A study was conducted to examine relationships between community college transfer and curricula by analyzing course offerings at the remedial and advanced levels. The study analyzed the Center for the Study of Community Colleges’ National Curriculum Database, containing data on 1991 liberal arts course offerings for 164 representative community colleges, as well as the National Transfer Assembly Database, containing 1991 transfer rates for 155 community colleges. Each recorded course was grouped by discipline and categorized as remedial (below college proficiency and not carrying college transfer credit), standard, or advanced (carrying a prerequisite in the same or related field as a condition for enrollment). Study findings included the following: (1) remedial course offerings accounted for 11% of liberal arts curricula in the community colleges; (2) two-thirds of the remedial courses were English offerings; (3) advanced course offerings accounted for about 21% of the liberal arts curricula, with humanities constituting the largest portion at 22%; (4) of schools that overlapped between the two databases, only one offered more than 40% of the curriculum at the remedial level, while seven schools offered more than 40% at the advanced level; (5) 37% of ESL classes were offered at the advanced level and 63% were standard; (6) pre-collegiate, freshman, and sophomore stratifications in the curriculum were unrelated to transfer; and (7) neither advanced course offerings nor articulation agreements alone appeared to strengthen the transfer function. A review of the literature on developmental education, the community college sophomore curriculum, transfer, and articulation is included. Contains 14 references. (MAB)
Stratified Course Offerings:
How Curriculum Structure Relates to Transfer

by

Melissa Mellissinos

STRATIFIED COURSE OFFERINGS: 
HOW CURRICULUM STRUCTURE RELATES TO TRANSFER

Melissa Mellissinos

INTRODUCTION

It is estimated that nearly 20% of baccalaureate degree recipients begin their post-secondary education at a community college. They complete freshman and sophomore level classes at a community college then transfer to a four-year college or university to complete their undergraduate education. Some of these college graduates are "traditional" college students when they matriculate at the community college - high school graduates in their late teens and early twenties. But increasingly, many community college students are "nontraditional." Their demographic and academic backgrounds are diverse.

"Nontraditional" students differ from "traditional" students in age, academic preparation, attendance patterns, socioeconomic status, culture and many other attributes. Nontraditional students are older, averaging about 28 to 29 years of age. They often lack the academic preparation and time management skills essential for success in college, usually attend part-time and come from lower socioeconomic backgrounds.

Since the 1950's, community college student demographics have shifted from primarily "traditional" students to primarily "nontraditional" students. These demographic changes stem from the open admissions policies which are now effective in almost all American two-year colleges. Open
admissions, also referred to as "open access," reflects the commitment of community colleges to extend educational opportunities to any student who can benefit. As community colleges began to expand access, adjustments to the institutional mission became necessary to accommodate the "new students."

Community colleges share a common ideal in their mission statements—comprehensiveness. Eaton (1990) refers to "comprehensiveness" as "ensuring that all major elements of the community college mission remain intact - in some combination of offerings." This usually includes occupational and transfer education, continuing adult education and community service. However, since community colleges serve different communities, the degree to which specific institutional goals are emphasized is unique to each campus.

Each community college interprets and demonstrates "comprehensiveness" individually. Student characteristics and college location affect curriculum and student services. For example, the entering abilities of students determine the levels of course offerings. The number of incoming students underprepared for college-level classes strongly influences the proportion of remedial course and support services because underprepared students typically require more specialized attention to succeed. Also, colleges that serve a large non-native English speaking community usually offer ESL (English as a Second Language). Community colleges situated near four-year colleges and universities are more likely to offer transferable courses throughout the curriculum, especially those with robust articulation programs.

Developmental Education. As high school standards erode and community colleges become more accessible to nontraditional students,
more students entering college lack basic skills necessary for success in college-level courses. Do these underprepared students belong in college? While this is a longstanding area of debate, colleges continue to offer developmental coursework and support services to remediate academically disadvantaged students.

Students entering college with weak basic skills is not a new phenomenon. The presence of underprepared students dates back to the nineteenth century. Institutional records and various student and faculty publications contain evidence that American colleges and universities admitted students far below college-level standards. Faculty and administrators complained about the same academic deficiencies that they complain about today. Underprepared students lacked spelling, writing, arithmetic and study skills. In addition, admission and remediation of these underprepared students was controversial as it is today (Brier, 1984).

