeting will be pivotal to the success of the transfer process so it is best to adhere to the following guidelines:

- Circulate the date of the meeting well in advance (minimum 2 months) for stakeholders to reserve on their calendars.
- Schedule a meeting at a central location to encourage participation by all stakeholders. The meeting should last several hours. As with students, schedule the meeting to include lunch.
- Create the agenda prior to inviting stakeholders to the meeting.
- Distribute the agenda with the invitation and ask the attendees to think about the enablers and barriers to the transfer process from their perspective. This will give them time to think about the issues that need to be raised and will make for a more productive meeting.

Sample Discussion Topics

A suggested agenda should include the following items:

- Description of the current articulation/transfer agreements between the 2-year and 4-year institutions

- Description of types of degrees offered

- Course articulation tables

- Results of student seminar

- Discussion - have each person describe:

    - what they would consider a seamless transfer process from their professional perspective

    - what works well in the current process from their professional perspective

    - what barriers do they encounter from their professional perspective

- Discussion of resources that are available and/or needed to overcome barriers

- Summary and discussion of next steps

Section III. Constraints and Enablers

Constraints

- Accreditation constraints of Computer Science (CS)/Information Technology (IT) programs
- Industry demands that change rapidly
- Mandates by accrediting agencies – programs may be out of date due to limited resources
- Day/evening course schedules – courses and programs are not available at times when students require them
- Different funding & support for day & evening programs
- Idiosyncrasies – arbitrary decisions made about courses and programs

- Programs are under-funded

- Transfer person may be overwhelmed and have "too many hats"

- Union issues

- Advising – advisors may not understand technology programs (difference between CS & IT); not enough information transferred to students or it's the wrong information or it's too late

- Not enough IT programs at four (4) year institutions

- Rigidity – perception that "my" programs are better than "yours"

- Students – change their minds/majors in a given semester/year

- Flexibility –red tape in creating programs at Commissions of Higher Education level as well as at the campus level

- Difficult to build consensus with existing or new partners; Variety of programs at bachelor institutions makes it difficult to design a community college associate degree that fits a variety of bachelor institutions

- Lack of joint admissions programs in the technologies

- Inconsistent changing course numbering due to software requirements

- Rapid changes in technology require frequent curriculum changes – constant need to update course & program articulation agreements

- Inconsistency of credit awards when there are no articulation agreements

- Inadequate training of transfer and faculty advisors

- Reciprocal agreements aren't in place

- Tech preparation articulation credit Is not accepted at bachelor institution

- Lack of high school advising about careers in Information Technology versus computer science due to counselor/advisor workloads

Enablers

- "What if" analysis is implemented, academic planning software (what you need to reach various goals); make this available to students as a support to academics

- Cross-training of advising for all staff members involved with students

- Provide transfer counseling when students enter school

- Market/Economy – can encourage or discourage students

- Articulation can work when faculty engage with each other

- Person on campus who is proactive in being aware of Information Technology programs and can bring the right people together

- Trust – willingness of all stakeholders to work together

- Institutional support for person who is engaged in transfer activities

- Stakeholders accessibility to course & program information

- Information about courses and syllabi on-line; support to keep information current

- Database on agreements and transferability of courses

- Accrediting agencies require program & course outcomes –same in K-12 with common course and program outcomes

- Engagement at all levels –administrators, faculty, students (it takes a coordinated village to get it done right)

- Statewide transfer compacts such as those for early childhood education; set standards for programs

- Case studies of community college transfer students and making these success stories known

- Joint admissions programs enable admissions

- Reciprocal agreements are in place

- Student visits to campuses, use student "ambassadors"

Section IV. Outline of the Student Transfer Process

Typical Activities

- University receives application

- Application given to Processor to be data entered (this step is eliminated if we receive an electronic/on-line application)

- Overnight process generates a label for the file and a letter to the applicant

- A check is made to locate any pre-application materials and place them in the student's file

- File remains on incomplete shelf until all application materials are received.

- Once file is complete it is moved to complete location

- Counselor/Advisor reviews the completed file, makes a decision and assigns a communication code

- Overnight process generates a decision letter

- Files for students who are denied are moved to Central File

- Files for admitted students go to a processor who data enters the transfer credit

- A reviewer checks the transfer credit evaluation

- The transfer credits are exported, a note is made via database and a copy is mailed to student

- Overnight process moves the transfer credit data to transcripting system so that the information is viewable in the degree audit

- File is moved to Central File

Convening Transfer Students

It is important to understand first-hand what students are experiencing in the transfer process. The CSITES regions invited to students who have transferred from a community college to a four-year institution to a meeting to discuss their experience with the process. The students were asked to identify the enablers, the barriers and an ideal transfer process.

