

EdTrAc Teacher Education Program

*First-year implementation evaluation
(2005-2006)*

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Summary

The Educational Training Academy (EdTrAc) is an NSF-funded project of Normandale Community College to increase the number, diversity, and skills of students preparing to be elementary and middle school teachers with a specialty in math and science. Overall, this evaluation indicates that the EdTrAc implementation is on track after its first year (2005-2006). Face-to-face interviews with project leaders and advisors as well as the surveying of students indicate the following as the key accomplishments this year:

- Improving existing courses and adding new ones in education, math, and science
- A strong Teachers of Tomorrow (TOT) club that is instrumental in successful implementation of events and activities such as the Future Teachers Conference
- Improvements in student tracking through the implementation of a new software system (SMART database)

These accomplishments represent the core of the work done by the EdTrAc project in its first year of implementation and show progress toward accomplishing the goals set at the beginning of the project. Student surveys indicate they believe classes are high quality, which may reflect efforts to improve and develop new courses. By all accounts, the Future Teachers Conference was a success due in large part to the hard work of the Teachers of Tomorrow club. The decision was also made to implement the SMART database, which project leaders indicate has been and will be critical to EdTrAc's success.

Evaluation findings have also shown that some activities have been harder to implement than anticipated. Among these challenges are the following:

- Outreach to high schools (Ambassadors Program)
- Scheduling and availability of classes
- Recruiting students to cohorts

Project leaders identified concerns with the outreach to high schools, and EdTrAc has hired a new director of teacher preparation who will be focusing on this outreach. This is one illustration of the ability of the program to perceive its needs and willingness to pursue what they consider a “difficult” and “time-consuming” activity but one which is critical to the success of the program. Student surveys indicate that improvements in the scheduling and availability of teacher education courses would help increase satisfaction with the EdTrAc program. Recruiting students to the cohorts is seen as another area to focus on. Possibilities explored include promoting direct contact between current and prospective cohort students, and seeking scholarships to enable more students to attend full-time and thereby qualify for cohort participation.

Introduction

Through the support of a National Science Foundation Advanced Technological Education grant, Normandale Community College (NCC) established the Educational Training Academy (EdTrAc). EdTrAc is a teacher education program allowing students to complete a four-year degree through Minnesota State University, Mankato (MSU,M) while remaining on the NCC campus. The program also partners with K-12 schools to increase student interest in math/science and teaching.

The goals of EdTrAc are to:

- Attract talented and diverse populations into the teaching field by recruiting from underrepresented or nontraditional populations
- Provide clinical experiences that introduce teacher education candidates to diversity and multicultural education
- Encourage future teachers at Normandale to choose a math or science middle school specialty, where job placement is strong
- Improve the science, math, and technology preparation of pre-service teachers through new or revised coursework that emphasizes active learning
- Encourage and support pre-service and in-service teachers

Components of EdTrAc include:

- Associate of Science degrees in: Elementary Education Foundations or Special Education Foundations
- The opportunity to complete a four-year degree with licensure from MSU,M (on the Normandale campus)
- Middle school specialties in Math, Science, Social Studies, and Language Arts
- An Introduction to Education course to orient students to opportunities in education and certification requirements
- Teachers of Tomorrow club (TOT) and Future Teachers Conference
- Advisory Board including members from K-12 partners and university colleagues
- Cohorts of education students who move through the education process together

- Tutoring certification program
- Math/Science faculty Ambassador project

This evaluation is intended to address the following research questions:

- Is implementation on track?
- What are the notable accomplishments in the first year of implementation?
- To what extent is anything not on track, or what concerns, if any, do stakeholders have about the implementation?
- How is the Ambassadors Program going?

Methods

Data sources for the evaluation included a review of documents (the original proposal and the planning-year evaluation), phone conversations with the Principal Investigator for background on the project, and four primary data collection activities:

- A self-administered questionnaire (SAQ) completed by seven staff of Normandale Community College and Minnesota State University, Mankato who have key roles in the EdTrAc project. These were: Julie Guelich, PI, Dean; Peggy Rejto, co-PI, Math faculty; Julie Johnson, co-PI, Physics faculty; Patty Larson, EdTrAc Coordinator; Tom Sundquist, Senior Personnel, Math faculty; Shirley Beil, Senior Personnel, Math faculty; and Steven Reuter, Senior Personnel, Mankato Education faculty.
- An in-person key informant interview, using a semi-structured question guide, with the same seven staff. The questions in this interview were informed by the responses to the earlier SAQ.
- A telephone interview, following a similar semi-structured format to elicit in-depth responses, with three members of the EdTrAc Advisory Board who work in K-12 positions. These were: Barbara McNamara, paraprofessional with the Bloomington School District; Nicole Lawson, 1st grade teacher at the Inter-district Downtown School in Minneapolis; and Natalie Rasmussen, chemistry teacher from Minneapolis North High School.
- A self-administered questionnaire completed by a convenience sample of 70 students taking Introduction to Education (EDUC 1101), Physics for Elementary Teachers (PHYS 1050) and Mathematics for Elementary Teachers I (MATH 1050). This selection of courses ensured participation by students in one of the new courses as well as students in the current cohort. It is not a representative sample, however, so results should be used as illustrative examples of student experiences and opinions but not considered generalizable to all students in the program. The survey included questions about the students' experiences with the education program at Normandale Community College, their educational background and prior experiences working with youth, and attitudes about math and science and teaching. The survey was given during the third, fourth, and sixth weeks of the 2006 fall semester.

In addition to reporting results of the student survey overall, the data analysis included a comparison of the responses of students who are first-generation college students (by the federal definition) to the responses of students who have at least one college-educated parent.

EdTrAc focus

Key informants from Normandale confirmed that current activities and intended outcomes are the same as originally proposed. These activities and outcomes are summarized below in Figures 1 and 2.

