

Factors Driving Undergraduate Students' Choice of a College Major and Perceptions about Teaching as a Career Choice



Prepared by:
Janet C. Fairman, PhD
Patricia L. Lech, MD, MS

April 2023

Maine Education Policy Research Institute

University of Maine

Orono, Maine



Published by the Maine Education Policy Research Institute in the College of Education and Human Development, University of Maine. This study was jointly funded by the Maine State Legislature, and the University of Maine System.

MEPRI was established to conduct nonpartisan studies on Maine education policy and the Maine public education system for the Maine Legislature.

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College of Education and Human Development
University of Maine, 5766 Shibles Hall, Orono, Maine 04469-5766 (207) 581-2475
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Overview of the Study

Why was this study conducted? This research was conducted by the Maine Education Policy Research Institute (MEPRI) at the request of the Maine State Legislature’s Joint Standing Committee on Education and Cultural Affairs. The impetus for this study is the continuing state and national challenge of educator recruitment and staffing shortages in the PK-12 teaching profession, and the need to better understand the reasons undergraduate students may choose to pursue an education degree and career or not.

What do you need to know to put this study into context? Severe school staffing shortages in Maine and elsewhere in the US have heightened concerns about the pipeline for educators. A number of factors have contributed to declining numbers of students seeking an undergraduate degree and career in PK-12 education. Undergraduate enrollments have declined in recent years, particular in Maine as an aging state. The percentage of undergraduates pursuing education degrees for both male and female students nationally has also declined significantly, but even more so in Maine. For those who do choose to pursue teaching as a career, there is greater demand for online and non-traditional, alternative preparation programs. On the other end of the pipeline, increased turnover, retirements and early retirements have also depleted the teaching workforce. Maine’s educator workforce is older than many other states. The pandemic appears to have contributed to educator attrition in the workforce, but more research is needed to investigate that question. A separate MEPRI study this year will focus on Maine school staffing changes in recent years. While much of the literature and media reports focus on PK-12 staffing shortages, there is also concern about existing and increasing staffing surpluses in some areas of education. Two major factors seem to be fueling that problem: 1) the decline in number of school aged children in some locales, particularly in some states like Maine, and 2) the preference for some students to choose teaching careers in subject areas where there may already be an over-supply of educators.

What did we learn from the study?

Part I. Trends in University of Maine System Data for Choice of Major

Enrollment in Education Degree Programs

- Longitudinal data for the UMaine System (UMS) indicate a decline in the total number of undergraduates each year from fall 2017 to fall 2022, with the sharpest decline in 2022.
- While the total number of UMS undergraduate students in education programs declined from fall 2017 to fall 2022, the enrollment was fairly level from 2018 through 2021, with the sharpest decline in fall 2022.
- The percentage of undergraduates in education programs remained steady at roughly 8.5% or 9% of all UMS undergraduates from fall 2017 to fall 2022.
- UMaine and UM Farmington campuses continued to have the largest proportion of all education undergraduates in the System from fall 2017 to fall 2022.

- All but one of the UMS campuses saw significant decline in undergraduate education enrollment from fall 2017 to fall 2022. The largest education enrollment decline was at UM Farmington. UM Fort Kent closed their education program.
- UM Presque Isle grew their online and elementary education program, more than doubling their education enrollment.

Change of Majors

- Education undergraduates in the UMaine System changed their majors at slightly higher rates than non-education students.
- The percentages of students who changed their major declined during the past six years, and more so for education students.
- Larger percentages of both education and non-education students changed their major within the first year of study.
- While education students were slightly less likely to change their major in their first year of study than non-education students, education students with 90+ credit hours completed were much more likely to change their majors near the end of their program than non-education students, sometimes at double the rates.

Retention of Students

- The percentages of education and non-education undergraduates who returned to the UMS in their programs each fall during the six years examined were fairly comparable, with slightly higher percentages of education students returning to the System. The percentages of both groups returning to UMS declined slightly from fall 2017 to fall 2021.

Degree Completion

- The percentage of undergraduate students in their programs who completed their degrees in a given year remained fairly stable from fall 2017 to fall 2021 for both education students and non-education students in the UMS.
- Education undergraduates had a higher 4-year graduation rate of 39.7% compared to non-education majors (35.1%), but also a higher 6-year graduation rate of 58% compared to non-education majors (52.9%).

Part II. Findings from the Undergraduate Student Survey

Demographics

- Males were less likely than females to respond to this survey. Males composed 25% of the education majors but only 17% of the survey respondents. Half of the non-education majors sampled were male, but only 38% of the non-education majors who responded were male.
- Six percent of survey respondents identified as non-binary, transgender or other.

Majors

- Most respondents identified themselves as being in a degree program and listed a major (n=603). The most common major was education (46%, n=280). This is largely attributable to the sample design.
- Within the education major, the distribution by gender was 79% female (n=199), 16% male (n=40) and 5% transgender/non-binary/other (n=13).
- Other majors with a high percentage of females were health professions majors (e.g., nursing, athletic training, speech therapist) (84%, n=27), psychology majors (74%, n=23) and public administration and social services (74%, n=14) students. Majors with the highest percentage of males were engineering (77%, n=23), computer science (80%, n=12), and mathematics (53%, n=8).
- A quarter of all students had changed their major (24%, n=145) and fifteen students (2%) indicated they planned to change their major.

Type of Education Program

- The largest number of respondents were traditional, full-time students from the Orono and Farmington campuses. UMaine Augusta had the highest percentages on non-traditional students, and part-time students.

Online Education Programs

- Twenty-seven percent of education students responding reported that their classes are primarily online.
- More than two-thirds of all students responding were from the Augusta, Fort Kent and Presque Isle campuses said that their classes were primarily online.

Reasons for Selecting Current Major

- For all groups of students, their “interests and passions” (85%, n=477), and “skills and talents” (62%, n=346) were among the top three factors in their choice of major.
- Among the top five reasons for both education majors and non-education majors was the “future ability to do meaningful work” and “future ability to help others.” Both of these reasons were selected more often by education majors than non-education majors. Almost two-thirds of education majors selected “ability to do meaningful work” (62%) and “future ability to help others” (64%) while less than half of non-education majors selected “ability to do meaningful work” (46%) and “future ability to help others” (32%).
- Although it was not among the top five reasons for choosing a major, a large percentage of both education majors (27%) and non-education majors (24%) selected “positive long-term employment outlook.”
- Education majors placed a higher value on “work schedule will be compatible with family life” (27%) and “career choice will allow work-life balance” (19%).
- Non-education majors more often indicated “potential high future earnings” (35%), “intellectually stimulating career” (29%), “ability to earn enough for a comfortable life” (26%) and “potential for career advancement” (23%).

Interest in Teaching

- Traditional students (54%) were more likely than non-traditional students (45%) to agree that they “enjoyed tutoring and/or helping others learn in courses I am taking or in courses that I have taken.” Traditional education students (59%) expressed the highest level of agreement with this statement.
- Education majors (82%) were more likely than non-education majors (49%) to agree that “enjoy working in a leadership role with groups of children.”

Math Enjoyment and Confidence

- There was very little difference between education majors (40%, n=108) and non-education majors (43%, n=139) in the percentage of students who reported that they enjoy using math.
- A higher percentage of non-traditional education majors (58%, n= 25) reported enjoying using math than traditional education students (31%, n=81). Overall, males (51%, n=78) were more likely than females (38%, n=138) to indicate they enjoy using math.
- Students were asked to rate their own math skills compared to the average college student. Over-all most students rated themselves as average (42%). Slightly more students rated themselves above average (33%) than below average (24%).
- Education majors (28%) were less likely than non-education majors to rate their math skills as above average (37%).
- Males (50%) were almost twice as likely as females (27%) to rate their math skills as above average.

Education Majors

- The most common concentration within education was elementary education (43%, n=107). This is in line with UMaine System 2020-21 data showing that 47% (n=126) of the 267 bachelor’s degrees in Education were awarded to those in the elementary education concentration.
- There were few secondary STEM concentration majors (n=15) among the survey respondents. Secondary English (n=30) and secondary social studies (n=32) had twice as many students as the other education concentrations.
- There was a low number of male respondents (n=40). Among males the most popular concentration was social studies (30%, n=12). More than half of the physical education students were male.
- Overall, eighty-two percent of education majors (n=217) took their first education class by the end of their first year in college. Thirty-nine respondents (15%) said they took an early college education class. Most (67%, n=178) had their first education class in their first year of college.
- Almost three-quarters of respondents (72%) made this decision to major in education prior to starting college. Another 16% chose an education major in their first year.
- Thirty education majors (11%) reported that they had changed from another major into education. Fifteen education majors (5%) had changed majors within the education category.
- Most education majors (86%, n=221) felt they would student teach. Nine percent (n=23) were unsure if they would student teach and five percent (n=13) said they would not student teach.