The presence of underprepared students in college is not limited to two-year schools. The need for developmental education extends beyond the community colleges. The decline of high school academic standards has resulted in four year colleges admitting students who require some remediation. Even Ivy League universities whose freshmen comprise some of the top high school graduates in the United States must offer remedial courses, mostly in basic writing.

However, senior institutions generally do not feel that remediation is their responsibility. They prefer to minimize basic skills classes to maintain their credibility as higher level educational institutions. This leaves community colleges to serve the increasing majority of underprepared college students.
The question of credibility arises with community colleges as well. McGrath and Spear (1991) point out that "the transfer function originally served to establish the academic legitimacy of the community college." Some educators believe that community colleges serving a large underprepared student population may not transfer students successfully. Remediation is resource-intensive and costly. Developmental students require more individualized instruction and support services than well-prepared students. The assumption is that students lack the skills, not the ability to perform at college level. Committing resources to developmental education could lead to de-emphasis of advanced coursework. But this is debatable. Can a community college that serves a developmental student population effectively remediate students so that they can succeed in college-level courses?

Remediating underprepared students means helping them develop basic skill in reading, writing and computation so that they can become functionally literate. One way to remediate students is to place them into English and mathematics classes until they develop skills necessary for college-level courses (or until they become functionally literate). This is called "tracking." Another method, called "mainstreaming," is to teach basic skills concurrently with other college-level material. "Tracking" versus "mainstreaming" is a controversial issue and community colleges are experimenting with programs to determine which method more effectively increases student success.

English and mathematics, which develop skills fundamental to other disciplines, comprise nearly the entire remedial curriculum. Entering students who are academically underprepared for college-level work are usually "tracked" into English and mathematics, where they must demonstrate a functional level of proficiency before they can enroll into other subjects.
Ideally the student will develop basic skills and progress into college-level courses which carry degree or transfer credit.

Some educators believe that remedial classes are temporary holding tanks for underprepared students who cannot succeed in college-level courses. They expect students to eventually drop out ("cool out") rather than persist. But students can benefit from remediation and proceed to transfer or accomplish another educational goal.

Developmental programs in community colleges usually begin with a single preparatory course, usually in writing and usually in response to high attrition. Franke (1992) states that "courses that are themselves preparatory generate even more preparatory courses, and the single developmental course evolves into a course sequence." But, as stated above, those courses occur almost entirely in English and mathematics. Richard A. Donovan (Deegan and Tillery, 1985) encourages collaborative programs and curricular partnership in developmental education. He recommends creating interdisciplinary courses that "promote critical thinking, synthesis and independent learning" to complement basic skills instruction. "Mainstreaming" developmental students would allow them to participate in college level courses earlier than they otherwise might have.

The Sophomore Year. While educating underprepared students in basic skills, community colleges also specialize in freshman and sophomore curriculum for students who plan to transfer. Students planning to transfer may or may not be eligible for admission to a senior institution upon entering the community college. But they are promised the opportunity to complete lower division coursework at the community college. Can a student complete the freshman and sophomore years at a community college and transfer to a four-year
colleges or universities?

Historically, community colleges existed to facilitate the transition from high school to a four-year college or university. The community college curriculum was deliberately identical to lower division university curriculum, enabling students to receive the first two years of their undergraduate education at a community college. But two significant factors altered the educational orientation of community colleges. During World War II, colleges began to include vocational education to support new industrial efforts. And soon after, they began admitting students who were previously academically unqualified for college. This shift in priorities impacted the institutional missions resulting in a more varied curriculum.

Although community colleges did not drop the transfer function from their missions, it was augmented by other community and educational obligations. Limited resources and multiple objectives force decisions about course offerings. Community colleges still struggle with balancing the curriculum to support stated goals in addition to transfer. By offering more occupational and developmental courses, some educators are concerned that limited resources may hamper the ability of community colleges to offer enough sophomore level liberal arts classes in support of the transfer function.

Course availability is a major variable influencing who actually transfers and when. According to Richardson and Bender (1987), community colleges not offering advanced courses regularly and at convenient times encourages students to transfer early. They state that Asians are most likely to transfer early due to "paucity of advanced science and math courses at community colleges."
TRANSFER AND ARTICULATION

Conditions for student transfer from a two-year school to a four-year college or university depend on student academic preparation and university entrance requirements. Some students are university eligible when they enroll at a community college and simply want to complete degree-applicable courses before transferring. Others, who are not university eligible, must often succeed in a specific community college program before transferring. Articulation between two- and four-year schools detail guidelines for transfer candidates and transferable courses.