EdTrAc activities

Key informants overwhelmingly reported that the main focus of the first year was to “strengthen the intellectual merit of the 2+2 program,” especially developing the cohort program and new courses. However, respondents made it clear that EdTrAc was also committed to engaging in the other activities as well, including the hiring of a new director of teaching preparation who has a connection to the K-12 schools and is going to take over outreach activities including the Ambassador program.

1. EdTrAc activities

- ✓ Refine and expand partnerships with K-12 for student recruitment (Ambassadors Program)
 - * Expand and refine work with the Bloomington and Richfield school districts
 - * Introduce to new high schools
 - * Add Ambassador outreach component for K-8 schools
- ✓ Strengthen the intellectual merit of the NCC/MSU,M 2+2 program
 - * Develop and introduce 3 new courses (Math for Elementary Teachers; Physics for Elementary Teachers; Math and Technology)
 - * Develop a cohort program for student support
 - * Provide clinical experiences with diverse student populations
- ✓ Expand the functions of the EdTrAc office
 - * Support Teachers of Tomorrow (TOT) work with high schools and Future Teachers conference
 - * Expand the role of the Advisory Committee

Source: Project documents and project leader interviews.

Expected EdTrAc outcomes

At the close of the 2005-2006 year, project leaders placed main emphasis on the outcomes of recruiting students to the program; making sure graduates are well qualified; and more students choosing a math and science middle school specialty. The consensus of project leaders is that the three most important expected outcomes shaping their current priorities are “more high school students recruited for teaching careers” and “more two-year and four-year education students well-qualified in math and science.”

“More [students] specialize in middle school math and science” was also an important current focus.

2. EdTrAc expected outcomes

- More high school students recruited for teaching careers
- More two-year and four-year education students are well-qualified in math and science
- More education students choose a middle school math or science specialty
- More two-year and four-year education students are retained in the program and graduate with teaching credentials
- More two-year graduates continue into Mankato 4-year bachelor's completion
- More enter teaching in middle school math and science
- More new teachers remain in the profession after the first year

Source: *Project document and project leader interviews.*

The first year activities of EdTrAc, and in particular the progress with new and improved courses, will mainly affect the goal of increasing the number of two-year and four-year education students who are well-qualified in math and science. The new courses and other first-year activities will also likely affect the number of students choosing a middle school math or science specialty and ultimately going into middle school math and science teaching. According to project leaders, these outcomes are the most likely to be affected because improving coursework is something that is under the control of the program and directly affects the quality of the education the students are receiving. This work is a strategic choice for a first-year focus because of EdTrAc's control over these outcomes early in this project. Other outcomes such as high school recruitment and teacher retention, which pertain to the beginning and end point of the teacher preparation pipeline, are less directly related to the core operations of the Normandale Community College, and require more time to build relationships and help students complete their degree and licensure.

Effects on students and faculty

Key informants from Normandale were asked to describe in their own words what they see as the main effects of the EdTrAc program on students and faculty at Normandale. The two main areas described by the key informants were information and academics.

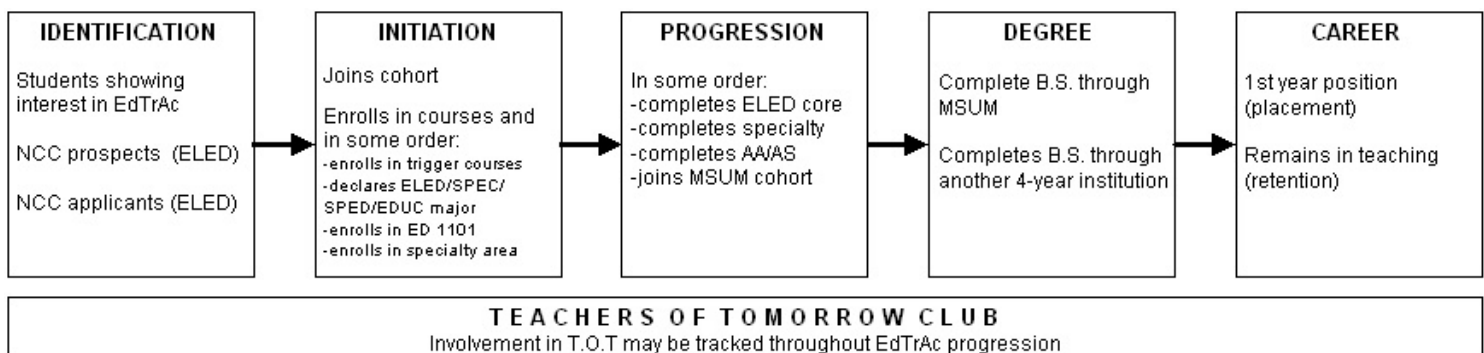
Information

Project leaders indicated that students were receiving more and better information because of the EdTrAc program that manifested itself in two ways: identification and focus. To start, the information the EdTrAc program provides allows students to identify whether a degree in education is what they want to accomplish. It also helps increase faculty awareness of education students in their classes. Second, once students have decided on an education degree, the EdTrAc program provides students with valuable information about courses and articulation that allows students to focus their education.

SMART database

A valuable information tool used by the EdTrAc program is the SMART database, developed by Dan McIalwain at Green River Community College (Auburn, Washington) for the Project Teach program. EdTrAc implemented the database with mentorship of people from Project Teach. The SMART database is used to track students' progress from the day they indicate interest in becoming a teacher, through the EdTrAc process and graduation, and into the student's career. As utilization of the database continues to grow, it will also be used to track the activities of and involvement in the Teachers of Tomorrow Club. See Figure 3 for a diagram of student tracking through the SMART database.

3. SMART database student tracking diagram



Source: Adapted from documentation provided by EdTrAc.

One Normandale key informant mentioned that before the SMART database they had to get their data straight from the ISRS system which collects data from all campuses of the Minnesota State Colleges and Universities (MnSCU) system. Now, however, data from ISRS is downloaded daily straight into the SMART database. The informant noted that using the ISRS system to get the information they wanted was “not easy” and that the SMART database is “working well but [they] are still working to improve it.” Another key informant from Normandale calls the SMART database “a good starting point to connecting [Normandale] staff with the needs of [their] students.”