- There were 223 education students who responded to an open-ended question asking how they chose education as a major. Common themes were the students made an early decision to be a teacher based on their school experiences and/or the influence of one or two teachers. Most of the 74 students who mentioned a time period when they decided they wanted to be a teacher said “always.” An additional fourteen made the decision in high school on the basis of volunteer work or a job. A desire to work with children was cited by several. Others noted the influence of teachers.
- Education majors were asked if they may become an administrator. A quarter of respondents (26%, n=65) had not thought about this career path. Six percent (n=15) plan to become administrators. Among non-traditional students (41%, n=17) and female students (34%, n=67), the most common response was “I do not want to become an administrator.” The most common response for traditional students (40%, n=83) and male students (48%, n=19) was “I may or may not become an administrator.”

Non-Education Majors’ Consideration of K-12 Teaching

- Twenty students are planning on getting an education minor. Two of these students say their major is also education. Five students getting an education minor are in creative and performing arts and four are in the humanities. Two were STEM majors. All but one education minor are full-time students. Seventeen are traditional students. Ten plan to teach. Six responded “No, I do not think I would ever teach.”
- Non-education majors were asked whether they had considered changing into an education major. Thirty-four students (11%) had considered switching into an education major. The most common majors of those who had considered switching into education were humanities (n=8), creative and performing arts (n=5) and business (n=5).
- A third of those who had considered a switch into an education major (32%, n=11) strongly disagreed that it would be easy to switch their major to education. Another (29%, n=10) somewhat disagreed that it would be easy to switch their major to education.
- Twelve students indicated that they had switched from education into a non-education major, while 50 students switched majors across non-education fields.
- The majority of students (53%, n=113) in their second year of college or further in their program disagreed that it would be easy to change their major to education.
- About one in five non-education majors (21%, n=67) had taken an education class. Most who had taken an education class (59%) had not considered changing their major or minor to education. Thirteen of the non-education majors who had taken an education class (19%) were planning on getting an education minor and six (9%) were considering it.
- Student teaching did not appear to be a barrier to most of the students who had considered switching majors or are getting an education minor. Most (43%, n=16) disagreed with the statement “The thought of doing a semester of student teaching discourages me from getting an Education major.” A quarter of those who had considered switching into education (24%, n=9) agreed with the statement.
- Reasons for not switching into an education major were provided by twenty-three students of the students who said that they had considered changing into an education major. Transferring credits was a barrier to five third and fourth year students. One wrote “Time and money. If more of my credit hours transferred I would seriously consider it. Teaching is my dream career that will not happen.” Two said that they did not want to

student teach. For one, student teaching would interfere with their job. The other felt student teaching would make their degree program longer and more expensive. Five said they were no longer interested in teaching. Seven felt low pay for teachers dissuaded them from an education major.

- Teaching in K-12 schools as a career was noted as a possibility for over a quarter of students who were not majoring or minoring in education. Seventy-five (27%) of non-education majors said they might or might not teach or may teach. Of those who provided information on their gender, females (29%, n=42) were slightly more likely than males (25%, n=26) to feel they might teach.

Benefits of Teaching

- One survey item asked all survey respondents to identify up to three perceived benefits of teaching as a career from a provided list. The most commonly identified benefit was time-off in the summers and for holidays (54%, n=287).
- The second most commonly chosen benefit was “working with children.” This was the most often chosen benefit for education majors (67%, n=182). Over a third of non-education majors also identified “working with children” as one of the top three benefits to a teaching career.
- Emotional satisfaction was identified by over a third of all respondents (36%, n=194). A larger percentage of traditional education majors (44%, n=99) selected emotional satisfaction.
- School community was more often selected by education majors (35%, n=95) than non-education majors (22%, n=58).
- “Ability to be home when children are out of school” was chosen by a quarter of respondents (24%, n=132).

Drawbacks to Teaching

- On one survey item, respondents were asked to choose up to three perceived drawbacks to teaching as a career from a list of different factors. Pay was overwhelming chosen by most respondents (81%, n=444). No other drawback was selected by more than 40% of the respondents. Traditional students (86%, n=364) were more likely than non-traditional students (62%, n=78) to identify pay as a drawback to a teaching career.
- The education system was identified as a drawback by several respondents. Education majors (36%, n=97) were more likely than non-education majors (26%, n=71) to identify the “education system” as a drawback to teaching as a career.
- Teaching being “emotionally challenging” was identified as a drawback by 30% of respondents (n=168).
- Education majors (37%, n=85) selected stress as a drawback to a teaching career.
- Non-education majors (32%, n=89) were more likely than education majors (20%, n=55) to identify student behavior as a drawback.

Starting Salary

- There was agreement among respondents (88%, n=491) that a starting salary for teachers of \$40,000 was too low. Over half of the respondents (54%, n=299) felt \$40,000 was “far too little” for a first year teacher’s salary in Maine. Eleven percent felt it was “just about right.”

Teaching in Rural Maine

- The respondents who reported that they are planning to teach or said they may teach were asked to select which factors would entice them to work in rural Maine. Thirty percent of those who planned to teach or may teach said that they want to teach in rural Maine. Those who went to high school in rural Maine (44%) or an out-of-state rural area (44%) said they wanted to teach in rural Maine, while just thirteen percent of those from a city/suburb wanted to teach in rural Maine.
- Only seven percent (n=20) felt “nothing would interest me in teaching in rural Maine.”
- More than half of the respondents to this question (55%) valued having a full-time position at one school.
- The next incentive cited that could attract them to teach in a rural school was higher pay than in a city (43%, n=116).
- The third highest percentage of respondents (36%, n=98) selected “strong peer support (other new teachers)” as a factor that could entice them to teach in rural Maine.
- The desire for strong mentoring support was the main difference between respondents whose classes were primarily in-person (28%, n=55) and those who are taking classes primarily on-line (44%, n=31).
- The largest differences between respondent groups were seen by year in school. First year students were the most likely to say that they wanted to teach in rural Maine (41%, n=23), in an area where they grew up (48%, n=27) and where they had family nearby (39%, n=22). Fourth and fifth-year students were more likely to value higher pay than in the city (44%, n=32), a four-day work week (36%, n=26), a job for partner or spouse in the area (26%, n=19) and having housing provided (25%, n=18).

What did we conclude overall from the study?

This study included an analysis of longitudinal data from the University of Maine System (UMS) on undergraduate student enrollment, retention and graduation for education and non-education majors, as well as an overview of the research literature on undergraduate enrollment and choice of education majors in particular. The data in Maine largely follow national trends showing a pattern of declining undergraduate enrollment in recent years as well as a decline in the number of students choosing to major in education and completing education degrees. Within the UMS, the percentage of all undergraduates who choose education has remained fairly steady these past five years. Education students changed their majors at slightly higher rates than non-education students, but also had a slightly higher 4-year and 6-year graduate rate compared to non-education students.

The study also included a survey of UMS undergraduate students to explore what factors drive their choice of college majors, and their perceptions of PK-12 teaching as a career option. Our findings about the factors students consider were quite consistent for our Maine students compared with national surveys. We found some similarities across all the undergraduates but also some differences between education and non-education majors in what students were looking for in a career after college. We also found some gender differences in choice of major. Interestingly, many of the non-education majors remained open to the possibility of teaching at

some point, which presents an opportunity to attract future teachers both through the delivery of education courses for non-education majors and through alternative education preparation pathways later in life for career changers. While some of the UMS campuses feature part-time programs for non-traditional students, other campuses predominantly offer full-time, in-person degree programs. Many UMS students seem open to the idea of teaching in a rural location, but salary and housing incentives would be key to their decision-making. While students viewed a teaching career in fairly positive ways, they saw current salary levels as a major detractor. Few students indicated they would consider a career in PK-12 education administration where there are also concerns about shortages and high turnover.

