2004 AIR DISSERTATION FELLOWSHIP PROPOSAL

Retention and Persistence of Undergraduate Students at Public Urban Universities

Data Sets of Interest: 1: National Postsecondary Student Aid Study
2: Beginning Postsecondary Students

Grant Amount Requested: $15,000

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Section 2: Project Summary

The one year retention and persistence to a degree of first time full time (FT/FT) college students has been studied at length. However, these retention studies tend to deal with retention and persistence as a "one size fits all" proposition. While public urban universities have been organizing themselves into a number of consortia to both identify the differences in their missions versus those of their other public university counterparts, and to stress differences in the populations the public urban universities tend to serve, research into what those differences might mean for both retention/persistence rates has not been as actively pursued.

In a recently conducted study at the University of Massachusetts Boston, we found that our students' retention behavior differs from what would be expected according to retention literature in the areas of race/ethnicity, SAT scores, and institutional commitment.

Key questions are whether this may be representative behavior for public four year large city higher education institution populations in general, and whether there are differences in those populations that cause this to be so. Preliminary research supported by a fellowship to the AIR/NCES/NSF Summer Data Policy Institute in June 2003 indicates that race/ethnicity and Verbal SAT scores may be acting as proxies for immigration status and the use of a home language other than English at these public four year large city institutions. More in depth study of the NPSAS data will be done to identify differences in the populations at these large city institutions when compared to all other public four year institutions, what these differences might mean in terms of institutional commitment, and consequently, what impacts immigration and language status may have on retention and persistence. BPS data will be used to construct and test models of retention/persistence/and attainment for large city institution populations compared to institutions outside of the larger cities.

Section 3: Table of Contents

Section 4: Project Description

Section 4.a: Problems and Variables

Section 4.a.1: Problems

The University of Massachusetts Boston is a single campus entity that is located at the edge of a city that anchors a metropolitan area. It is a part of a multi-campus state university system within a state higher education system that also includes state and community colleges. Over the past 20 years, the university has experienced marked changes in the demographic makeup of its student body. In the fall 1980 semester, white non-Hispanics made up more than 83% of the known race undergraduates. By fall 2000, that percentage had fallen to under 58%. Not all minority groups increased their representation at the same rate. Black non-Hispanics increased their representation from 8.8% to 14.7%, Asian/Pacific Islanders increased from 1.4% to 12.2%, Hispanics of all races increased from 2.9% to 6.7%, and non-residents increased from 3.4% to 7.5% of the undergraduate student population. Much of the growth of the Black non-Hispanic group appears to come from immigrant populations, with the Boston area having a large Haitian American population. Members of these groups are less likely to be native English speakers than their white non-Hispanic counterparts.

Early in the fall 2001 semester, the university began a study of the retention of FT/FT freshmen who had entered the university in the fall semester of 2000. Overall, these students made up only about 15% of the new students the university enrolled in AY 2000-2001. However, they are particularly important because reports to the U.S. Department of Education (DOE) Integrated Postsecondary Data System (IPEDS) regarding one-year retention and four, five, and six year graduation rates are based upon their behavior. Reporting of these rates was instituted in order to make colleges and universities more accountable. However, they don't take into account

differences in individual institution's populations or missions. As Astin noted, "… institutions with higher retention rates are presumably doing a 'better' job of retaining their students than are institutions with lower rates. In short, the prospective student is being encouraged to avoid institutions with low rates and to prefer institutions with higher rates" (1993). Thus, an institution's retention rate was set as a benchmark for the quality of the higher education it offered, regardless of whether it actually served the needs of its students.

The UMass Boston retention study helped to identify a number of issues and concerns. As I analyzed the results, I found that a number of factors that are theorized to affect retention in the retention literature either have little impact on this group of public urban university freshmen, or in some cases, have an effect that is the opposite of that which is theorized. Among these factors were race/ethnicity, Verbal SAT scores, and a number of variables that reflect institutional commitment. At least part of these differences may well be related to our status as a public urban university where race/ethnicity, immigration and language status, Verbal SAT scores, and institutional commitment may all be related.

I decided to explore this issue on a larger scale, and have used the NPSAS:2000 data set to explore differences in the populations of public large city four year institutions compared to other public four years with particular attention to language and immigration issues. I intend to do further work concerning retention, persistence and attainment using the BPS data set.

Section 4.a.2: Variables

NPSAS:2000 includes a number of variables that allow exploration of the differences between public four year institutions and other public four year institutions. I have used a number of them in an initial analysis of the NPSAS:2000 data. Among the most important variables used are:

LOCALE is used to identify institutions located within the boundaries of cities with populations of 250,000 or more. It is used with **CONTROL** and **AIDLEVL** variables to identify public four year institutions by location. “Large City” indicates a public four year in a city with a population of 250,000 or more.