The main work being done with the tracking of students is improving the identification of potential EdTrAc participants. So far, prospective students have been identified through various activities such as campus visits and the Future Teachers Conference. Now, they are making attempts to identify students visiting Normandale who may be prospective EdTrAc students by identifying those students’ anticipated majors.

Faculty awareness

EdTrAc has improved faculty awareness of education students in their classrooms. Prior to EdTrAc, math and science instructors rarely knew of the education students in their classroom. Now, instructors not only know what students are preparing to become teachers but they have been motivated to develop new courses or improve existing courses specifically for education students. Project leaders also noted that the EdTrAc program has increased student awareness of Normandale’s teaching program, citing that before EdTrAc “[the education program] was a sleeper” but “with EdTrAc, it has become more visible.”

One key informant reported hearing a number of “students saying that they have received great information about course, articulation, and job information” through the EdTrAc program. Another informant reported “the EdTrAc office has become a hub for information for students interested in education.”

Academics

Informants also talked about the academic effect on students because of the EdTrAc program and identified these effects in terms of courses and experiences. First, new and expanded courses are now offered to students including classes specifically tailored to students training to become teachers. Second, out-of-class opportunities and experiences have increased. These opportunities include fieldwork and placements in schools with racially and socio-economically diverse populations. Furthermore, students’ experiences are also deepened by out-of-class activities such as the Teachers of Tomorrow club. This group organized the Future Teachers Conference allowing EdTrAc students to work with other organizations and business to successfully implement the event.

Identifying early successes and concerns

In the key informant SAQ, Normandale key informants were asked to identify areas of special success or concern. In later face-to-face interviews, the same project leaders were asked more in-depth questions about the factors they thought contributed to the success or concern.

Areas of success

Among the areas of largest success were tangible activities and tools. Respondents indicated the Future Teachers Conference and the SMART database provided good examples of success at this early stage of implementation.

Future Teachers Conference

The “Winning Strategies for Paraprofessionals and New Teachers” conference, commonly known as the Future Teachers Conference, was held on March 11, 2006 and widely seen as a great success. The conference was successful due to the involvement and work of the students, members of the Teachers of Tomorrow (TOT) club, and partnership with outside organizations.¹ Other reasons cited for the success of the Future Teachers Conference were the quality of the speakers, the mix of attendees, and release time for faculty members involved. Students and members of the TOT club were visible during the conference, which was very well received by the attendees of the conference.

SMART database and early identification

Informants identified the SMART database and identification of prospective EdTrAc students as another early success of the program. One reported factor of this success was the designer of the database “knew what he was doing.” In other words, the product is well developed and provides a good starting point for connecting staff with students. Another factor cited in the success of the SMART database was its accessibility. One key informant noted that “it is accessible to each person involved with EdTrAc operations” and they “can use it to produce reports on prospective and current students.”

¹ Educational Cooperative Services Unit (ECSU) and Strategic Planning for Low Incidence Services in Education (SPLISE).

Other areas of success

- The Teachers of Tomorrow club, which is strong due to the enthusiasm and organization of the students.
- EdTrAc has become “a center of information about teaching as a career on the Normandale campus” because of the availability and excitement (not just willingness) of staff to promote it.
- Implementation of new physics and math courses which was successful because of faculty willing to follow through with course development.
- The successful offering of a student cohort which was made possible because of the preparation that went into designing a schedule semester by semester.

Areas of concern

Among the areas of concern were more organizational objectives. Respondents indicated communications – especially publicity and connecting with high schools – as the main concerns in the first year of implementation.

Publicizing the program

Key informants cited publicizing and raising awareness of the EdTrAc program, its resources, and the cohorts as one of the main areas of concern in the early stages. The concern around publicity and awareness included building awareness of the program among high school students and publicizing resources available on campus to current students (including cohorts). One respondent reports that “getting info about potential cohort members has been difficult, but we are getting better at it.” Other informants think the new director of teacher preparation will help improve the high school outreach program – which he will be focusing on.

Contacting and involving high schools

Another communications concern raised by the Normandale key informants was the connection with high schools and the Ambassadors Program. One informant indicated that getting into high schools was harder than they had expected, that they “really had no idea going in how difficult” the process is. The difficulty comes from the time needed to build relationships and be at the schools promoting the program. With the hire of a new director of teacher preparation – who will be focusing on K-12 involvement – informants are optimistic that this activity will improve.

Other areas of concern

Other issues raised by only one or two respondents include:

- Students resist being part of a cohort because of the lack of flexibility for part-time students.
- Need for greater communication between Mankato and Normandale because of the difficulty of coordinating classroom scheduling. As noted above, scheduling is an important consideration in successful implementation of the student cohorts.

Students' experiences with EdTrAc

Student survey respondents were asked about their experiences with Normandale and the EdTrAc program. These experiences include how they first heard about the EdTrAc program, what activities they are involved with on and off campus, perception of the EdTrAc program, and their overall opinion of the math/science and teaching fields. A demographic profile of student respondents is included at the end of this section.

Student introduction to EdTrAc

Student reports indicate that the Normandale staff is responsible for many students finding out about the EdTrAc program. Over one-quarter (27%) of respondents reported they heard about the EdTrAc program through Normandale – including specific people at the school or advisors. Furthermore, another 13 percent of respondents reported hearing about EdTrAc through their classes or classroom faculty at Normandale. The internet and word-of-mouth were also cited as common ways students discovered EdTrAc, with 11 percent of respondents reported hearing about EdTrAc online and 11 percent through a friend, family member, or acquaintance. Another 11 percent reported hearing about EdTrAc when they transferred to Normandale and 9 percent discovered it in the course catalog. See Figure 4 for a complete list of the responses.