While the literature includes growing concern about teacher shortages in PK-12 schools, there is also evidence of countering forces that might reduce the severity of these shortages. In particular, declining numbers of school-aged youth in some locales, such as Maine, will reduce PK-12 school enrollments and thus fewer teachers and school buildings may be needed in the future. Further, in some subject areas, there appears to be an oversupply of trained teachers, while other areas have a critical shortage of trained educators. The national literature and data, UMS enrollment data on number of students within particular areas of concentration within the education major, and the results of our undergraduate survey of UMS students, all point to the same conclusion that undergraduate students continue to select college majors based on their own interests, passions and desire to “make a difference” in society, but without much consideration about where the jobs are. This is particularly true for students that choose education concentrations in areas that are currently over-supplied in the job market. The challenge seems to be one of providing better college and career information to students at an earlier stage in middle and high school, based on actual employment needs and projections, to encourage students into education careers where there is a high need for educators. Finding a better alignment in our supply and demand for PK-12 educators could reduce some of the severe teacher shortages in certain areas.

What are some potential implications for education policy and/ or practice?

- The number of education majors may be increased by providing high school students information on teaching PK-12 as a career and opportunities to experience working with children. Most education majors had decided on an education major prior to entering college. Early college courses in education had been taken by 15% of education majors.
- Non-traditional pathways into education careers should be promoted for adult learners. There are some online options and teaching certificate programs within the UMaine System. More than a quarter of non-education majors felt they might or might not teach at some point in their careers.
- Some respondents felt it was difficult to switch into an education when they were in their second year or more of college. Options for these students to enter teaching without incurring extra cost and academic time could be explored.

- While UMS has some master's degree programs for students with a degree in another field, Maine is an exception to the national trend of conferring significantly more master's degrees in education than bachelor's degrees.
- Providing students information on how teacher salaries increase with experience and average teacher salaries may increase interest in teaching as a profession. Most respondents saw low pay as a disadvantage to teaching PK-12 and felt a starting salary of \$40,000 was too low.
- There is a national mismatch of students' choice of major and concentration within education and areas of need in PK-12 education. Providing potential undergraduate students with reliable information on future teacher openings and areas of shortages may help students choose concentrations where job opportunities will be more plentiful. Although many respondents reported that they enjoy using math and were confident that their math skills were equal to or better than their college peers, very few had selected a STEM concentration.
- While male teachers are believed to have a positive effect on male students, there remains a shortage of male teachers. Nationwide, the number of males in bachelor's degree education programs has been decreasing at a faster rate than that of females. The male respondents in education were over-represented in physical education and secondary social sciences concentrations. These concentrations are not in areas of teacher shortages.
- Designing and promoting education courses for students who do not plan on going into PK-12 teaching could increase awareness and interest in teaching later on. Over a quarter of the non-education respondents indicated a potential interest in teaching in the future, and many individuals do pursue education as a second career. The majority of non-education majors in our survey sample have not taken an education course.
- While the focus of this report was on teaching PK-12 as a career, a holistic view of district needs should be considered. Schools are increasingly employing professionals who are not teachers, such as specialists in areas of disability, school counselors, psychologists and coaches. Districts can emphasize recruiting under-represented populations into a variety of positions beyond classroom teachers.

What methods were used to conduct this study? The study included informal interviews with coordinators of teacher education programs from three UMaine System (UMS) campuses, a representative survey of undergraduate students from across the System's seven campuses, and collection of student enrollment data on college majors, change of majors, retention, and degree completion from the System. An anonymous online survey was disseminated to 4,034 students in late fall 2022, with about half (2,034) representing all enrolled education students pursuing a program of study that would lead to teacher certification and the other half (2,000) representing non-education majors as a random sample. A total of 628 students completed the survey for an overall response rate of 16%. The broad research questions guiding this study were the following:

- What proportion of all UMS undergraduate students choose to major or minor in education? How has this changed in recent years? (institutional data)
- What proportion of all UMS students change their major from education to some other major or vice versa? (institutional data)
- What proportion of all UMS students return the following fall semester to continue working on their education degree? (institutional data)
- What proportion of all UMS students complete their degree (degree conferral) in education versus other disciplines? (institutional data)
- What are the reasons UMS undergraduate students choose to major in education or not? (survey data)
- How do UMS students view teaching Pre-kindergarten through grade 12 as a career? (survey data)

How robust are the findings? All enrolled education students (majors, minors, concentrations and alternative pathways) working in programs toward PK-12 teacher certification were invited to participate in the survey, and a broad, representative sample of an equivalent number of students in non-education undergraduate degree programs were also invited to take the survey. While the overall response rate of 16% is lower than ideal, it is still within the normal range of recent undergraduate student surveys conducted by the UMaine System or campuses. Data analyses allowed us to investigate responses in more nuanced ways, for example by gender, year in program and reasons for pursuing education vs. non-education programs.

Introduction

This report presents findings from a study of factors that drive the choice of a college major for undergraduate students, as well as their general perceptions about and level of interest in teaching as a career choice. This research was conducted by the Maine Education Policy Research Institute (MEPRI) at the request of the Maine State Legislature’s Joint Standing Committee on Education and Cultural Affairs. The study included both a survey of undergraduate students from across the University of Maine System’s (UMS) campuses and collection of demographic data from that institution on the number of students choosing various majors and changing majors. The impetus for this study is the continuing state and national challenge of educator recruitment and staffing shortages in the PK-12 teaching profession, and the need to better understand the reasons undergraduate students may choose to pursue an education degree and career or not. Findings from this study build on previous research by MEPRI related to educator staffing, recruitment, certification, turnover and shortages in Maine (Fairman et al., 2019; Johnson & Morris, 2019 and 2021; Johnson et al., 2020; Morris & Johnson, 2018), and also contribute to the broader body of research on this topic to inform both institutional as well as state level policy decisions.

Background

A growing challenge facing Maine and other US states is the lack of sufficient numbers of teachers to staff schools, partly as a result of larger numbers of retiring teachers in recent years and high attrition in the teaching profession (Darling-Hammond, 2020). Lower numbers of students seeking college degrees and education degrees specifically are also important factors causing the staffing shortages to increase over time. All of these factors contribute to growing concerns about the pipeline for producing sufficient numbers of PK-12 educators. At the same time, there is evidence of an oversupply of teachers in some subject areas, and concern about the effect of declining PK-12 student enrollment on staffing needs for the future. We review available research literature and current data in this section.

Across the US, the number of college applications to public and private non-profit four-year colleges increased by 46% from 2011 to the fall of 2021 (June, 2023). However, actual enrollment numbers at some universities have declined, and fewer students have been entering college in the past decade than before. In the first two years of the pandemic (2020-21 and 2021-22), college enrollment sharply declined (by 6.75%) Early figures from fall 2022 show that there

was no rebound from students who may have taken a gap year before entering college; the decline in undergraduate enrollment was still at the pre-pandemic rate of 1.1% (Belkin, 2022; National Student Clearinghouse Research Center, 2023).

A growing trend in college enrollment is the high demand for community college programs and online programs that allow students more flexibility in their work and learning schedules. While enrollment in traditional teacher preparation programs declined nationally by 43% from 2010-2018, enrollment in alternative preparation programs grew by 42% (Partelow, 2019). Some students with a non-education bachelor's degree later decide to pursue a teaching career and enroll in an alternative preparation program or an education master's degree program. Among the institutions awarding the largest number of bachelor's degrees from 2017-2020, the top five were either online universities or had large online programs (The Chronicle of Higher Education, Oct., 2022). In Maine and elsewhere, larger numbers of individuals seeking a career in PK-12 teaching are also enrolling in online, non-traditional, or alternative route preparation programs (Partelow, 2019). We discuss this enrollment trend for the UMaine System more in the findings section of this report.

Across the US, the number of education majors as a percentage of all college graduates completing degrees has been decreasing since the 1970s when education was the most common college major (Schaeffer, 2022). Within this shrinking population of college students, a significantly lower percentage of undergraduate students are choosing to pursue education majors and careers. Between 2010 and 2018, enrollment in teacher education programs across the US declined by more than one third (Partelow, 2019). During this period, the enrollment declined by 44% for male students, 33% for female students, 27% for Black students, and 27% for Hispanic/ Latinx students (Partelow, 2019). The more rapid decline of male students in education programs and teaching is a concern to those who feel male teachers serve as positive role models. Research based only on test scores has shown conflicting results or only minimal effects on the benefits of having male teachers (Hwang & Fitzpatrick 2021). Public perceptions of the teaching profession have also declined along with interest in undergraduate degrees in education. In a recent survey, 44% of US adults surveyed said they were not at all likely to encourage a young person to become a K-12 teacher (Shaeffer, 2022).