IMMIGR is used to construct the variable “Immigrant”, by which I mean students who are Resident Aliens, Foreign Born Citizens, or Citizens with Parent(s) who were foreign born. I compared these to all Other Citizens. I did not include International Students in any of the analyses or report them in any of the summary table.

RACE1 has Hispanic/Latino as a separate category and is used to provide a race/ethnicity description that does not overlap the categories.

NBLANG is used to construct a variable that identifies English language usage. The NPSAS question asked what language was spoken most often in the student’s home when he or she was a child. I compared those who spoke English in the home as children to all Other Language speakers. However, I eliminated all of the students who indicated American Sign Language or another sign language (a single response category in the DAS) as the language used most often in the home from the analysis, because I cannot tell the cultural base for the sign language.

The initial results are important. I first looked at the degree of racial/ethnic diversity in the Large City institutions compared to all others by using the NPSAS RACE1 variable. I found that the Large City publics are in fact, more racially/ethnically diverse than other public four year institutions, as may be seen in Table 1.

Table 1: Racial/Ethnic Groups as a Percentage of Undergraduate Populations*

Race/Ethnicity	Large City	Not Large City
White, non-Hispanic	52%	76%
Black, non-Hispanic	18%	9%
Hispanic or Latino	13%	9%
Asian	13%	4%
Other	2%	1%

* Native American and Hawaiian/Other Pacific Islanders are not reported because of small cell size.

I then looked at the immigration status of the various racial/ethnic populations by city size, and I found that students at the Large City institutions were much more likely to be immigrants or the children of at least one immigrant parent (Immigrants in what follows). I conducted simple significance of difference tests on the percentage of Immigrants in each category and for the group overall by city size and found that the differences were significant at the 95% confidence level for every group except the Asians. The results are presented in Table 2.

Table 2: Mean Percentage of Immigrants by Race/Ethnicity and City Size

Race/Ethnicity	Large City	Not Large City
White non-Hispanic*	12%	6%
Black non-Hispanic*	26%	9%
Hispanic or Latino*	68%	50%
Asian	93%	91%
Other*	77%	50%
All*	34%	14%

* Means significantly different at the 95% confidence level

I then looked at English language usage by city size as a separate issue from immigration. Again, I found that the students at the Large City institutions were much more diverse by language than were students at the other public four year institutions. I conducted simple significance of difference tests on the percentage of students within each racial/ethnic category and overall who reported speaking a language other than English most often as children by city size. The mean percentages for all of the groups are presented in Table 3.

Table 3: Mean Percentage Who Spoke a Language Other than English as Children by Race/Ethnicity and City Size

Race/Ethnicity	Large City	Not Large City
White non-Hispanic*	5%	2%
Black non-Hispanic*	5%	2%
Hispanic or Latino	52%	48%
Asian	65%	58%
Other	45%	39%
All*	21%	8%

* Means significantly different at the 95% confidence level

Overall, the Large City publics are more diverse by race/ethnicity, immigration, and childhood language spoken. They educate a disproportionate number of these students. The large city schools had about 22% of the four year public institution students in the NPSAS:2000 sample, but they had 42% of all of the students who spoke a language other than English as children, 41% of all of the Immigrants, and 46% of all of the Immigrants who spoke a language other than English as children.

NPSAS:2000 provides a number of other variables of importance. Again, the initial analysis indicates significant differences in SAT scores, remedial course taking, delayed entry to postsecondary education, family income, financial aid, living arrangements, the distance from home for those who do not live with their parents, and household/family structure especially in those who have persons other than children as dependents. All of these variable areas will be explored more thoroughly in the current project.

However, NPSAS:2000 does not have a critical set of variables that measure retention, persistence or attainment. The Beginning Postsecondary Student (BPS) longitudinal study is an offshoot of NPSAS and has the appropriate variables, but according to Aurora D'Amico at NCES, the 2000 NPSAS group will be used for a new Baccalaureate & Beyond Longitudinal study (B&B) rather than a new BPS. A new cohort of beginners will be pulled off the NPSAS

survey conducted in 2004. The most recent BPS cohort first began postsecondary in 1995-96 and were last surveyed in 2001. This is somewhat problematic in that neither the most current BPS nor the 1996 NPSAS upon which it is based has a variable that describes the immigration status of the student and/or the student's parents. The BPS does have language and citizenship variables that can act as a proxy for immigration, but a number of immigrants and the children of immigrants will be missed. However it is still the best available data. BPS data will be used to construct a model of retention and persistence for public large city four year institutions. Among the BPS variables that will be used are:

PRFIRST, PRSCND, and PRTHIRD are used to track enrollment status at the original institution after the first, second, and third years.

PRFATTB1 tracks persistence through first attainment.

SBLANG will be used to construct a variable that identifies English language usage much as NBLANG was in the NPSAS data.

A number of other BPS variables measuring race/ethnicity, citizenship, transfer, stopping out, leaving postsecondary education (PSE) altogether, and other behaviors will be used as needed.