4. How respondents heard about the EdTrAc program. Open-ended responses grouped by category (N=64)

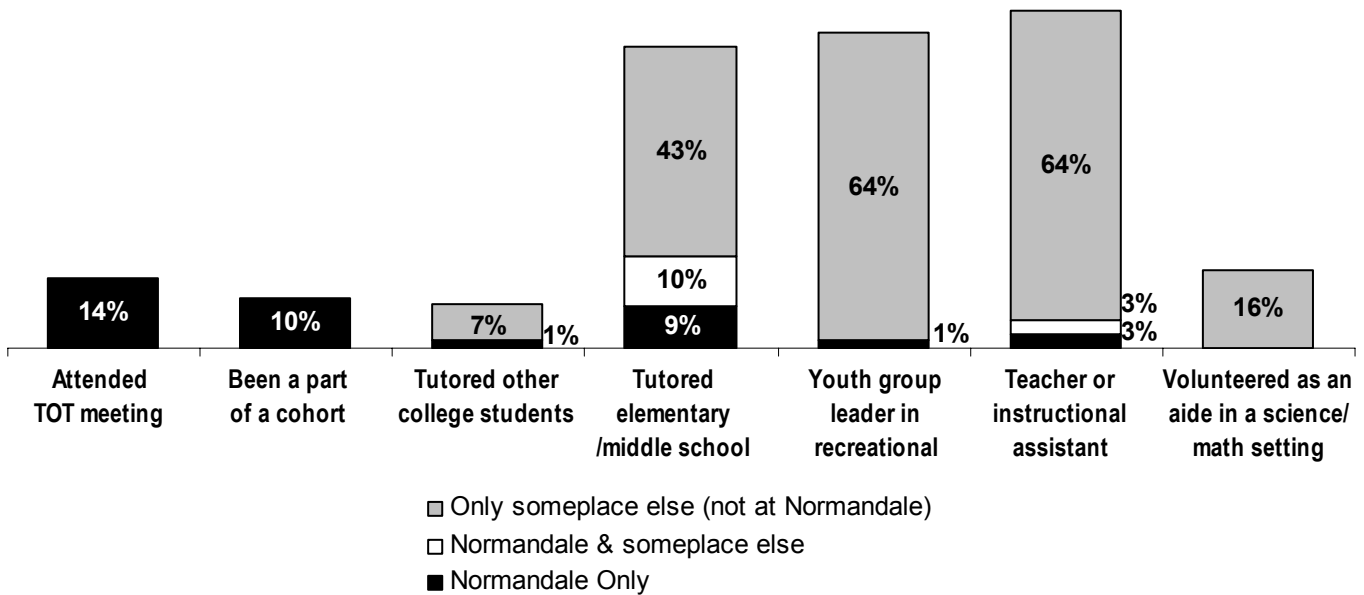
	Number	Percent
Through Normandale (e.g., counselor/unspecified person)	17	27%
Through classes or classroom faculty	8	13%
Website, internet, or online	8	13%
Friend or family (word of mouth)	7	11%
When I transferred (e.g. when signing up for classes)	7	11%
Course catalog	6	9%
Mailing, newsletter, or other promotional literature	5	8%
Signs or other on-campus promotion	2	3%
Through high school teacher or counselor	2	3%
Other ways of hearing about EdTrAc	5	8%

Student involvement in EdTrAc

Respondents were asked a series of questions about their involvement in activities directly and indirectly related to the EdTrAc program and teaching in general. The highest levels of involvement were as a teaching or instructional assistant including Sunday school teacher or child care aide (70%); youth leader in a recreational setting including camp counselor or scout leader (65%); and tutoring elementary or middle school students (62%). Respondents mostly reported participating in these activities somewhere other than Normandale.

Students reported less involvement in activities specific to Normandale and the EdTrAc program. Fourteen percent of respondents attended a Teachers of Tomorrow (TOT) meeting and 10 percent have been a part of an EdTrAc cohort. Interestingly, 16 percent of respondents reported volunteering as an aide or docent in a science or math setting such as a zoo, science museum, or nature center, all of which was through somewhere other than Normandale. See Figure 5.

5. Respondents' involvement in selected activities (N=67-70)



Student perception of EdTrAc

Students' impressions of the education classes

Respondents were asked to rate their impression of the education classes at Normandale Community College. One-fifth (20%) of respondents reported they did not know enough about the education classes or they had not been in the program long enough to have an accurate impression of the quality of the education classes. For this section, we have removed these respondents from the analysis. Overall, respondents report positive impressions of the education classes at Normandale Community College. Four-fifths (83%) of respondents gave the classes a “good” (49%) or “outstanding” (33%) rating. Sixteen percent of respondents thought the classes were “OK” and only 2 percent thought they were “not so good.” Responses from transfer students were similar but no transfer student rated the classes “not so good” while more (40%) rated them “outstanding.”

In an open-ended question, students were asked why they gave the rating they did. One-quarter (26%) of respondents indicated good teachers or well-taught classes as the main reason for their impression of the EdTrAc education classes. Another one-fifth (18%) indicated they learned a lot or the classes provided good content or information. Transfer students and non-transfer students cited different reasons for their impressions. Over half (52%) of transfer students reported good teachers while only 12 percent of non-transfer students reported good teachers. Good content or information had more similar responses, with 20 percent for transfer students and 15 percent for non-transfer students reporting good content or information.

The non-transfer students were more likely to give a general or vague explanation for their impression of the education classes. For instance, almost one-third (31%) of non-transfer students say “no complaints” or “so far so good” as their rationale for their ratings (only 4% for transfer students) and almost one-quarter (23%) of non-transfer students said something similar to “some good classes and some bad classes” or “the classes were good but not great” (0% for transfer students). See Figure 6.

The previous experiences of transfer students may provide them with a comparison to make more thoughtful commentary on the quality of the EdTrAc classes. It is encouraging that students with experience in other college-level classrooms regard the EdTrAc classes, particularly the instructors and content, as high quality. It does not appear that age or first-generation college student status influenced these correlations.