Feedback from Students

- Materials and articulation information are outdated

- Need better availability and dissemination of articulation material

- Too slow turnaround time for transfer of credit evaluation and awarding of credit

- Ongoing updating of the transfer agreement so that students do not loose credits

- Determine courses for future bridging such as Information Technology basics & career exploration, programming languages, certification preparation, and basic math and logic theory.

- Need additional funding for transfer student scholarships and to research and follow transfer student with regard to issues of retention, course completion, and graduation goals.

- Generate community awareness of the opportunities of CPATH and encourage students to continue to reach their educational goals

- Continue recruitment to encourage more students to transfer to four year institutions.

- Increase Awareness via:

  o Develop faculty and staff relationships between personnel at both institutions via Use list serve/communication with Jr./Sr. faculty, staff and administrators. Develop a transfer center and coordinators at each campus. Improve website access for transfer information.

- Increase Participation of Women and Non-Traditional Students by:

  o Develop mentoring program in <u>STEM</u> related fields. Assist older students returning to college. Use bridge courses between high school and college – critical thinking is an important skill that students need. Consider options for alternative scheduling. Delivery of instruction needs to be flexible to help meet various needs of the students. Class room size, maximum of 20; make use of Teacher's Aides

- Improve Job Market Awareness Through:

  o Recruitment of Workforce Economic development centers to collect demographic information and skill needs from local, small and large businesses. Increase communication in disseminating workforce for all job sector needs (health industries, government, schools, customer services) on how our computer technology education programs are on target for meeting those needs. Invite local employers to classrooms and college events to educate stakeholders as to what jobs are available, what skills are needed and where they are located to encourage students to stay in the area to work.

- Early intervention Activities to:

  o Educate stakeholders to change old myths about outsourcing technology jobs. Program Chairs distribute current job labor market information in a timely manner and on a regular basis to college advisors, staff, students and parents. Continue inter-college related communications via conferences and virtual meetings. Identify transfer students as soon as possible during the admission process or at the time of first semester enrollment to advise and enroll in transfer program courses. Deliver transfer options in the beginning

of the education experience and at end before graduation. Continue with cooperative recruitment activities.

- Increase Community Outreach to Include:

  o Relationships are key to success, which will foster communications among college personnel, secondary schools, parents, students, and local employers. Make transfer and career information more readily available electronically and on the web for easy access and distribution. Improve program advising to provide accurate information regarding careers and employment outlook.

Student-Focused Interventions

Ivy Tech Community College conducts their annual graduation ceremony in May. As faculty and students return from Spring Break week typically held during the 2nd week in March, the different campus offices of Student Affairs convene a Graduation Festival. The faculty encourage their expected graduates to participate. At this event, students are able to purchase graduation & honor society regalia, meet with Career Office advisors, and purchase Tickets for the annual Student Government Association Graduation Banquet. This event provides a unique opportunity to highlight further education options. So while the college staff members plan throughout the year to have the vendors in place to prepare for graduation events they also work with recruiters from four year institutions to provide answer questions students may have regarding transfer.

Section V. What Worked: CSITES Transfer Best Practices

- Obtain support from college administration and executive teams from the start

- Identify stakeholders early on in the process & convene on a regular basis during the planning process

- Obtain and review syllabi and course descriptions to determine compatibility

- Provide timely, accurate transfer and employment outlook information

- Conduct ongoing collaborative activities for advising staff and for students at both institutions

- Develop an modularized course at the receiving institution to determine and remediate deficiencies efficiently and effectively

- Use both articulation (course-by-course) and "block transfer" (full program) in order to achieve maximum student benefit

Section VI. Sustainability

- Have on-going scheduled meetings with corresponding personnel from both institutions

- At the end of each term (semester) invite selected transfer students and other stakeholders meet to discuss and determine what opportunities there are to improve the transfer system

- Develop metrics for use in comparative analyses in an on-going scheduled manner

Section VII. Templates

- Examples might include:

  o Course by Course Transfer Crosswalk (Template)

  o Regional Summit Agenda (Sample)

  o Presentation (Sample)

  o Brochure (Sample)