Transfer. Although community colleges may appear to be shifting emphasis from liberal arts to vocational (or occupational) education (Brint and Karabel, 1989), transfer remains high priority and is furthermore gaining status. Community college mission statements typically claim transfer education as a primary goal of the institution. However, occupational education and transfer education are not mutually exclusive aspirations. Community Colleges can no longer assume that occupational program students are less likely to transfer than liberal arts students (McGrath and Spear, 1991). To enable transfer community colleges must provide curriculum and student services to promote and support the transfer function.

Concern is mounting that transfer from community colleges to four-year colleges and universities is on the decline. In a national longitudinal study of 1972 and 1980 cohorts, Grubb (1990) found that transfer has decreased. The actual numbers have decreased and the proportions have decreased. This conclusion holds for various demographic groups and students with diverse academic experiences. Grubb suggests that the changing
background of students and weaker preparation in high school are among contributing factors to the decline in transfer, but acknowledges that the decline cannot be attributed to any single cause.

Eaton (1990) agrees that transfer is a concern, but detects resistance in emphasizing transfer education from some community college educators. Eaton proposes three myths about transfer. The second myth is entitled "The Myth of Transfer as Elitism." This myth portrays transfer education as impractical because it implies lofty aspirations for the majority of community college students. It assumes that most of them are either occupationally oriented or interested in a terminal degree or certificate merely at the community college level. It is thus believed that emphasizing transfer education would raise institutional standards, consequently denying access to some groups of students.

Community colleges purport to be "open access" institutions of higher learning. They are "America's second chance" for students who may have performed poorly in high school or even college. They provide education and services to adults regardless of age, ethnicity, native language and academic preparation. In particular, community colleges offer remedial education to students who are underprepared for enrollment in college-level courses. Colleges focusing on transfer education and thus raising institutional academic standards may be forced to limit access to students who are not academically at college level. Namely, those students requiring remedial education.

A community college's activities can demonstrate its commitment to transfer through campus activities and attitudes. Thus in support of enhancing the transfer function of the community college, schools are developing programs to improve articulation between two-year and four-year colleges
Articulation. Articulation between community colleges and four-year colleges and universities provides the framework that connects curriculum and transfer. The colleges formally agree which community college courses carry transfer credit at the senior institution. In some cases, guidelines for articulation are mandated or recommended at the state level. But Turner (1992) discovered that state-level guidelines do not guarantee standardized articulation within a state.

Turner (1992) conducted a case study of the transfer process for Hispanic and non-Hispanic white students in three California community colleges. California's Master Plan for Higher Education assumes that transfer work at any community college can transfer to any four-year program within the state. But in practice, Turner found that articulation and transfer are local issues driven by informal networks. Articulation occurs *between* a two-year and a four-year college. It is generally based on historical transfer patterns and perpetuates itself. Community colleges that notoriously transfer significant numbers of students have strengthened communications with the four-year schools they feed into, and may be more likely to attract interest in articulation from other four-year schools.

There is general agreement that articulation and transfer are directly related. Otherwise college leaders would not respond to declining transfer by developing articulation programs. However, articulation agreements are administrative arrangements and may not entirely reflect institutional efforts to support transfer. A study of curriculum and transfer may provide insights beyond the scope of formal articulation.
METHODOLOGY

The proceeding analysis is derived from two databases compiled by the Center for the Study of Community Colleges. The National Curriculum Database (1991) contains liberal arts course offerings for 164 representative community colleges and the National Transfer Assembly Database (1991) contains transfer rates for 155 community colleges. Community colleges occurring in both databases comprised the sample for this study. The methodology for developing the curriculum database is presented separately. However, some specifics need to be noted here.

Each recorded course was grouped by discipline and categorized into three classifications: remedial, standard and advanced. This study concerns specifically the remedial and advanced categories. "Remedial" applies to any compensatory, developmental or remedial course which is below college-level proficiency and does not carry college transfer credit (Cohen, 1992). ESL was not categorized as remedial.

"Advanced" refers to courses which carry a pre-requisite in the same or related field as a condition for enrollment (Cohen, 1992). They may carry transfer credit. Note also that "standard" courses may also carry transfer credit.