6. Students' impressions of the education classes

Impression	Transfers (n=25)	Non-transfers (n=26)	Overall (N=51)
Outstanding	40%	27%	33%
Good	44%	54%	49%
OK	16%	15%	16%
Not so good	0%	4%	2%
Reason*			
Good teachers/well taught	52%	12%	26%
Good content/learned a lot	20%	15%	18%
No complaints/so far so good	4%	31%	18%
Some good some bad (good but not great)	0%	23%	12%

* **Note:** Open-ended responses, grouped by category; only the top four reasons shown.

Students' impressions of out-of-class help

Respondents were asked to rate their overall impression of the out-of-class help they receive at Normandale Community College. One-quarter (26%) of respondents reported they have not had or needed out-of-class help. For this section we have removed these respondents from analysis. Over three-quarters (78%) of respondents indicated they have a “good” (56%) or “outstanding” (22%) impression of the out-of-class help at Normandale. Another one-fifth (20%) of respondents said the out-of-class help was “OK” while two percent rated it as “not so good.”

Answering an open-ended follow-up question, the most-cited response to why they have that impression of the out-of-class help was the helpfulness of people at Normandale. Over one-quarter (27%) of respondents indicated teachers are helpful out-of-class; another 13 percent reported helpful staff and 11 percent reported tutors or other students were helpful. Interestingly, the exact same number of respondents reported out-of-class services were easily accessible (16%) as reported at least some difficulty (16%) getting out-of-class services. See Figure 7.

7. Students' impressions of the out-of-class help they received (N=45)

Impression	Percent
Outstanding	22%
Good	56%
OK	20%
Not so good	2%
Reason*	
Teachers are helpful	27%
Services easily accessible	16%
Had trouble getting services	16%
Helpful staff	13%
Tutors or students helpful	11%

* **Note:** Open-ended responses, group by category; only the top five reasons are shown.

Favorable aspects of the teacher education program (EdTrAc)

Respondents were asked to list the one or two things they like best about the teacher education program at Normandale (EdTrAc). Students appear to like the quality of the program most and are also happy with the expediency of the program. For example, one-quarter (25%) of respondents reported knowledgeable or generally high-quality staff as one of the main strengths of EdTrAc; 19 percent mention out-of-class experiences or networking; 10 percent mention content taught in class; and 10 percent mention specific classes or general satisfaction with classes as favorable aspects of the EdTrAc program. Furthermore, 15 percent of respondents reported they like the size of the classes, program, or school – which may indicate satisfaction with quality and convenience. Regarding convenience, almost one-quarter (22%) of respondents reported they like the availability or accessibility (including proximity to their home) and 10 percent reported that one of the best things about EdTrAc is the articulation with Minnesota State University, Mankato (MSU,M) which allows them to complete a 4-year degree through MSU,M while staying on the Normandale campus. See Figure 8 for the seven most frequently cited favorable aspects of EdTrAc.

8. What are the one or two best things about the teacher education program at Normandale Community College? Open-ended responses, grouped by category (N=59)

	Number of respondents	Percent of respondents
Knowledgeable or good teachers or staff	15	25%
Availability, accessibility, or convenience	13	22%
Experiences, connections, or networking	11	19%
(Small) size of the class, program, or school	9	15%
Content (what is being taught in the classroom)	6	10%
Classes (general or specific class named)	6	10%
Able to complete 4-year degree (though MSU,M)	6	10%

Improvements to the teacher education program (EdTrAc)

When students were asked to name the one or two things they would like to see changed about the teacher education program at Normandale (EdTrAc), many (37%) reported they would not change anything or that they have not been in the program long enough to answer. Those who did most often mentioned classes as the area of the EdTrAc program to be improved, including one-fifth (19%) of respondents reporting that the availability or scheduling of EdTrAc courses could be improved and 11 percent reporting the content or something else about the classes could be improved. Seven percent of respondents reported out-of-class help could be improved (for example, more tutors or better hours to seek out-of-class help). See Figure 9.

9. What one or two things about the teacher education program could be improved? Open-ended responses, grouped by category (N=54)

	Number of respondents	Percent of respondents
Nothing or haven't been here long enough	20	37%
Classes (improve availability or scheduling)	10	19%
Classes (improve content or other)	6	11%
Improve out-of-class help (more tutors or better hours)	4	7%

Student attitudes towards science, math, and teaching

As part of the student questionnaire, respondents were asked to read a series of paired statements asking about their feelings towards math/science and teaching. After reading the statements, respondents indicated which one described their feelings more accurately. Overall, respondents felt strong about their decision to become a teacher but had less confidence in their math and science abilities.

Interestingly, students were more likely to report knowing they wanted to teach before coming to Normandale (85%) than they were to report they knew they wanted to do something with math/science before coming to Normandale (50%). Furthermore, three-quarters (75%) of respondents reported they are “quite certain” that they want to be a teacher while one-quarter (25%) reported they need to find out more about becoming a teacher before they are sure. About two-thirds of respondents reported being unsure of their math skills (67%) or needing to increase their knowledge and confidence in science (64%) while about one-third reported confidence and enjoyment of math (33%) or enjoyment of science (36%). Over four-fifths (85%) of respondents reported they like the science and math hands-on activities the most while 15 percent think the concepts and theories are the most interesting part of math and science. See Figure 10.

10. Responses to paired statements

	N	%
I am quite certain that I want to be a teacher	50	75%
I think I would like to be a teacher but I need to find out more before I'm sure	17	25%
I like math and feel confident of my abilities in it	22	33%
Math sometimes makes me feel nervous or unsure of my skills	44	67%
I knew before I came here that I wanted to do something with math/science	29	50%
My experiences here at NCC/MSU,M sparked my interest in math/science	29	50%
Science is something I enjoy and like to do	24	36%
I feel that I need to increase my knowledge and confidence in science	42	64%
My experience at NCC/MSU,M made me think seriously about being a teacher	10	15%
I knew before I came here that teaching was something that I wanted to try	55	85%
What I like most about math and science is doing hands-on activities	58	85%
The concepts/theories are the most interesting part of math and science for me	10	15%

First-generation college students

Because of the project’s focus on underrepresented populations we thought it would be important to discuss first-generation college students. The definition of a “first-generation” college student can be confounding. The common definition used by many – including the Minnesota legislature – considers first-generation college students to be those students who have parents with no college experience (i.e., only having a high school diploma or less). However, the Federal Department of Education and many scholarship programs define a first-generation college student as a student whose parents did not complete a four-year baccalaureate degree.²

First-generation college students at EdTrAc

By the Minnesota legislature’s definition of first-generation college student (neither parent attended college), 15 percent of respondents are first-generation college students. When using the federal definition, one-half (50%) of the respondents reported being first-generation students. Two-thirds (66%) of respondents reported at least one parent with at least a two-year college degree including 38 percent with a four-year college degree and 12 percent with a graduate school degree. One-third (34%) of respondents reported neither of their parents had a college degree, however, one-fifth (19%) reported a parent had completed “some college” while 13 percent had a parent with a high school diploma. Only one respondent (1%) reported that neither parent had a high school diploma. See Figure 11.