Section 4.b: Proposal of work

Section 4.b.1: Background

The differences in the populations noted in the previous section have a number of serious implications for retention and persistence at Large City institutions. Tinto's Student Integration Model proposes that retention and persistence is related to the ability of the student to leave his or her previous life and become integrated into the academic and social life of the higher education institution with allowances for differences by race/ethnicity and ability (1975, 1993).

A competing model is Bean's Student Attrition Model which proposes that students leave school for many of the same reasons that employees leave work organizations (1980). Bean found institutional commitment to be the primary factor for both men and women. In his model, institutional commitment is an intervening variable arising from satisfaction with the higher education institution, which is itself an intervening variable arising from the student's background characteristics, organizational characteristics as perceived by student such as the quality of the institution, practical value of the education, the degree to which the student feels fairly treated by the institution, etc. Bean's model deals more explicitly with background characteristics such as prior academic performance measured by ACT scores and/or high school GPA, and socio-economic status.

Cabrera et al did not find these two theories to be incompatible (1992). However, they believe that institutional commitment means somewhat different things in the two theories, and that while Tinto supposes a commitment to the institution based upon competent social and intellectual membership in the community of the specific institution, Bean's concept of institutional commitment might be better characterized as institutional fit.

A major problem with both theories is that they deal only with traditional four year institution students. Indeed, Bean tested his model with a sample that was made up exclusively of White non-Hispanic, U.S. citizens, under the age of 22, single, first time full time freshmen in their first semester. He also biased the sample towards higher achieving students as measured by ACT scores, with only 2% from the lowest quartile.

This would not be typical of a Large City four year public higher education institution population. For example, even when limiting a study to first time full time freshmen, only about one third of the fall 2000 entering first time full time freshman cohort at UMass Boston was

White non-Hispanic, under age 22, U.S. citizens, and with combined SAT scores above 800. The Large City populations may require a different model.

Immigration and language status should play a large part in the model. These may make for an entirely different model of institutional commitment. Where Tinto sees a feeling of competent citizenship in a particular institution and Bean's view may be characterized as institutional fit, institutional commitment may be strongly related to proximity to family and community for Immigrant populations, particularly if the language used in the family is other than English. The initial analysis of the NPSAS:2000 data showed that there were significant differences in the percentage of students who lived at home, and in the distance of school from home for students who lived on campus by Immigrant status. This has implications for student services to improve the retention of this group.

Immigrant and language status also affects performance measures, particularly for standardized tests that supposedly measure language ability. In the study of first time full freshmen at UMass Boston, we found a strong negative relationship between retention and Verbal SAT scores. We believe that this is because the Verbal SAT score is not measuring ability as Tinto might see it or performance as in Bean's model, but is rather a proxy for Immigrant status. Our sample is too small to determine this for sure, which is why the NPSAS:2000 and BPS data is so important. Race/ethnicity measures are similarly impacted by Immigrant and language status.

Since NPSAS:2000 has no retention/persistence/attainment variables, BPS data will have to be used in the actual analysis of retention/persistence/attainment. However, as earlier noted, the lack of an immigration variable in the BPS data is problematic. The first step in the project

will be to compare NPSAS:2000 and BPS:96/01 data to determine the degree to which the language and citizenship variables can reliably act as proxies for immigration.

I will apply for the use of the restricted NPSAS:2000 and BPS:96/01 data sets in order to do the most accurate possible comparisons. One area where the restricted data will be necessary is in determining the intensity of remedial course taking. There are a number of remedial course questions, but the DAS does not provide a way to tell how intensively the student took these courses. For example when analyzing the NPSAS:2000 data, I found that while 21% of the Large City Immigrants had taken any remedial course, a subtotal of the percentages taking each type added up to 50%. The 16% of Large City Other Citizens who took any remedial course only had a subtotal of 23% when the various types of courses are added together.

A risk index variable is available in both data sets. It takes a value from 0-7 of 7 factors that have been found to adversely affect retention etc. They are delayed entry, no high school diploma, part time enrollment, financial independence, dependents other than spouse, being a single parent, and working full time. I believe that the impacts of several of the risk index variables (all except being a single parent) will differ for the Large City populations and especially for the Immigrants in the Large City institutions.

Further, I expect that ACT English and SAT Verbal scores will also have different impacts on retention etc. for the Immigrant populations. An initial examination of the BPS data shows that for the English speakers in the Large City institutions about 19% of all students with Verbal SAT scores below 450 did not return to the same institution the second year compared to about 21% overall. Among those who spoke a language other than English, the picture was very different. Only about 8% of those who scored below 450 left compared to about 18% of all

students. Outside the Large Cities, the one year retention rates were not markedly different for those who scored below 450 compared to all students.