The actual number of students completing degrees in education is smaller than the number who initially enroll in that major. National data show that the number of conferred

master's degrees in education increased significantly from 1990 to 2010, while the number of bachelor's degrees in education remained fairly level. The number of master's degrees in education surpassed the number of bachelor's degrees in education conferred in 1995. There was a sharp decline in the number of conferred master's and bachelor's degrees in education after 2010. However, the number of conferred master's degrees in education remained fifty-percent higher than the number of bachelor's degrees in education (NCES, 2021). Between 2010 and 2018, the number of students completing bachelor's teacher education programs nationally declined by 28% (Partelow, 2019). In Maine, the situation was worse; there was a 53% decrease in the number of students completing a bachelor's education degree in Maine universities (Partelow, 2019). Trends in the number of students seeking bachelor's education degrees within the UMaine System also show a similar decline in recent years, as we discuss later in the findings section of this report.

There is speculation that the COVID-19 pandemic may have exacerbated this trend of decreasing enrollment in undergraduate teacher education programs. While enrollment in education majors was relatively stable between spring of 2019 and spring 2022 (National Student Clearinghouse Research Center, 2022), most of these students were already enrolled in their education programs prior to the start of the pandemic. More research is needed to explore the impact of the pandemic on education degree enrollments.

The pandemic does appear to have further shifted American views of the value of college and caused students to re-evaluate their choice of major. A recent poll showed more than half of Americans, 56%, do not feel that a college education is worth the cost. This is a reversal from 2013 when 53% of Americans felt a college education was worth the cost. Young adults ages 18-34 were the least likely to value a college education (Belkin, 2023). Finding a job where they can make a meaningful difference is becoming more important than pay to a larger percentage of college students. In a recent nationwide survey, students said they choose their major based on interest in the field (57%), potential career opportunities (46%), and making a positive impact (41%). When students do change their majors, 60% of them do so because they're more interested in another field of study. Nearly 30% make the switch because they're looking for a major that enables them to make a difference in the world (Wiley, 2023). Another survey of college students showed similar results. Students' highest priority was to have a stable job that will allow them to help people (Whillans et al., 2020).

The pandemic also affected many workers' career choices. Some studies have found that one in five workers changed careers during the first two years of the pandemic. Work-life balance was valued by these workers (Caporal, 2022; Parker & Horowicz, 2022). Work-life balance, work culture, and opportunities for advancement were cited as factors in their decision to change careers. Even though pay was cited as a factor by some, more than half of career changers took a pay cut. (Caporal, 2022)

The job market for teachers has not been well understood for decades. Some studies have found that half of education major graduates do not teach after graduation (McVey & Trinidad, 2019; AIR, 2016). There are also some projections of a teacher surplus as the number of K-12 students is expected to further decrease (McVey & Trinidad, 2019; Partelow, 2019). Since 2018, K-12 enrollment decreased by 2.6% nationally while the number of teachers increased by 1.1% nationally. Maine followed this trend by employing more teachers as enrollment declined (Aldeman, 2023).

In some subject areas and schools, the lack of qualified teachers is persistent. The problems of teacher over-supply and teacher under-supply are both discussed simultaneously in the literature. A recent national estimate is that 1.7% of teaching positions were unfilled and 5% of underqualified teachers were underqualified or teaching outside their concentration (Nguyen et al., 2022). The same schools and same education concentrations tend to be understaffed every year. Rural, urban and low income and low achieving schools are more likely to be understaffed (Edwards et al., 2022; McVey & Trinidad, 2019). Some concentrations, namely secondary STEM teachers, special education teachers, world language teachers and ESL teachers are typically listed by most states as shortage areas (Edwards et al., 2022; McVey & Trinidad, 2019; Partelow, 2019). Data on teacher surpluses by concentration is sparse. One analysis of Illinois teacher certification data found there were twelve new secondary social study teacher certifications for every job opening (McVey & Trinidad, 2019). A prior study showed that large states had two to nine times the number of new elementary teacher certifications as there were elementary teacher job openings (Sawyer, 2013).

Higher teacher turnover and retirement for veteran teachers also contribute to the current PK-12 educator shortages. Maine has an older educator workforce than other states. In a recent report, Maine was one of five states with the lowest percentage of teachers in their twenties. Specifically, in 2017-2018, only 9% of Maine's teachers were under the age of 30 while 15% of

teachers across the US were under the age of 30 in that year (Shaeffer, 2022). In the 2018-19 school year, one in six Maine teachers (16%) were older than sixty years old, compared to only 2% in 1999 (Johnson et al., 2020). A recent MEPRI study found that 16.6% of Maine's teachers with fewer than four years of experience and 16% of teachers with four or more years of experience left teaching within a three-year period. Some of the more experienced teachers left teaching for retirement (Johnson et al., 2020).

The effects of the COVID pandemic on Maine school staffing and retirements is also unclear, requiring closer examination of staffing data. Preliminary data indicate that there may be fewer educators in Maine in the near future. Data from the Maine Public Employees Retirement System (PERS) indicates that more classroom teachers left their jobs prior to retirement age in 2021 (n=435) and 2022 (n=596) than in prior years since 2015, with an increase of 39% and 37% respectively. More classroom teachers retired just before the pandemic in 2019 (n=916) and in 2022 (n=927) than in recent years or the first part of the pandemic in 2020 (n=843) and 2021 (821). Retirements increased by 13% from 2021 to 2022 (Wolfe, 2022). PERS data is difficult to interpret as teachers can retire under PERS but continue teaching under a new contract while they draw retirement.

Maine approved legislation in June 2021 to create an emergency certificate option that allows schools to hire individuals with less preparation for teaching positions on a temporary basis. However, schools in Maine are still struggling to meet their staffing needs (Wolfe, 2022). Given that most teachers look for work within 15 miles of their hometowns or even in their old school districts (Partelow, 2019), this factor creates more challenge for smaller, rural districts in Maine to attract applicants from a wider geographic area. A separate MEPRI study this year will examine staffing data statewide to explore teacher and administrator turnover in Maine since the pandemic.

Methodology

The research methods for this study included a mix of qualitative and quantitative data. The study began with informal interviews with staff and coordinators of teacher education programs from three campuses of the University of Maine System (six individuals) to learn more about the different pathways their students take to pursue teacher certification and employment, and some of the factors their students cite as attractive or challenging in their programs of study and student teaching. Information from those conversations helped to

inform the design of the undergraduate survey instrument, which was also piloted with UMS students for feedback and revision.

The survey instrument (Appendix A) consisted of primarily fixed-choice items and a few open-ended questions for comments asking students what their major was, factors that influenced their choice of a major, interest in teaching, perceptions about the benefits or drawbacks of a PK-12 teaching career, and what might entice them to consider teaching in a rural location in Maine. Institutional Review of this project approved the research methods used. The University of Maine System provided email contact information for a stratified sample of undergraduate students across the System's campuses. Only students of 18 years of age or older were invited to take the survey, based on their birthdates on record. Students' survey responses were not connected to their email addresses or identities. The anonymous survey was disseminated online in late November and ran through early December, with emailed reminders.

The survey sample included all UMS undergraduate students enrolled in education majors, minors, concentrations and alternative pathways to teacher credentialing in fall 2022 that would normally lead to teaching certification and employment (n=2,034). Across the UMS campuses, similar degree program areas sometimes have slightly different names. For the purpose of this survey, the sample of "education" students includes students enrolled in the following areas: art education, music education, physical and health education, early childhood education, elementary education, secondary education, English as a second language or English language learners, liberal studies with education as a concentration (UM Augusta), child and youth care practitioner (UM Augusta), teaching assistant I and II (UM Augusta), education services (UM Augusta), special education, alternative route to certification (UM Machias), and education but "undeclared" field. The sample of education students includes 122 students enrolled in courses focusing on teaching students with exceptionalities or special learning needs, and 220 students at the USM campus majoring in art, music or other fields, such as English or biology, who also had a course of study plan in teacher education within the K-12 grades, indicating the intent to pursue credentialing for a K-12 teaching career. Students enrolled in undergraduate programs such as human development or kinesiology and physical education that are not PK-12 teaching tracks were excluded from the "education" majors sample.