11. Educational attainment of parents and proportion of first-generation college students

What is the highest grade either of your parents completed?	(N=68)	P	First-generation college student	
			Minnesota	Federal
Less than high school	1	1%	15%	50%
High School	9	13%		
Some college	13	19%		
Two-year degree	11	16%		
Four-year degree	26	38%		
Graduate School	8	12%		

² The federal regulation definition of first-generation is in Sec.402B(6)g1(a) of the Higher Education Act of 1965. <http://www.ed.gov/offices/OPE/PPI/Reauthor/index.html>

Progress and involvement of first-generation college students

As mentioned above, one-half (50%) of the respondents in the student survey met the federal definition of a first-generation college student.³ There were some interesting differences on key points in the survey between first-generation students and other students. For example, only 6 percent of first-generation college students were a part of a cohort at Normandale while 15 percent of other students were involved in a cohort.

First-generation respondents reported fewer intentions in acquiring awards and degrees as well as less progress in credit hours. When asked what award or degree they intended to receive, one-quarter (24%) of first-generation students did not report any award or degree while only 12 percent of non-first-generation students did not report any award or degree. Furthermore, over four-fifths of first-generation respondents reported less than 65 credits completed (18% have completed 65 to 128 credit hours) while two-thirds (65%) of non-first generation respondents reported less than 65 credits completed (35% have completed 65 to 128 credit hours). Higher numbers of first-generation students reporting early stages of the program (undecided degree and less than 65 credits) may illustrate early stages of the project's recruitment work.

On the other hand, first generation college students surveyed were slightly more likely than other students surveyed to have attended a Teachers of Tomorrow meeting (18% to 12%) or tutor other college students (12% to 0%). Furthermore, these first-generation students were more likely than other students to indicate confidence in math and science. For example, 44 percent of first-generation students (31% of other students) reported that "science is something they enjoy and like to do" as opposed to something they "need to increase their knowledge in." Two-fifths (41%) of first-generation students (28% of other students) reported they "like math and feel confident in their abilities" instead of feeling that math "makes them nervous or unsure of their skills." Finally, one-fifth (21%) of first generation students (9% of other students) reported "the concepts and theories are the most interesting part of math and science" instead of liking the hands-on activities the most. See Figure 12. Because of the small number of students surveyed, these differences are not statistically significant.

³ For this section we are analyzing the data using the federal definition of first-generation college student.

12. First-generation students compared to other students

	First generation (N=34)	Other students (N=34)
Part of a cohort at Normandale	6%	15%
Did not indicate degree or credential	24%	12%
0-64 credits completed	82%	65%
65-128 credits completed	18%	35%
Attended a Teachers of Tomorrow meeting	18%	12%
Tutored other college students (anywhere)	13%	0%
"Science is something I enjoy and like to do"	44%	31%
"I like math and feel confident in my abilities"	41%	28%
"The concepts and theories are the most interesting part of math and science for me"	21%	9%

Helping first-generation college students

Normandale and K-12 key informants were asked about helping first generation college students succeed. Normandale key informants mentioned the need for first generation students to "find a place where they feel comfortable" and that "having cohorts and tighter groups of students would work to help first generation students." It was also mentioned that it may be hard for first generation students to put in effort if "they are unable to see themselves succeed" and that you "have to make it safe for them to experiment." In other words, key informants think building cohesion and confidence among first generation college students is critical to ensuring success for them in college-level academics.

The K-12 key informants were asked what they thought were the barriers to getting first generation college students the preparation they need to enter college. The themes mentioned by the K-12 key informants were preparing study skills and – like the Normandale key informants – making sure the students feel comfortable and have adequate connections with other students.

Other informants mentioned adjusting first generation college students' perspectives about the college experience and improving their access to the tools necessary to work through the process. For example, one reported that it is important to expose first generation college students to college settings and provide information to help their parent or parents "learn about the hoops they will have to jump through." This informant

also thought it was important to get successful college graduates of different ethnicities and language groups to come in and speak to students of the same groups so the students have a positive example in someone they can relate to and understand that they can succeed. Another informant suggests “mentors” to help students and parents with the process and provide examples of the college experience to the student.

Student respondents

Race and gender

One-quarter (25%) of student respondents are male and three-quarters (75%) are female. Most (85%) respondents identify as White or Caucasian; 6 percent identify as African American or Black; 5 percent identify as Asian; 3 percent as Multiracial; and 2 percent as Hispanic. See Figure 13.