Section 4.b.2: The model and methods

I expect to use a number of statistical methods to establish differences is the populations of Large City versus Other Locale four year public institution populations, along with establishing correlations for a number of different variables that will vary by the students' language, immigration and citizenship status, and the locations of the schools that the students choose to attend. In other words, I intend to establish that there are real differences in the populations that go beyond surface diversity.

Further, I intend to establish that various standardized measurements of ability such as ACT English and SAT Verbal scores are inappropriate for Immigrant populations, particularly in Large Cities, not only because the magnitude of the impact is different, but because the actual impact is in the opposite direction of that theorized.

I also expect to find a number of differences in what makes up institutional commitment. For students who attend outside the Large Cities, I expect that a number of the BPS variables that report reasons for attending the first school concerning reputation, facilities faculty, etc. will be rather more important to their retention etc. than they will be for students and especially immigrants in the Large Cities. Further, I expect that for the Immigrants in the Large Cities, proximity to home and work will be rather more important than it is for other students outside the Large Cities.

In order to accomplish this, I intend to use multiple regression techniques, including a number of interactive variables, to establish that the impacts of various risk actors vary

significantly by the student's background, particularly background measures related to language, citizenship and immigration status. The methods will depend on the form of the dependent variable. Probit or logit will be used for dichotomous outcome measures (returned or not) while multinomial regression models will be used for dependent variables with more categories (returned, transferred, out of PSE). Other methods may involve survival models with time to attainment or time to separation from PSE as the dependent variables.

A simplified version of the models might be expressed as:

$$\mathbf{Y = \mathit{f}(\mathit{B}_1X_1 + \mathit{B}_2X_2 + \mathit{B}_3X_3 + \mathit{B}_4X_4 \ldots B_{10}X_{10} + B_{11}X_{11} + B_{12}X_{12} + (Bn_{+1}(X_{11}*X_1) + \ldots B_{n+1}(X_{11}* X_{10})) + (Bn_{+1}(X_{12}*X_1) + \ldots B_{n+1}(X_{12}* X_{10})) + \mathit{E}}$$

Where:

Y = A dependent variable representing retention, persistence, attainment etc.

X_1 = Race/ethnicity (Several categories)

X_2 = Ability (Multiple measures including standardized test scores)

X_3 = Institutional Commitment (Multiple measures including reasons for attending such as reputation, facilities, faculty, location, etc.)

$X_4 – X_{10}$ = Risk Factors (7 NPSAS/BPS risk factors)

X_{11}= Locale (Large City or Other)

X_{12} = Immigrant (Several measures including Language and Citizenship)

$((X_{11}*X_1) \ldots(X_{11}* X_{10}))$ = Other variables interacted with Locale

$((X_{12}*X_1) \ldots(X_{12}* X_{10}))$ = Other variables interacted with Immigrant Status

E =Random Variation Factor

Section 4.c: Dissemination plan

Parts of this research have already been presented to the institutional research community. I have presented *An Analysis of the Retention of First Time Full Time Freshmen at a Public Urban University* at the North East Association for Institutional Research (NEAIR) 29th Annual Conference in November 2002, *Developing an Analysis of Retention and Persistence at a Public Urban University* at the Association for Institutional Research 43rd Annual Forum in May 2003, and *Exploring Diversity at Public Urban Four Year Institutions by Using National Databases*, at the NEAIR 30th Annual Conference in November 2003.

The latter paper presented findings of differences between populations at public urban four year institutions and other public four year institutions based upon data from NPSAS:2000. The research presented was supported by an AIR/NCES/NSF Data Policy Institute Fellowship in 2003. The paper is currently being revised for submission to a journal.

I expect to present another paper related to this research at the 2004 North East Association for Institutional Research conference in 2004, and I also expect to present a related paper at the 2005 AIR Forum in San Diego regardless of funding for this project. I expect to develop several papers from this dissertation research that will be submitted for publication. I have a history of presenting my research findings to the institutional research community, and can be relied upon to continue to do so.

Section 4.d: Description of policy relevance

The recent wave of immigration into the United States has produced a situation where a large proportion of the population is now foreign born or the children of immigrants. Many of these immigrants have concentrated in urban areas. For earlier immigration waves, public

elementary and secondary schools acted as integrative agents for these populations. Immigration patterns have changed in that the largest proportion of immigrants are no longer from Europe, and the immigrants as a whole are more racially, ethnically, and culturally diverse than were earlier groups. Another change is that as more immigrants and minorities have concentrated in the cities, in many areas the children of the majority have left if not the city, at least the city school systems.