In addition to the students pursuing education, the survey sample also included a random selection of 2,000 students (half male and half female students) from non-education majors across the system for comparison with the education majors. This group would include students majoring in fields like English or biology who might also have a minor in education. International students, non-degree students, and students under the age of 18 according to their birthdates were excluded from the survey.

The overall response rate (completed surveys) for the survey sent to 4,034 students was 16% (n=628), or 15% for the education students (n=311) and 16% for non-education students (317). As expected, the response rates for education students showed higher participation from self-identified female students (77%) than male students (17%), in about the same proportion as their enrollment in education programs (74% female/ 25% male) this fall. For non-education students who were randomly sampled with equivalent numbers by gender, there was also a larger participation from self-identified female students (53%) than males (38%), with 9% of students selecting “non-binary/ transgender” or “prefer not to say” for gender.

In addition to the survey data, this study also included collection of relevant institutional data on the number of students enrolled within the University of Maine System in recent years, and the proportion choosing education majors versus all other majors. These data were compiled by the System office and include aggregate or system-wide numbers as well as disaggregated numbers at the campus and program levels. Again, students were counted as “education” majors if they were enrolled in a program of study that would lead to certification in some area of PK-12 teaching. Students enrolled in undergraduate programs such as human development or kinesiology and physical education that are not PK-12 teaching tracks were excluded from the “education” headcount. Further, all numbers reported in the institutional data tables are unduplicated headcounts, meaning that students were only counted once in fall 2022 and not multiple times for different semesters.

The following broad research questions frame this study:

- What proportion of all UMS undergraduate students choose to major or minor in education? How has this changed in recent years? (institutional data)
- What proportion of all UMS students change their major from education to some other major or vice versa? (institutional data)

- What proportion of all UMS students return the following fall semester to continue working on their education degree? (institutional data)
- What proportion of all UMS students complete their degree (degree conferral) in education versus other disciplines? (institutional data)
- What are the reasons UMS undergraduate students choose to major in education or not? (survey data)
- How do UMS students view teaching Pre-kindergarten through grade 12 as a career? (survey data)

Findings

Our study findings are presented in two parts: we first present an overview of recent trends in undergraduate student enrollment and choice of majors with the UMaine System (UMS), and then we describe findings from the survey of undergraduate students in education and non-education majors and programs of study within the UMS.

Part I. Trends in University of Maine System Data for Choice of Major

In this section of the report, we present findings from our analysis of the most recent institutional (UMS) data available on undergraduate degree majors and programs of study. These data were compiled from fall 2022 enrollments across the UMS campuses. The data provide a longitudinal look at enrollment trends and students' choice of majors over a six-year period, from fall 2017 through fall 2022. It is important to note that the COVID pandemic spanned the last three years of this timeframe, where students' education and lives were disrupted in various ways by the shift to remote learning and financial as well as personal hardships for some students. While the pandemic resulted in some decline in college enrollment in Maine and elsewhere in the nation, another important factor was the anticipated decline in college-aged youth in Maine given the overall demographic trends in the state even before the pandemic. Together, these factors driving lower enrollments have presented serious finance challenges for higher education institutions. We have attempted to keep the data tables to a minimum in this narrative and note the key findings from our analysis of the data. More detailed tables are provided in Appendix B.

Choice of Degree Majors and Minors

We compared enrollment levels in education versus non-education undergraduate degree programs, to identify whether fewer students in the UMS are choosing to pursue education

degrees. The national and state data we described earlier in this report suggest a steady trend of lower undergraduate enrollment in education programs with sharper declines in recent years. Our examination of the UMS institutional data for the past six years shows that the while the total number of undergraduates in the System and in education programs specifically declined over this period, most notably in fall 2022, the percentage of undergraduates in education programs has remained steady at about 8.5% or 9% of all UMS undergraduates (see Table 1).

Total UMS enrollment in all undergraduate programs declined from a high of 22,811 students in fall 2017 to 21,736 in fall 2020 and then 20,004 in fall 2022, representing an overall decline of 8%. At the same time, total enrollment in education programs also declined from 2,009 students in fall 2017 to 1,902 in fall 2018 and then 1,795 students in fall 2022 (a decline of 10.7% overall). Table 1 presents total enrollment across the UMS campuses as well as the enrollment in education programs specifically and as a percentage of all undergraduate enrollment. Additional data tables can be found in Appendix B, showing the program type (major, minor or certificate).

Table 1. Education Enrollment and Total Enrollment for UMS Campuses

Campus	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
UM	571	534	540	572	597	531
UMA	235	210	206	194	209	225
UMF	665	620	599	582	545	489
UMFK	35	14	4	4	3	6
UMM	84	77	73	82	69	70
UMPI	86	91	152	148	175	188
USM	336	357	338	340	338	289
UM System – Education Students	2,009	1,902	1,911	1,917	1,932	1,795
UM System - All Undergraduate	22,811	22,669	22,266	21,736	21,166	20,004
Education as a % of All Undergraduate	8.80%	8.40%	8.60%	8.80%	9.10%	9.00%

Note: Enrollment data show unduplicated headcounts and include both degree and non-degree seeking students, but exclude early college students.

As shown in Table 1, the University of Maine (UMaine) and UM Farmington each continued to have the largest proportion of all education students, ranging from 27% to 33% (in rounded numbers) across the six years. The next largest education enrollments were at the University of Southern Maine (USM) and UM Augusta. USM represented from 16% to 19% of

all education students in the System, and UM Augusta represented from 10% to 13%. UM Presque Isle had from 4% of the System's education students in 2017 rising to 11% in fall 2022. UM Machias and UM Fort Kent had far fewer students than the other campuses and represented smaller percentages of the total. UM Fort Kent closed its education program and currently only has a handful of transfer students working out of UM Presque Isle. It is important to note too that for the smaller campuses the majority of education students are enrolled in online programs.

All UMS campuses saw a significant decline over the six years in undergraduate education enrollment with the exception of the UM Presque Isle campus (see Table 1). Campuses saw enrollment declines ranging from a low of 11% at UMaine to a high of 27% at UM Farmington. USM, UM Machias and UM Augusta had comparable rates of enrollment decline at 19%, 18% and 17% respectively. The campus with the largest decline in education students was UM Fort Kent, where enrollment declined from 35 students in 2017 to three students in 2021, a decline of 91%, due to the closure of their education programs. UM Presque Isle has shown significant enrollment growth each year, more than doubling their enrollment from 86 students in 2017 to 188 students in fall 2022. The biggest growth for UMPI was in fall 2019, which preceded the COVID pandemic. Hence, the enrollment growth for that campus cannot be simply explained by the idea that students were seeking to stay closer to home during the pandemic. During that time, Presque Isle significantly grew their online program (Loftus, 2023). The area of growth was primarily in elementary education.

Generally, the areas of higher enrollment decline for UMaine, UM Farmington, USM, and UM Machias were in early education and secondary education programs. These two areas have been particularly challenging for the state and represent critical staffing needs. Farmington saw enrollment declines of 39% in early education and 21% in secondary education. Due to the large size of the data table, we've placed Table B1 in Appendix B, showing enrollment in education programs by campus and by education concentration.

Change of Degree Majors

Another question we explored through the institutional data was whether education students within UMS tend to change their degree majors from education to something else at similar or different rates than other students in non-education programs. Our examination of the UMS institutional data for students' designated field of study/ academic plan from fall 2017 through fall 2022 found that while education students changed their majors at higher rates than

non-education students (particularly in fall 2018 and fall 2019, prior to the pandemic), the two groups were more similar in the subsequent years, with slightly higher rates of education students changing their major to another field. On a positive note, the percentages of students who changed their major declined over the recent years examined, and more so for education students. Table B2 in Appendix B presents the number of students who changed their field of study between fall 2017 and fall 2022.

Larger percentages of both education and non-education students changed their major within the first year of study, with fewer students doing so in subsequent years. These rates were somewhat comparable for the two groups, but education students were slightly less likely to change their major in their first year of study than non-education students. However, for students with 90+ credit hours completed, higher rates of education students changed their majors than non-education students—sometimes more than twice the percentages. This finding may reflect the experience of student teaching in schools that many education students engage in to prepare for certification. That experience may convince some students that the reality of teaching is not what they expected. A positive finding is that the percentages of students changing their major in the first or second year (up to 29 or 59 credit hours completed) declined significantly from fall 2017 to fall 2022.