Courses with equivalent names or within a sub-subject area may fall into different categories depending on the school. For example, general psychology may classify as "standard" at some colleges and "advanced" at others. In either case the course might be transferable, but hold different requirements for admittance. Even in more structured disciplines such as mathematics, equivalent courses may be categorized differently. Pre-algebra
is sometimes "remedial" and sometimes "standard." Four percent of community colleges in the curriculum database offer pre-algebra in the "advanced" category. Furthermore, equivalent courses at different schools do not necessarily carry equivalent transfer credit.

Transfer data were obtained from a project initiated to help colleges define and establish their transfer rates. A national sample of college presidents with at least 20% nonwhite enrollment were invited to participate, however the transfer database includes a few schools with fewer than 20% nonwhite enrollment. At the expense of providing requested data, many could not or would not participate (Brawer, 1991). However, for the community colleges in the Transfer Assembly, transfer rates are consistently defined.

Fifty-two colleges occurred in both databases. Most of these "overlap colleges" are large (over 6,000 students), although they range in size from 402 to 43,880 students. The average unduplicated enrollment is 7,542 students with a standard deviation of 7,409 students.

California has the largest representation (33%) in the "overlap colleges," followed by Texas (17%) and Illinois (12%). Although both databases have broad geographic representation, California, Texas and Illinois have the most transfer history in community college education.

ANALYSIS AND FINDINGS

The purpose of this study is to examine relationships between transfer and curriculum by analyzing course offerings at the remedial and advanced levels.
Remedial course offerings account for about 11% of liberal arts curriculum in the community colleges. English dominates the remedial curriculum with more than two-thirds of remedial course offerings, primarily in English Composition and Reading. The remainder of remedial course offerings are mathematics, mainly in Pre-algebra and Introductory Algebra. Only about 1% of remedial course offerings occur in other disciplines.

Various statistical methods were used to understand the relationship between remedial curriculum and transfer. No clear relationship between the percent of remedial course offerings in the liberal arts and transfer was found. The percent of remedial course offerings is uncorrelated to transfer rate and holds no predictive value. A chi-squared test revealed that community colleges with a large percent of remedial course offerings did not have lower transfer rates, as has been suggested by some educators. However, the findings indicate that community colleges with more than half the remedial curriculum in English tend to have lower transfer rates than schools that offer more remedial math.

Advanced ("sophomore level") course offerings account for about 21% of liberal arts curriculum in the community colleges. Most of the advanced classes are in humanities (22%), followed by English (19%), science (18%), fine and performing arts (17%), mathematics/computer science (17%) and social science (7%).

Advanced liberal arts curriculum also appeared unrelated to transfer rate. Community colleges offering a greater percentage of advanced liberal arts course offerings do not have higher transfer rates. Nor do schools with high concentrations of advanced courses in specific disciplines. Hybrid disciplines were created by combining related disciplines, but provided no addi-
tional insight into the relationship between curriculum and transfer.

The distribution of remedial, standard and advanced course offerings varies significantly. In the overlap colleges, only one school offered more than 40% of the curriculum at the remedial level, while seven schools offered more than 40% at the advanced level. The percent of remedial course offerings is uncorrelated to the percent of advanced course offerings, and they are both negatively correlated to college size.

Larger schools show less differentiation in the course levels. They offer more standard (freshman of "college-level") courses and less remedial and advanced courses. But more differentiated schools do not differ in transfer rates from the more homogeneous schools that offer primarily college-level courses. Furthermore, schools with skewed advanced course offerings (compared to remedial) do not differ in transfer rates.

**English as a Second Language.** Some educators view ESL as remedial while others believe that it is a foreign language. In the above analyses, ESL was handled as a foreign language and the ESL courses fell into the standard and advanced categories based on the coding criteria. Since many ESL students are "tracked" rather than "mainstreamed," analyses were conducted to determine whether reclassifying ESL as remedial affected the above conclusions.

Thirty-seven percent of ESL classes are offered at the advanced level and the remainder are standard (63%). When ESL is classified with remedial curriculum, the percent of remedial course offerings in the liberal arts increases somewhat significantly to 17% and the percent of advanced course offerings decreases to 19%.

The percent of nonwhite students is negatively correlated 31% with
transfer rate. And although nonwhite schools offer more ESL, regrouping ESL with remedial curriculum does not significantly alter the relationships between remedial and advanced course offerings and transfer.