Boston provides a good example. The white flight from Boston and Boston schools noted by Jennifer L. Hochschild in the early 1980s has continued (p. 32). UMass Boston has experienced similar changes in the demographic makeup of its student body. In the fall 1980 semester, white non-Hispanics made up more than 83% of the known race undergraduates. By fall 2000, that percentage had fallen to under 58%. Choy's recent report for the American Council on Education identified understanding the recent explosion of diversity in college populations as essential to the appreciation of access and attainment in higher education (2002). Public urban universities are in the forefront of dealing with this diversity, and if we are to not only provide access to higher education but the appropriate tools to be able to succeed in higher education, we will need to pay attention and to look below the surface diversity to be able to identify the cultural and linguistic diversity within the categories with which we have become comfortable. Because of high concentrations of minority and immigrant populations in urban areas and the ability of public urban universities to attract not only these populations but populations from wealthier less de facto segregated suburbs and school systems, public urban universities may be uniquely positioned to assist immigrant populations in integrating into the larger society, and to make the larger society more comfortable with its newer members by providing an arena where both groups meet and work together as equals.

Section 4.e: Discussion of innovative aspects of the project

This research will attempt to use NPSAS:2000 and BPS:96/01 data to document an additional level of diversity beyond the standard racial/ethnic reporting categories, and to demonstrate that it is of particular importance to public four year institutions in the Large Cities. Preliminary analysis of NPSAS:2000 and data indicates that not only are these institutions more racially/ethnically diverse than other public four year institutions outside large urban areas, but much higher proportions within each racial/ethnic group tend to be immigrants or the children of immigrants. These students do not necessarily behave the way a model based on White non-Hispanic, young, single, high ability students would predict behave. They have other needs and require other services. The preliminary analysis of the NPSAS:2000 data indicates that immigration status is strongly related to English language usage and Verbal SAT scores. It also is related to a wide range of behaviors that may affect retention and persistence.

Section 4.f: Discussion of the audience to whom the project will be important

I expect that the primary audience for the project will be officers at public urban four year institutions. However, while immigrants and the children of immigrants attend urban institutions disproportionately when compared to the public four year institutions, I believe that information about the needs and behaviors of these immigrant populations will be important to officers at other types of institutions as well. For example, a cursory examination of the NPSAS:2000 data with regard to community colleges indicated that the community colleges have similar differences in diversity by race/ethnicity and immigration status when comparing Large City versus Other Locales as well.

The high levels of immigrants and the children of immigrants in Large City institutions have a number of serious implications for enrollment management. It means that retention and persistence studies that examine the effect of race/ethnicity at public urban institutions may not be measuring what the analysts think they are measuring. When Astin & Oseguera report on African Americans, the overwhelming majority may actually be of African American descent, but at the public four year Large City institutions, the group may well have a majority of Immigrants from Haiti, Africa, Brazil, and the English speaking Caribbean, and these students would have very different backgrounds from what is usually defined as African American.

Student Support Services should be interested in information regarding the outside family and work responsibilities of the various populations. If as I suspect, Immigrants are partially tied to their institutions by the need for proximity to family to provide financial and language support, services that try to support the students while they are doing so might increase retention and persistence rates. These services might include culturally appropriate student organizations, support for naturalization classes for the students and their families, and a focus on providing campus employment for these students wherever possible so that the student may remain connected to the institution while fulfilling family support responsibilities.

This research should be particularly important to Legislative leaders, other policy makers, and immigrant rights advocates. Funding decisions should take the populations of the institutions into account. Further, simple retention and persistence rates may be particularly inappropriate as outcome measures for institutions that serve high proportions of Immigrants. Family responsibilities and the need for remedial (especially language related) course work may well delay attainment of the degree beyond the normal 4, 5, or 6 year measurement periods.

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Section 6: Biographical Sketches

Section 6.1: Biographical sketch for Kevin B. Murphy

I returned to school to complete a bachelor's degree after becoming disabled in an industrial accident. I went to UMass Boston because it was convenient. I was forty and had spent the previous three years in the hospital, in physical therapy, or recovering from surgery. When I wasn't in the hospital or at physical therapy, the focal point of my day was the Price Is Right television program. I didn't expect anything to really change because of school. I thought of it more as a short term hobby that would allow me to feel like I was making some progress, but it became a completely transformative experience. After completing the bachelor's degree summa cum laude, I continued to graduate school in the Public Policy Ph.D. Program at UMass Boston. The program provides an interdisciplinary approach to equipping students with a sophisticated background in politics and economics along with high level research methods and analytical skills.

While I was still taking courses, I became involved with the graduate student government, first as a member of the Graduate Student Assembly, and then as an officer and the program coordinator of the organization. In that capacity, I oversaw several programs for graduate students at the university, and became particularly concerned with higher education issues; especially with issues of access and retention in public institutions. However, that was not the focus of my research at that time. After a number of semesters as a teaching assistant, program coordinator, and research assistant had allowed me to develop and hone my research, analytical, and quantitative skills, I accepted a temporary part time position in the UMass Boston Office of Institutional Research and Policy Studies (OIRP) as a research analyst filling in for someone on partial leave. This allowed me to combine my interest in higher education issues

with the opportunity to do practical research in the field. After a year as a temporary part time employee, three years ago I accepted a regular full time appointment as the research analyst in the same office.