Looking at the non-education majors who chose to change their majors, only about 1% of these students choose education as a new program of study. This rate has been fairly consistent across the six years we examined. Again, most of these students are making this decision early on within the first year or two of study (up to 29 or 59 credit hours completed). Table B3 in Appendix B shows the number of education and non-education students who changed their field of study by number of credit hours completed in their program. Table B4 in Appendix B shows the number of non-education students who changed their field of study to education.

Retention of Students

In looking at the preparation pipeline for future educators in Maine, it is also important to look at retention rates in higher education programs. We examined the UMS institutional data to see if the System has been retaining undergraduate students in education majors at roughly the same rates as for non-education students. The data we examined focused on students who returned in a subsequent fall term within their programs. From fall 2017 to fall 2021, the percentages of education and non-education students who returned to the UMS in their programs

were fairly comparable, with slightly higher percentages of education students returning to the System. The percentages of both groups returning to UMS declined slightly from fall 2017 to fall 2021, which is consistent with the overall enrollment decline for this period described earlier. In fall 2021, 67% of education students and 60% of non-education students returned to UMS within their programs. Table B5 in Appendix B shows the number and percentage of students returning from year to year in their programs for education and non-education students.

Degree Completion

Given that there is always some attrition in undergraduate programs, we know that not all students who are enrolled or return to campus will complete their degree. We therefore explored the percentage of students in their programs who completed their degrees in a given year. This focus does not include the percentage of enrolled students who eventually complete their degree. As a note of caution, it should be considered that, for a variety of reasons, the number of students in their fourth or fifth year in a program may vary over time, and thus the percentage who graduate or complete their degree will be affected by changes in the size of each cohort or class. The percentage of students in their programs who completed their degrees in a given year remained fairly stable from fall 2017 to fall 2021 for both education students and non-education students. For education students, 17.5% of the students in the program in fall 2017 completed their degree while 16.4% of the education students in 2021 completed their degree. For non-education majors, 17.5% of students in fall 2017 completed their degrees while 19.7% of students in fall 2021 completed their degrees. Table B5 in Appendix B presents data on the number and percentage of students who completed their degrees for education and non-education students.

We also examined data on graduation rates, which looked at the percentage of declared majors who eventually completed their degrees. The data tracked students who completed degrees within four or six years of enrollment, using the summer/ fall 2016 cohort of students who were starting their programs as either part-time or full-time students. Overall, the education students had a higher 4-year graduation rate of 39.7% compared to non-education majors (35.1%), but also a higher 6-year graduation rate of 58% compared to non-education majors (52.9%). Table B6 in Appendix B shows the number and percentage of students in the fall 2016 cohort who graduated in four or six years, for education and non-education students.

Education Degrees by Concentration

Looking across the UMS for education degrees by area of concentration, the largest number of degrees have been in elementary and secondary education, followed by secondary education and early childhood education. Table 2. presents data over the five years examined.

Table 2. Education Bachelor's Degrees conferred by University of Maine System

Area (Education Type)	2017-18	2018-19	2019-20	2020-21	2021-22
Elementary Education	131	110	102	101	126
Secondary Education	66	59	50	46	56
Early Childhood Education	51	60	70	59	40
Music Education	12	13	19	17	24
Physical & Health Education	16	8	12	6	12
Art Education	12	11	8	8	8
Special Education (Level Not Specified)	4	1	3	2	5
Other/Not Specified	1	0	2	1	1
Unduplicated Headcount Conferrals	293	257	260	237	267

In the next section, we present findings from the undergraduate student survey.

Part II. Findings from the Undergraduate Student Survey

Demographics

The majority of students responding to the survey were full-time (85%, n=539). About one in seven students were part-time (15%, n=93). About three-quarters of the students completing the survey (77%, n= 432) felt they would complete their bachelor's degree within six years of high school graduation. These students are referred to as traditional students in this report. Most of these traditional students were full-time students (n=409). Non-traditional students were split between full-time (n=68) and part-time (n=60).

Table 3. Distribution of Respondents by Enrollment Status and Traditional Status

	Full-time	Part-time	Total
Traditional student	73% 409	4% 23	77% 432
Non-traditional student	12% 68	11% 60	23% 128
Total	85% 477	15% 83	100% 560

Less than half of the 635 respondents (44%, n=280) identified themselves as education majors. Twelve students had not declared a major. All but one student who had not declared their major was in their first year (n=9) or second year (n=2). Five were not in a degree granting program. Three were not currently enrolled.

Education majors (89%, n=247) were more likely than non-education majors (82%, n=292) to be full-time students. Three students had a prior education degree.

Of the 628 student respondents, 557 answered the gender question. The majority of respondents in our survey indicated their gender was female (66%, n=367). Males (n=153) comprised 28% of the sample, while six percent (n=33) indicated transgender, non-binary or other as their gender. There was no difference between females and males in full-time (83%, 86%) or part-time enrollment and being traditional students (76%, 78%).

College Majors

Most students identified themselves as being in a degree program and listed a major (n=603). Fifty-nine students (10%) were getting a double major. Double majors were more common in students in their third year (14%, n=20), fourth year (11%, n= 15) and fifth years (14%, n=5) than in their first year (4%, n=6) and second year (6%, n=8). Students getting a double major were primarily in-person students (83%, n=45) and based in Orono (56%, n=30). Most respondents (73%, n=442) had not changed majors since they enrolled. A quarter of all the responding students (24%, n=145) had changed majors, and 50 of these students switched majors across non-education fields of study. Thirty students switched from a non-education to an education major. Fifteen students (2%), twelve of whom were in their first or second year, were planning to change majors.

The most common major for respondents was education (46%, n=280). This is largely attributable to the sample design. The sample population was roughly split between education majors (n=2,034) and non-education majors (n=2,000). There was some variation in the percentage of education majors based on students' class year: first year (40%), second year (53%), third year (44%), fourth year (43%) and fifth year or higher (61%).

The most common non-education majors for all students were humanities (9%, n=56) and life sciences (8%, n=50). For male students, the most common non-education majors were engineering (15%, n=23) and business/economics/accounting (12%, n=18). Thirty-one students who identified as non-binary or transgender were not included in the table in order to protect confidentiality of respondents.

Table 4. College Major by Gender

MAJOR	Total		Female		Male	
Education	46%	280	56%	199	27%	40
Humanities (English, history, political science, French...)	9%	56	8%	30	9%	14
Life Sciences (biology, marine science, forestry, nutrition...)	8%	50	7%	25	10%	15
Business, Economics, Accounting	6%	39	5%	17	12%	18
Engineering	6%	36	2%	7	15%	23
Psychology (counseling...)	6%	36	7%	23	3%	4
Creative and Performing Arts	6%	35	4%	15	7%	11
Health Professions (nursing, athletic training, speech therapist...)	6%	35	8%	27	3%	5
Public administration and social services (social work...)	4%	22	4%	14	2%	3
Computer Science	3%	16	1%	3	8%	12
Mathematics	3%	16	1%	5	5%	8
Parks, recreation, leisure, fitness, kinesiology	2%	10	2%	6	2%	3
Criminal Justice, Law enforcement	1%	9	1%	5	2%	3
Physical Sciences (chemistry, physics...)	1%	9	1%	2	3%	5
Communication (journalism...)	1%	5	0%	1	1%	1
Cultural, gender, ethnic, and group studies	0%	3	0%	0	1%	2
TOTAL	100%	603	100%	353	100%	149

When majors with fifteen or more students in our respondent sample were examined, the gender distribution within majors showed significant differences. In education, the distribution of respondents by gender was 79% female (n=199), 16% male (n=40) and 5% transgender/non-binary/other (n=13). Females made up 84% of health professions majors (e.g., nursing, athletic training, speech therapist) (n=27), 74% psychology majors (n=23) and 74% of public administration and social services (n=14) students. The majors that had more male respondents were engineering (77%, n=23), computer science (80%, n=12), and mathematics (53%, n=8). Of the 149 males responding to the survey, 27% (n=40) were education majors.

Majors where more than forty percent of students said their classes were primarily online included criminal justice/law enforcement, cultural/gender/ethnic/group studies, public administration and social services, psychology, computer science and business/ accounting/ economics.

Concentration within the Education Major

Respondents who identified their major as education were asked their area of concentration. The most common concentration within education was elementary education (43%, n=107). This is in line with UMS 2020-21 data showing that 47% (n=126) of the 267 bachelor's degrees in education were awarded in the elementary education concentration.