**SUMMARY**

These findings indicate that pre-collegiate, freshman and sophomore stratifications in the curriculum structure are unrelated to transfer.

Schools with more remedial curriculum "track" underprepared students which requires additional time until the student can become transfer eligible. Remedial education is more resource intensive and provides more opportunity for underprepared students to "cool out." But there is no conclusive evidence that emphasized remedial education is inhibiting transfer. On the other hand, schools offering minimal or no remedial curriculum may be "mainstreaming" underprepared students into college-level courses. This also appears to have no impact on transfer.

The prominence of sophomore ("advanced") courses varies widely among community colleges. Apparently, a student has more opportunity to complete lower division baccalaureate coursework and transfer successfully when adequate advanced course offerings are available. Yet this is not reflected in transfer rates. Since transfer rates include students who have completed a minimum of 12 units at the community college before transferring, it is possible that students who cannot take sophomore classes at the community college may transfer early. Also, sophomore level classes are only transferable if they are specified in an articulation agreement between the two-year college and the four-year college or university selected by the
Articulation helps two-year and four-year colleges establish course equivalencies for transferable courses. But they only effectively occur pairwise between institutions and do not guarantee course availability and accessibility. A community college may offer many sophomore classes not specified in its articulation agreements. Conversely, it may specify a comprehensive transfer curriculum without supporting it through course offerings. In either case, it could result in a decreasing number of students persisting through the sophomore year.

Advanced course offerings alone do not appear to strengthen the transfer function and neither do articulation agreements. Coordination of both efforts may be required to enhance transfer.

Community colleges accept the challenge ofremediating underprepared students while "specializing in freshmen and sophomores" (Edman, 1992). Each college implements this challenge to meet the specific needs of the students and community. Generalizations about remedial and sophomore education relating to transfer cannot be made without considering other factors such as articulation, student characteristics and other student services.
REFERENCES


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STRATIFIED COURSE OFFERINGS:
HOW CURRICULUM STRUCTURE RELATES TO TRANSFER

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by
Melissa Mellissinos
Los Angeles Trade-Technical College
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STRATIFIED COURSE OFFERINGS

CAN COURSE LEVEL OFFERINGS PREDICT TRANSFER SUCCESS?

CORRELATIONS (N = 52)

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<th>%REMEDIAL</th>
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<th>%ADVANCED</th>
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- Higher enrollment community colleges offered less stratified, mostly "standard" curriculum.

- Transfer rate is uncorrelated with percent of liberal arts curriculum in each stratification - remedial, standard and advanced.

- Multiple linear regression techniques did not reveal a predictive relationship between course stratifications and transfer rate, even when other variables were accounted for (e.g., college size, percent nonwhite).

- A non linear relationship was also not apparent.
REMEDIAL CURRICULUM

DO COMMUNITY COLLEGES SERVING A LARGE DEVELOPMENTAL POPULATION TRANSFER STUDENTS EFFECTIVELY?

- REMEDIAL COURSE OFFERINGS ACCOUNT FOR 11% OF LIBERAL ARTS CURRICULUM.

- TRANSFER RATES DID NOT DIFFER FOR SCHOOLS ABOVE OR BELOW THE AVERAGE PERCENT OF REMEDIAL COURSE OFFERINGS.
ADVANCED CURRICULUM

DO INCREASED SOPHOMORE COURSE OFFERINGS IN COMMUNITY COLLEGES FACILITATE TRANSFER?

- ADVANCED COURSE OFFERINGS ACCOUNT FOR 21% OF LIBERAL ARTS CURRICULUM.

- TRANSFER RATES DID NOT DIFFER FOR SCHOOLS ABOVE OR BELOW THE AVERAGE PERCENT OF ADVANCED COURSE OFFERINGS.
ESL RECLASSIFIED

WHEN ESL IS GROUPED WITH DEVELOPMENTAL CURRICULUM, IS THE TRANSFER RELATIONSHIP STRENGTHENED?

- English-as-a-second-language was classified with foreign languages.
- 63% of ESL course offerings are "standard" and 37% are "advanced."
- When ESL becomes "remedial," the percent of remedial course offerings in the liberal arts curriculum increases to 17% (from 11%) and the percent of advanced course offerings decreases to 19% (from 21%).

New correlations (N = 52)

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- "Remedial" ESL does not strengthen relationship between course stratifications and transfer.