One of my first assignments was to do an analysis of outcomes for the university's Writing Proficiency Requirement, which is a rising junior assessment of proficiency in writing in the English language. While attempting to do the analysis, I became aware that there were significant issues regarding recent immigrants and non-native English speakers, and that these populations made up a much higher proportion of our students than anyone realized. Since then, I have been paying particular attention to these populations both in research done for the university as a part of my job, and in slightly broader research that I am doing on public urban higher education as a part of my dissertation. I have presented several papers related to these issues at various conferences. The details of these presentations are in my C.V. which begins on the following page.

I believe in the transformative power of higher education, perhaps mostly because I have experienced it. I am particularly focused on public urban higher education because of the multi-layered diversity of the populations that we serve in terms of age, race/ethnicity, immigration and language status, disability, and work and family responsibilities. I believe that this diversity presents huge challenges to higher education, and that we need a great deal of additional research if we are going to serve these students as they attempt to transform, or in some cases, reclaim their lives. I expect to spend the rest of my career working in this area. My ideal situation is to complete the Ph.D. and then to continue my research in how best to provide services and support to such a diverse population, ideally in a position that combines some teaching with a practical research practice in an institutional research office.

Kevin B. Murphy

Education

Ph.D. in Progress	University of Massachusetts Boston Doctoral Candidate in Public Policy
Master of Science	Public Policy, University of Massachusetts Boston, 1997
Bachelor of Arts	Political Science, *summa cum laude*, University of Massachusetts Boston, 1991
Associate of Arts	Cape Cod Community College, 1985

Experience

1999-Current *University of Massachusetts Boston*, Boston, MA
Research Analyst
Responsible for a wide range of data acquisition, analysis, and presentation of results to a wide range of audiences with particular attention to survey design, administration, and analysis of results.

1998-2000 *University of Massachusetts Boston*, Boston MA
Research Assistant
A. Assisted the Public Policy Ph.D. Program Quantitative Methods Director in an economic forecasting project by doing statistical analysis on Current Population Survey data and other large data sets. Also responsible for background research and data acquisition and analysis for "Massachusetts Benchmarks", a publication of the University of Massachusetts in cooperation with the Federal Reserve Bank of Boston.

Spring 1999 **B**. Assisted a Professor in the Department of Economics by doing data management and statistical analysis on large data sets to analyze differences in assets and profitability for multinational and single nation corporations.

1996-1997 *University of Massachusetts Boston*, Boston MA
Program Coordinator
As the Program Coordinator for the Graduate Student Assembly, oversaw the GSA office and all programs funded by graduate student fees. Graduate student representative to the Faculty Council and to the University Athletic Committee, and alternate to the Graduate Studies Standing Committee.

1995-1996 *University of Massachusetts Boston*, Boston MA
Teaching Assistant
A. Econometrics
Acted as a teaching assistant in a graduate level econometrics course focusing on multiple regression, time series analysis, and logistic regression with special attention to regression diagnostics and remedies. Other topics included weighted least squares, non-linear transformations, dichotomous variables and the use of Stata statistical software.

B. Quantitative Methods
Acted as a teaching assistant in a graduate level quantitative methods course focusing on graphical analysis, the fundamentals of probability theory, basic statistics, hypothesis testing, and the basic linear regression model.

1985-1988 Various Employers
Computer Systems Analyst

Papers and Presentations

"Developing an Analysis of Outcomes for the Writing Proficiency Requirement", North East Association for Institutional Research 27th Annual Conference, Pittsburgh, PA, Published in *Proceedings*, pages 135-142, November 2000

"The Impact of a Series of Writing-Intensive Courses on Success on the Writing Proficiency Requirement", North East Association for Institutional Research 28th Annual Conference, Boston, MA, Published in *Proceedings*, pages 81-93, November 2001

"An Analysis of the Retention of First Time Full Time Freshmen at a Public Urban University", North East Association for Institutional Research 29th Annual Conference, Annapolis MD, Published in *Proceedings*, pages 67-77, November 2002

"Developing an Analysis of Retention and Persistence at a Public Urban University", Association for Institutional Research 43rd Annual Forum, Tampa FL, May 2003

"Exploring Diversity at Public Urban Four Year Institutions by Using National Databases", North East Association for Institutional Research 30th Annual Conference, Newport, RI, November 2003

Awards

AIR/NCES/NSF Fellowship – Fellow of the Data Policy Institute on the Databases of the National Science Foundation and National Center for Educational Statistics, June 2003.