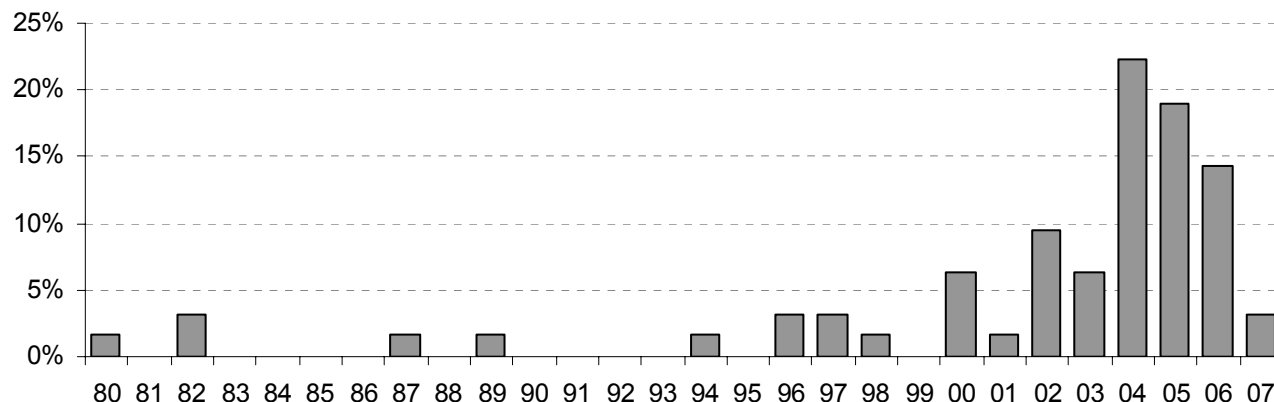
13. Race and gender of respondents

Gender	Number	Percent
Male	17	25%
Female	50	75%
Race		
White/Caucasian	56	85%
African American/Black	4	6%
Asian	3	5%
Hispanic/Latino	1	2%
Multiracial	2	3%

Type of high school and year of graduation

Most (89%) respondents graduated from public high school, 8 percent graduated from private high school, and 3 percent received a GED. Four-fifths (79%) of respondents graduated high school (or received a GED) between 2000 and 2006 while 3 percent are preparing to graduate in 2007. The three years with the highest percentage of overall graduates were 2004 (22%), 2005 (19%), and 2006 (14%). Ten percent graduated in the 1990s and another 8 percent in the 1980s with the earliest graduation in 1980. See Figure 14.

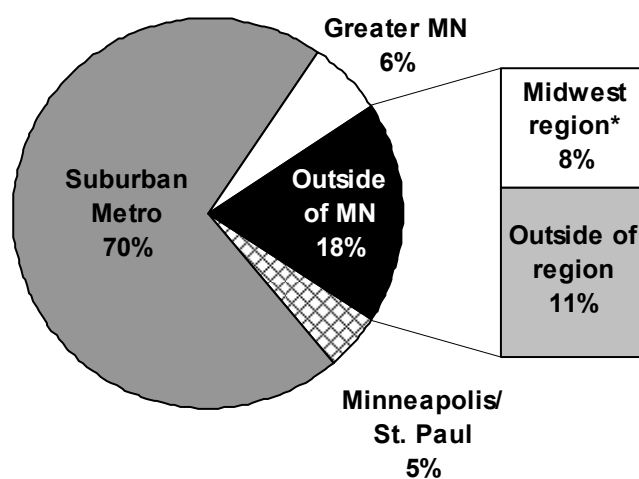
14. High school graduation year of respondents (N=63)



Location of high school

Overall, most (82%) respondents completed secondary education – high school or GED – in Minnesota. Almost three-quarters (71%) of respondents completed secondary education in the suburban metro area with 5 percent from Minneapolis/Saint Paul (MSP) and 6 percent outside of the seven-county metro area.⁴ Eighteen percent of students completed secondary education outside of Minnesota including 8 percent from the Midwest region⁵ and 11 percent from outside of the Midwest region (including one respondent from out of the country). See Figure 15.

15. Area of respondents' high school graduation (N=65)



***Note:** Midwest region includes: Iowa, North Dakota, South Dakota, and Wisconsin.

⁴ The seven-county metro area includes: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties.

⁵ Midwest region includes: Iowa, North Dakota, South Dakota, and Wisconsin.

Prior college enrollment

Almost one-half (48%) of respondents reported they have been enrolled in a different post-secondary school prior to coming to Normandale Community College. Of students reporting prior post-secondary enrollment, almost two-thirds (64%) reported enrollment in a four-year college or university and almost one-half (48%) reported enrollment in a different two-year community or technical school. Four respondents (6%) reported previous enrollment at more than one school.

Students who had been enrolled in another post-secondary school before Normandale were asked to give their reason(s) for coming to Normandale. Over one-half (56%) of transfers reported proximity as a main reason, saying that it was either close to their home or the location was convenient for them. One-quarter (25%) of transfers reported that the degrees, credentials, or programs offered at Normandale were a main reason they decided to attend the school and 16 percent reported the affordability of Normandale as a main reason. See Figure 16 for a complete list of respondents' reasons.

16. Reasons students transferred to Normandale. Open-ended responses, grouped by category (n=32)

Reason	Number	Percent
Location (close to home or convenient location)	18	56%
Degrees, credentials, or programs offered	8	25%
Affordability (cheap or cheaper price)	5	16%
To finish general credits	2	6%
Opportunities provided at Normandale	2	6%
Didn't like previous school or area	2	6%
Personal issues	1	3%
Pursue personal goals	1	3%
Other reasons	4	13%

Degrees and credits at Normandale Community College

Students were asked how many credits they had completed and what degrees or certifications they expected to complete. Respondents were allowed to check all the degrees that applied to them. Almost two-thirds (63%) of respondents reported expecting to complete a four-year Bachelor's degree; over half (53%) reported an Elementary Teaching License; and over one-third (36%) reported a two-year Associate's degree. Ten percent of respondents reported that they are expecting to complete a graduate school degree. Most students (73%) had completed less than 65 credit hours at the time of the survey (39% completed 0-32 credits and 34% completed 33-64 credits) while 24 percent had completed 65 to 96 credit hours and three percent had completed over 96 credit hours. See Figure 17 for a more detailed analysis of total credit hours completed, grouped by the award the student is expecting to achieve.