Due to the low number of male education major respondents (n=40), a breakdown of concentration by gender is not shown to protect respondent confidentiality. The concentrations where more than 90% of the respondents were female were elementary education, secondary English, special education and world languages. The only concentration where more than half of the respondents were male was physical education. Among males, the most popular concentration was secondary social studies (n=12).

For all education majors' concentrations except special education (40%, n=8), the majority of respondents said that their courses were in-person. Table 5 shows the distribution of survey respondents in an education program by their area of concentration.

Table 5. Concentrations within Education Major

Elementary	43%	107
Early childhood	17%	42
Secondary Social Science (7-12)	13%	32
Secondary English (7-12)	12%	30
Special Education	9%	22
Art/Music	5%	12
Secondary Math (7-12)	5%	12
Physical Education	2%	6
World language (Spanish, French ...)	2%	4
Secondary Life Sciences (7-12)	1%	3
Library Science	1%	2
K-12	0%	1
School Health	0%	1
Child Youth and Family Relations	0%	1
Alternative Education	0%	1
Undecided	0%	1
Total	100%	251

Change of Major

Students were asked if they had changed their major since they enrolled. Twenty-four percent (n=145) said that they had changed their major, and 50 of these students switched majors across non-education fields. Thirty students switched from non-education to an education major. Thus, education majors (20%, n=58) were less likely than non-education majors (28%, n=87) to report that they had switched majors in our survey. Traditional students (25%, n=128) were more likely than non-traditional students (16%, n=19) to say that they had changed their major. First years (10%, n=15) were the least likely to say that they had changed their major. Second, third and fourth year students had similar rates of changing their major (26%-31%). Changing one's major may delay graduation for students as 44% (n=16) of fifth years had changed their major. Of those reporting that they had changed their major, 127 identified their initial major's broad classification, but several students did not indicate their initial major field. The most common

initial majors for these current education majors were health professions (n=5), humanities (n=5), life sciences (n=5) and business (n=4).

Education Students

In addition to the 280 students who identified education as their major, there are an additional 33 students that were considered education students in the remainder of this report. Eighteen said education was their minor. Two part-time students in a non-degree program indicated they were taking education classes and planned to teach. Thirteen others responded that they were taking education classes and planned to teach.

Educational Setting

The largest percentage of respondents was from UMaine Orono (32%, n=180). Almost half of the education majors was at UMaine Farmington (48%, n=121). The highest percentage of traditional students was at UMaine Orono (91%, n=164) and UMaine Farmington (90%, n=128). The highest percentage of full-time students was also at UMaine Orono (94%, n=170) and UMaine Farmington (95%, n=135). UMaine Augusta (27%, n=20) had the lowest percentage of traditional students and also had the lowest percentage of full-time students (48%, n=36). Campuses where more than half of the respondents said that they were raised in rural Maine were at UMaine Orono, UMaine Farmington, UMaine Fort Kent, UMaine Machias, and UMaine Presque Isle.

Table 6. Distribution of Respondents by University of Maine System Campus

	Education Major	Not Education Major	Total
University of Maine (Orono)	24% 59	40% 121	32% 180
University of Maine at Augusta	8% 19	18% 56	13% 75
University of Maine at Farmington	48% 121	7% 21	25% 142
University of Maine at Fort Kent	0% 1	1% 2	1% 3
University of Maine at Machias	4% 10	3% 8	3% 18
University of Maine at Presque Isle	7% 18	6% 19	7% 37
University of Southern Maine	9% 23	26% 79	18% 102
Total	100% 251	100% 306	100% 557

Non-traditional students (72%, n=92) were more likely than traditional students (17%, n=71) to say their courses were primarily online. Full-time students (21%, n=101) were less likely than part-time students (77%, n=62) to say their classes were primarily online. Campuses with a low percentage of primarily online students were UMaine Orono (12%, n=22), UMaine Farmington (12%, n=17) and USM (18%, n=18). At all other campuses, more than two-thirds of students said their classes were primarily online. The highest percentage of students saying their classes were primarily online were at the Augusta campus (85%, n=64). The percentages of students at the Fort Kent, Machias and Presque Isle campuses were between 67% and 83%.

Twenty-seven percent of education majors (n=62) reported that their classes were primarily online. This did not vary by concentration within the education field. All education students at the Augusta and Fort Kent campuses (n=13) said their classes were primarily online. More than two-thirds of education students at Machias and Presque Isle said their classes were primarily online. Twelve percent of students at the Orono (n=8) and Farmington (n=15) campuses said the majority of their classes were online. Fewer than five education students at USM said their classes were primarily online. Students primarily taking classes online (70%,

n=45) were less likely than students whose classes were primarily in person (92%, n=172) to indicate they plan on student teaching.

Reasons for Choice of Major

Respondents were asked to select up to five reasons for their choice of their current major. For all groups of students, their “interests and passions” (85%, n=477), and “skills and talents” (62%, n=346) were among the top three factors in their choice of major for a large percentage of students. When results were examined by sub-groups of respondents, the next most common responses varied.

For education majors and non-education majors, two other factors were among their top reasons for selecting their current major. Both traditional and non-traditional education majors valued the future ability to do meaningful work (62%, n=169) more than non-education majors (46%, n=152). The same trend was seen with “future ability to help others” being selected by a higher percentage of education majors (64%, n=174) than non-education majors (32%, n=107). About a quarter of education majors (27%, n=73) and non-education majors (24%, n=81) selected “positive long-term employment outlook.”

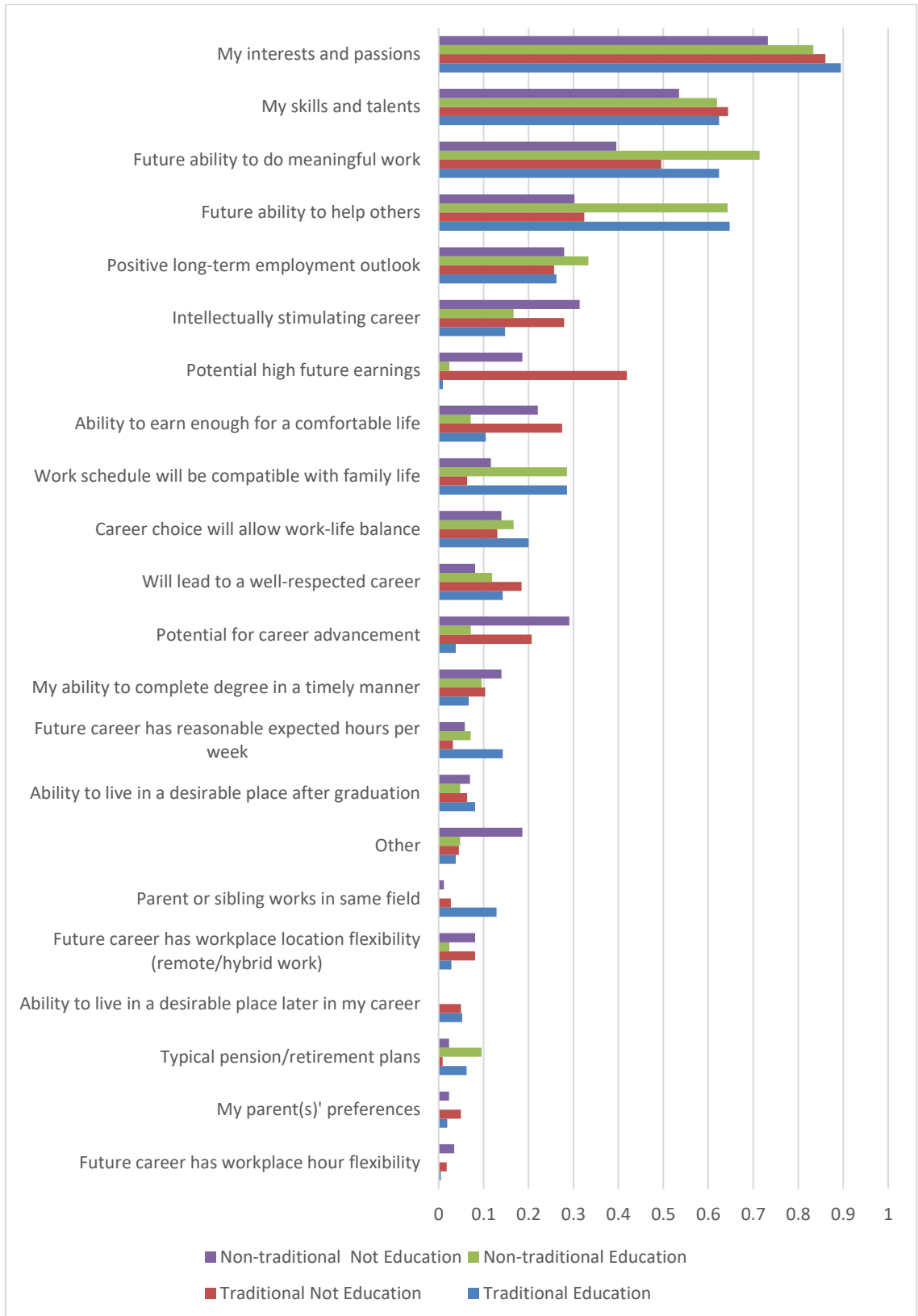
More education majors (27%, n=74) than non-education majors (8%, n=27) listed “work schedule will be compatible with family life.” Education majors also felt “career choice will allow work-life balance” (19%, n=52). Thirteen percent of traditional education majors (n=27) felt “parents or sibling works in the same field” was one of their top three reasons for choosing an education major.