Professional Activities

Member, Association for Institutional Research 2004 Pre-Forum Professional Development Offerings Subcommittee

Member, Association for Institutional Research 2003 Conference Table Topics Committee

Member at Large, 2002-2004 North East Association for Institutional Research Steering Committee and Grants Committee

Chair, North East Association for Institutional Research 2003-2004 Grants Committee

Mentor, North East Association for Institutional Research, 2002-ongoing

Facilitator AIR 2002, 2003, and 2004 (pending assignment) Annual Forums

Service to the Institution

University Retention Committee, 2000 – ongoing

Campus Communications Committee, 2002 – ongoing

Campus Community Team, 2003 - ongoing

University Planning Council, 2003-ongoing

University NEASC Accreditation Committee, 2003-ongoing

Professional Memberships

Association for Institutional Research

North East Association for Institutional Research

Section 6.2: Biographical sketch for Alan Clayton-Matthews, Ph.D.

Alan Clayton-Matthews is Assistant Professor and Director of Quantitative Methods in the Public Policy Program at the University of Massachusetts/Boston. He is co-editor of *Massachusetts Benchmarks*, a joint publication of the University of Massachusetts and the Federal Reserve Bank of Boston that presents timely information and analysis about the performance of the Massachusetts economy. He is also a Director of the New England Economic Project, a group of economists and managers from academia, business, and government who study and forecast the New England economy.

Prior to his appointment to the faculty at the University of Massachusetts at Boston, he worked as an economist and policy analyst for the Massachusetts Department of Revenue, the Social Welfare Research Institute at Boston College, and DRI/McGraw-Hill. He received a Ph.D. in economics from Boston College.

Alan's research experience includes econometric model estimation, hypothesis testing, simulation, and economic forecasting. He has worked with a wide variety of data sets including both cross-sectional data sets such as the Current Population Surveys, Census Decennial PUMS, and longitudinal/panel data sets such as the National Longitudinal Survey of Youth and the Panel Study of Income Dynamics. He has extensive research experience in econometric model estimation and testing, with a wide variety of cross section and time series methods, including single and multiple equation linear regression, various limited dependent estimation methods, factor analysis, structural equation modeling, and dynamic factor analysis. He also has experience with several statistical software applications, and in addition, writes his own software as needed. His dynamic factor analysis software, for example, is being used by a handful of researchers in the U.S. and Europe.

Alan also is experienced in advising graduate students in statistical model estimation and testing, and in working with data sets. He has served on over a dozen dissertation committees, sometimes as chair, but always as an advisor on quantitative methods of analysis.

ALAN CLAYTON-MATTHEWS

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105 Concord St.
Needham MA 02494
(781) 444-5209

Education

Graduate: **Boston College**, Ph.D., Economics, May, 1987.
Specialization: Labor Economics, Public Finance.

Undergraduate: **Massachusetts Institute of Technology**, 1967-1972.
Major: Economics. Minors: History, Music.
Degree not conferred.

Employment

Public Policy Program, University of Massachusetts, Boston
September 1996-Present. Assistant Professor and Director of Quantitative Methods.

Office of Tax Policy Analysis, Massachusetts Department of Revenue
1991-September 1995. Economist.

University of Massachusetts, Harbor Campus
Spring 1995 - Fall 1996/ Fall 1990-Spring 1991. Lecturer, Statistics and Research Methods, Public Policy Program. Principles of Macroeconomics, Department of Economics

The Social Welfare Research Institute, Boston College.
1988-1991, 1975-1986. Senior Research Associate.

Data Resources Incorporated (DRI), Lexington, Massachusetts.
1987. Senior Economist, Regional Information Service.

Appointments, Committees, Etc.

Co-Editor, Massachusetts Benchmarks, January 2003 - Present.

Editorial Board Member, Massachusetts Benchmarks, June 1997 - Present. Appointed as co-editor January 2003.

New England Economic Project (NEEP), Director, 1994-Present. President, 2000-2001.

Labor Market Information Advisory Group, Commonwealth of Massachusetts, Division of Employment and Training, 2000 – present.

Disparity Study Strategic Planning Task Force, Commonwealth of Massachusetts, Executive Office of Transportation and Construction. June 1994 - August 1995.

Technical Advisory Committee, Dynamic Economic Impact Analysis Model, Commonwealth of Massachusetts, Department of Revenue October 1991 - 1998.

Publications

Articles

"Multinomial logistic regression", with Chanyeong Kwak, *Nursing Research*, Vol 51, No. 6, November/December 2002, pp. 404-410.

"Economic Currents", Appears in the following issues of *Massachusetts Benchmarks*, University of Massachusetts and the Federal Reserve Bank of Boston. Fall '97, Spring '98, Summer '98, Fall '98, Winter '99, Spring '99, Summer '99, Fall '99, Winter '99/'00, Spring 2000, Summer 2000, Fall 2000, Winter 2000/2001, Spring 2001, Summer 2001, Fall 2001, Winter 2001/2002, Spring 2002, Summer 2002.