17. Credits by awards sought (N=69)

	Associate's Degree		Bachelor's Degree		Graduate Degree		Elementary Teaching License	
Degree (% of all students)	25	36%	44	63%	7	10%	37	53%
0-32 credits (% of degree)	7	28%	14	32%	1	14%	12	32%
33-64 credits (% of degree)	10	40%	18	41%	2	29%	13	35%
65-96 credits (% of degree)	8	32%	12	27%	2	29%	11	30%
97-128 credits (% of degree)	0	0%	0	0%	2	29%	1	3%

Over four-fifths (83%) of students reported seeking at least one of the degree awards (Associate's, Bachelor's, or Graduate degree), three percent reported no awards while 14 percent reported only an Elementary Teaching License.⁶ Respondents who reported at least one degree were asked to identify their chosen field for the degree they are expecting to complete. Overall, there were 76 majors reported by the 58 respondents who indicated a degree (1.3 majors per degree). Over one-half (55%) of students (42% of degrees) reported the elementary education field for their degree and another 29 percent of students (22% of degrees) reported general or unspecified education. Twelve percent of students (9% of degrees) reported special education and 12 percent (9% of degrees) reported math/science. Twenty-eight percent of students (21% of degrees) reported another field or were undecided. See Figure 18.

⁶ It is not an option for students in the EdTrAc program to seek only an Elementary Teaching license; they are also expected to complete a Bachelor's degree which is required for the license. Student coming to Normandale with a Bachelor's degree are directed to other licensure programs at the school. It is unclear why these students selected only the Elementary Teaching license.

18. Area of study by degrees (and overall for all degrees and all students)

	Education		Elem. Ed.		Special Ed.		Math/Science		Other/ undecided	
Associate's (n=25)	5	20%	7	28%	2	8%	0	0%	10	40%
Bachelor's (n=44)	9	20%	23	52%	5	11%	6	14%	4	9%
Grad. School (n=7)	3	43%	2	29%	0	0%	1	14%	2	29%
All Degrees (n=76)	17	22%	32	42%	7	9%	7	9%	16	21%
All Students (n=58)	17	29%	32	55%	7	12%	7	12%	16	28%

Issues to consider

Overall, the evaluation indicates that the EdTrAc project is on track. Accomplishments in the first year of implementation include the following:

- Strong new courses, which are considered excellent by both project leaders and students.
- An EdTrAc office that is providing information and service to students and faculty. The work coordinated from this hub is not only considered successful by project leaders, but in addition student survey responses express considerable appreciation for the availability and helpfulness of out-of-class support, much of which likely comes through this office.
- Implementation of the SMART database to track students all the way from initial expression of interest through to first professional placement.
- Setting up an Advisory Committee to plan outreach work to K-12 schools.
- Support for a very active Teachers of Tomorrow Club, and helping them to put on a successful Future Teachers Conference.
- Initial implementation of a cohort of students to take classes together, give each other peer support, and enable project staff to more efficiently deliver supportive services as needed.

Evaluation findings suggest potential value in putting particular attention in the coming year to the following areas:

- Scheduling of classes, including better communication and coordination between Normandale and Mankato and paying particular attention to the sections that students need available to them.
- Recruitment of students for the cohort, particularly first-generation college students.
- Outreach to high schools.
- Communications and public relations to increase awareness of EdTrAc and the cohorts among students at Normandale.

Student surveys show strongly favorable student responses to the program. Suggestions for improvement, when any were offered, focused mainly on scheduling and availability

of classes. Concern about this is raised due to the change in MSU,M staff schedule meaning that there will not be a person on the NCC campus full-time who can help to ensure that these schedules will be well coordinated. This should receive attention.

Project leaders express concern mainly about cohort recruitment and high school outreach.

One apparent barrier to cohort recruitment is the requirement that participants be full-time students, whereas many students in the teacher education program attend school part-time because of their need to work to cover the costs of tuition and living expenses. This is especially likely to be true of the diverse first-generation urban students who are the EdTrAc program's primary target population.

First-year successes to build on include a strong outreach effort from the EdTrAc office and through math and science teachers, an environment that students generally report as helpful, and the availability of current cohort students to let other students know that the cohort is valuable to them. Opportunities that can be taken to strengthen the cohort include seeking scholarship funding, which would enable more students to be full-time and hence eligible. The program should consider having current cohort students go to high schools and tell students there not just about the teacher education program at NCC but also about the cohort as an opportunity. Having the information about the cohort earlier would help students plan further ahead and possibly be better able to include the cohort in their plans.

High school outreach has proven to be a time-consuming task, but this will be addressed by the hiring of a full-time person who will have this work as a main responsibility. Student surveys show there are already some students in the program who heard about it through their high schools; this may or may not reflect the first year's work. Most first-generation students who were surveyed indicated that they learned of the teacher education program after being at Normandale, so more information available during the high school years will be helpful.

The efforts to promote the cohorts and high school outreach will both involve a focus on well-crafted information and communication. Evaluation findings suggest these have been well developed during the first year, which will provide a strong foundation to build on. Particular strengths to expand on include the demonstrated success of the SMART database, faculty identification and encouragement of students in their classes, and EdTrAc office as a hub for information and support.

The planned expansion of communication efforts should focus on identifying students in greatest need of peer support through the cohort. Student survey responses indicate that instructors are a significant source of information about the teacher education program for first-generation students. It would be helpful to use this vehicle as an additional way

to provide students with information about the cohort as early as possible while their plans are still relatively flexible. Efforts to secure scholarship funding, now underway, have the potential to address one of the more significant barriers to cohort participation.

If possible, increased flexibility in the way in which the cohort is offered would likely also make it more attractive to potential participants.

It should also be noted that the Normandale EdTrAc program was one of seven programs to receive a best practice award from the Phi Theta Kappa International Honor Society for their work with teacher preparation. The award cites “strong administrative support, exemplary faculty leadership, a strong curriculum, and multiple opportunities for students” as characteristics exhibited by EdTrAc. The award also concluded that in the case of EdTrAc, “the end result was an exemplary teacher education program.”

In summary, the information collected by this evaluation shows that the EdTrAc program in its first year consistently and successfully focused on the goals that it had set for itself, by means of activities that are well matched to their intended outcomes. The sequencing of activities is well designed to create early successes to build on in subsequent years.