Sample 1. Course by Course Transfer Crosswalk (Template)

[SENDING INSTITUTION] A.S. IN *X* FOR TRANSFER TO [RECEIVING INSTITUTION'S] B.[*X*.] IN [NAME OF PROGRAM]								
[Sending Institution] Equivalency			**[Receiving institution] Equivalency**			**Required Additional Courses for the B[x] Degree**		
Course #	Course Title	Credits	Course #	Course Title	Credits	Course #	Course Title	Credits
Total Credits		0			0			0
Total Credits to Complete Baccalaureate Degree								0
Total Credits for Native Students to Complete Baccalaureate Degree								

Sample 1. Course by Course Transfer Crosswalk (Example)

GENERAL EDUCATION REQUIREMENTS		4-Year Equivalent		
15 Credits				
College Writing				
ENG111	College Writing I	ENGL101	Freshmen English I	
ENG112	College Writing II	ENGL102	Freshmen English II	
Individual & Society				
GOV101	Gov & Politics in US	POLSCI102 (SB)	Gov & Politics of the US	
GOV103*	State & Local Politics	POLSCI338	Massachusetts Politics	
PSY101	Prin of Psychology	PSYCH100 (SB)	Introductory Psych	
PSY107	Group Dynamics	PSYCH elective (SB)	Elective	
PSY131*	Psych of Pop Culture	PSYCH elective	Elective	
SOC101	Prin of Sociology	SOCIOL101(SB)	Intro to Sociology	
SOC109	Cult Anthropology	ANTH106 (SB)	Intro to Cultural Anthropology	
World View				
ECO201	Macroeconomics	ECON101 (SB)	Intro to Macroeconomics	
ECO202	Microeconomics	ECON102 (SB)	Intro to Microeconomics	
GEO101*	World Regional Geography	EEOS102	World Regional Geography	
HIS102	Hist of Western Civ II	HIST112 (HU)	Modern Western Civilization	
HIS111	World Civilzation I	HIST elective (WC)	Elective	
HIS112	World Civilzation II	HIST114 (SB)	Modern World History II	
HIS151	US History I	HIST165 (HU)	American History Before 1877	
HIS152	US History II	HIST166 (HU)	American History Since 1877	
PHL111	World Religions	PHIL elective (WC)	Elective	
PHL113	Religions of Middle East	PHIL elective (WC)	Elective	
VMA111*	Intro to Mass Media	COMSTU elective	Elective	

Sample 2. Regional Summit Agenda

CPATH CSITES Regional Meeting
Purdue University Calumet
October 28, 2008
Agenda

8:30-9:00AM	Registration
9:00-9:20AM	Welcome
	Professor Chuck Winer
	Chancellor Howard Cohen
	Dean Niaz Latif, School of Technology
9:20-9:35AM	Background of Ivy Tech Program
	Gina Rue, Program Chair-Ivy Tech
9:35-9:55AM	Keynote Speaker
	Dr. Kathleen Tobin, Professor and Member of the
	Indiana Commission of Higher Education
9:55-10:05AM	Break
10:05-10:45AM	Student Speakers
	Eric Pearman, A. S. Ivy Tech – Current PUC
	Student in B.S. Program
	Andrea Leydet, Current PUC Student in B.S. Program
10:45-10:55AM	Break
10:55-11:25AM	Business Technology Speakers
	Richard Shields, Business Development Manager-
	Chester Technologies
	Joel Giger, Lead Engineer-Cimcor, Inc
11:25-11:45AM	Small Breakout Session 1
	(Topics: Communication between all groups)
11:45AM-12:30PM	Lunch and Plenary Speaker: R. Keith Howard, Vice Chancellor
	Student Affairs-Ivy Tech
12:30PM -1:00PM	Feedback from Breakout Session #1
1:00PM -1:30PM	Small Breakout Session 2 (Topics: Course Articulation, Student
	Issues)
1:30PM -2:00PM	Feedback from Breakout Session #2
	Wrap up and Next Steps

Section VIII. References

Finkel, Ed, *Making Transfers Academic* (2007). Community College Week, Tuesday, December 18, 2007, http://www.ccweek.com/news/templates/template.aspx?articleid=197&zoneid=7

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Southern Regional Education Board (2007), *Clearing Paths to College Degrees: Transfer Policies in SREB States.* http://publications.sreb.org/2007/07E06_Clear_Paths.pdf