"Medical Devices: A Stronghold of the Commonwealth's Economy", *Massachusetts Benchmarks*, University of Massachusetts and the Federal Reserve Bank of Boston, Winter 2001/2002.

"An Application of the Stock/Watson Index Methodology to the Massachusetts Economy", with James H. Stock. *Journal of Economic and Social Measurement*, Vol 25 (1998/1999), pp. 183-233.

"New Current and Leading Indexes for Massachusetts", *Massachusetts Benchmarks*, University of Massachusetts and the Federal Reserve Bank of Boston, Fall '98.

About Composite Economic Indexes, *Massachusetts Benchmarks*, University of Massachusetts and the Federal Reserve Bank of Boston, Fall '97.

"Indexes of Economic Indicators: What Can They Tell Us about the New England Economy", *New England Economic Review*, Federal Reserve Bank of Boston, November/December 1994, pp. 17-41. With Yolanda K. Kodrzycki and Daniel Swaine.

"The Massachusetts Dynamic Analysis Model: A Brief Description With Illustrative Examples", *State Tax Notes*, Vol. 5, No.12, September 20, 1993, pp. 639-44.

"Generational Alliance: Social Security as a Bank for Education and Training," *The American Prospect*, Vol. 1, No. 2, Summer 1990. With Barry Bluestone, John Havens, and Howard Young.

"The Differential Importance of Weight and Body Image Among College Men and Women", *Genetic, Social, and Psychology Monographs*, Volume 113, No. 4, 1987. With Sharlene Hesse-Biber and John A. Downey.

"Structure vs. Cycle in U.S. Manufacturing Job Growth," *Industrial Relations*, Vol. 25, No. 2, Spring 1986, pp. 101-117. With Barry Bluestone and Bennett Harrison.

Section 7: Budget

Section 7.1: Amounts Requested

Category	Requested Funds
Salaries and Wages	
Principal Investigator Kevin B. Murphy	$13,000.00
Travel	
AIR 2005 Forum for Dissemination Hotel, Airfare, Registration, etc.	$1,600.00
Other Direct Costs	
Materials and Supplies	$250.00
Publication and Dissemination	$150.00
Total Amount Requested	$15,000.00

Section 7.2: Budget request explanation

The salary support includes benefits. The travel expenses to the AIR 2005 Forum will allow me to present findings to AIR. Materials and supplies include books, journal reprints etc. Publication and Dissemination includes slides for presentations, and preparation of articles for journal submissions.

Section 8: Current and Pending Support

The University of Massachusetts Boston provided salary support for attendance at the Summer Data Policy Institute. It will continue to do so for dissemination of findings at regional and the national conference.

Section 9: Facilities, Equipment and Other Resources

Office space, computers and appropriate software, telephone, and fax are all provided by the University of Massachusetts Boston. A separate, secured, stand alone computer and software will be provided for analysis of the restricted data sets.

Section 10: Special Information and Supplementary Documentation

Section 10.a: Letter of support

Public Policy Program

University of Massachusetts Boston

January 7, 2004

Dear Association for Institutional Research,

I am pleased to support Kevin Murphy in his research on persistence and retention of college students. I have known Kevin for several years. As a student in a research methods class, Kevin displayed a keen ability to analyze data and to understand the related statistical concepts. I was also immediately impressed by his communication skills, both oral and written.

Given his wide range of skills, I chose Kevin Murphy to be my research assistant on an on-going project (Massachusetts Benchmarks) supported by the University of Massachusetts and the Federal Reserve Bank of Boston to track and analyze the state's economy. He served admirably in this capacity for a couple years, providing data gathering, econometric, and analytical support.

Kevin also took an independent study from me to learn several limited-dependent variable statistical techniques. As always, he performed excellently in the course. Mr. Murphy is currently a doctoral candidate of our Public Policy Program, having fulfilled all the course and comprehensive requirements.

Now I am privileged to be the chair of Mr. Murphy's dissertation committee. His topic is the determinants of retention and persistence of university students, especially with regard to public urban institutions such as the Boston campus of the University of Massachusetts. Although his initial work-related task was to study the retention of freshman students on this

campus, he quickly realized that the broader issues involved differences between public urban universities and other universities, with respect to the missions of the institutions, the characteristics of the students, and the socio-economic environment of these schools.

I am confident that Kevin's dissertation will be an important contribution to the study of retention and persistence of college students, and that it will be used not only by the University, but also by policy makers in higher education in general, as well as by analysts and advocates for minority and immigrant issues.

Kevin Murphy's knowledge, skill, and commitment to these issues are fully apparent in several publications he has presented to AIR conferences. He has also gained experience using NPSAS and other NCES/NSF data sets at the 2003 AIR/NCES/NSF Summer Data Policy Institute.

I strongly recommend Kevin Murphy for a dissertation grant, and am highly confident that this research and his dissertation will well serve the goals of your dissertation grant program.

Alan Clayton-Matthews

Assistant Professor