More non-education majors selected “potential future high earnings” (35%, n=117) than education majors (1%, n=3). Non-education majors (26%, n=86) were also more likely than education majors (10%, n=28) to select “ability to earn enough for a comfortable life.” “Intellectually stimulating career” was more often chosen by non-education majors (29%, n=96) than education majors (15%, n=41). Non-education majors also selected “potential for career advancement” (23%, n=76) more often than education majors (4%, n=11).

No difference in factors was seen by year in school. Females were more likely than males to value having a work schedule that is compatible with family life. Males ranked potential high earnings, intellectually stimulating career, and potential for career advancement higher than females did.

Sixteen non-traditional students and eighteen traditional students wrote in additional reasons. Ten of the sixteen non-traditional students were part-time students. The rest were full-time students. The most common write-in reason was that a current job influenced their choice of major. The non-traditional students who said that their current job was a factor in their selection of major were humanities, business/economics/accounting, engineering, health professions, and psychology majors. None of the respondents who wrote their current job affected their choice of major were education majors. Five full-time traditional students felt teachers or advisors influenced their choice of major. Three students felt the availability of a major and the ability to have transfer credits count toward graduation were factors in their choice of major. Later in the survey education majors were given an open-ended question asking why they chose education as their major. Figure 1 shows the top five reasons for choosing a major for different groups of respondents.

Figure 1. Top Five Reasons for Selecting Current Major



Affinity for Teaching

Potential interest in education teaching was examined with two survey questions. These looked at the enjoyment of teaching or working with groups of children. One question asked if the respondent enjoyed “tutoring and/or helping others learn in courses I am taking or in courses that I have taken.” The other question asked if they enjoy “working in a leadership role with groups of children.”

Table 7. Enjoyment of Tutoring

	Strongly/ Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	Total
Traditional Education	11% 23	30% 63	41% 87	18% 38	100% 211
Traditional Not Education	19% 42	32% 70	36% 79	14% 30	100% 221
Non-traditional Education	16% 7	44% 19	19% 8	21% 9	100% 43
Non-traditional Not Education	18% 15	35% 30	28% 24	19% 16	100% 85
Total	16% 87	33% 182	35% 198	17% 93	100% 560

The majority of respondents (52%, n=291) agreed that they enjoyed tutoring and/or helping others learn. A third of respondents (33%, n=182) had neutral feelings about tutoring. Education majors who are traditional students were the highest percentage of respondents (59%, n=125) agreeing that they enjoyed tutoring and/or helping others in courses that they are taking or have taken. Interestingly, less than half of non-traditional education majors (40%, n=17) agreed that they enjoyed tutoring or helping others in their courses or courses that they have taken. The most common response for non-traditional education majors (44%, n=19) was to “neither agree nor disagree” with liking tutoring and/or helping others in their course. About half of non-education majors, both traditional students (49%, n=109) and non-traditional students (47%, n=40) agreed with this statement. There was no variation in percentage of respondents agreeing with the statement by gender or year in school.

The next statement was “I enjoy working in a leadership role with groups of children.” The examples given were camp counselor and coach. Over-all sixty-four percent of students

agreed with this statement with nine percent of students reporting that they had not had this experience. The highest percentage of agreement was for traditional education students (86%, n=181). About a quarter of non-education majors disagreed or strongly disagreed with this statement. Among non-education majors, females (52%, n=79) were more likely than males (39%, n=42) to agree that they enjoy working in a leadership role with groups of children. There was not a difference between the percentage of female education majors and male education majors who enjoy working in a leadership role with groups of children.

Surprisingly, all but two of the education majors who strongly disagreed or somewhat disagreed with the statement that they “enjoy working in a leadership role with groups of children” are either planning to teach or feel that they may teach.

Table 8. Enjoyment of Working in a Leadership Role with Groups of Children

	Strongly/ Somewhat disagree	Neither agree nor disagree	Agree	Strongly agree	Not applicable, I have not had this opportunity	Total
Traditional Education	3% 7	5% 10	27% 56	59% 125	6% 13	100% 211
Traditional Not Education	22% 49	19% 42	30% 67	19% 41	10% 22	100% 221
Non-traditional Education	14% 6	5% 2	30% 13	37% 16	14% 6	100% 43
Non-traditional Not Education	27% 23	19% 16	20% 17	25% 21	9% 8	100% 85
Total	15% 85	13% 70	27% 153	36% 203	9% 49	100% 560

Feelings about Math

Due to persistent shortages of STEM educators and reports in the literature of education majors not enjoying math or having lower math confidence than their non-education peers, respondents were given two questions about math. Students were asked about their enjoyment of math and they were also asked how their math skills compared to their peers.

Math enjoyment differed by gender and year in school. Interestingly, there was very little difference between education majors (40%, n=108) and non-education majors (43%, n=139) in the percentage of students who reported that they enjoy using math. Males (51%, n=78) were more likely than females (38%, n=138) to indicate they enjoy using math. The large gender difference was not seen for education majors. Less than half of female and male education majors reported enjoying math. Forty percent of female education majors (n=83) and 42% of male education majors (n=19) agreed that they enjoy using math. For non-education majors the gender gap widened. The percentage of males that enjoy using math rose to 55% (n=59) and the percentage who disagreed fell to 27% (n=29). Students in their first year were more likely to disagree (46%, n=69) that they enjoyed using math than agree (37%, n=55). As students progressed, the trend reversed. In the fourth year the percentage of students disagreeing with enjoying using math fell to 34% (n=44) while those reporting enjoying using math rose to 47% (n=60).

While there was not a difference between education majors and non-education majors in enjoying math, there was a difference between non-traditional and traditional education majors. A higher percentage of non-traditional education majors (58%, n= 25) reported enjoying using math. There was a much lower percentage of traditional education students (31%, n=81) who reported enjoying using math.

Table 9. Gender Differences in Reported Enjoyment of Math

	Strongly disagree or disagree	Neither agree nor disagree	Strongly agree or agree	Total
Female	42% 153	20% 71	38% 138	100% 362
Male	32% 49	17% 26	51% 78	100% 153
Total	40% 221	18% 103	42% 233	100% 557

Students were asked to rate their own math skills compared to the average college student. Over-all most students rated themselves as average (42%, n=252). Slightly more students rated themselves above average than below average. Half of the male respondents (50%,

n=76) rated their math skills as above average or far above average. Nine percent of all males felt their math skills were “far above average.” About half as many females, around a quarter of female respondents (27%, n=98), rated their math skills as above average or far above average. Over-all males were more likely than females to rate their math skills as above average. This trend was seen in education majors. Forty-four percent of male education majors (n=20) rated their math skills as above average while only a quarter of female education majors rated their math skills as above average (24%, n=51). Equal percentages of female (22%, n=47) and male (22%, n=10) education majors rated their math skills as below average.

A larger percentage of non-education majors (37%, n=122) than education majors (28%, n=74) rated their math skills as above average. Students in their fourth year (41%, n=53) were more likely than students in other years to rate their math skills above average. Traditional students (36%, n=156) were more likely than non-traditional students (25%, n=32) to rate their math skills as above average.

Table 10. Gender Difference in Self-Reported Math Skills Among Education Majors

	Far below or somewhat below average	Average	Far above or somewhat above average	Total
Female	22% 47	53% 111	24% 51	100% 209
Male	22% 10	33% 15	44% 20	100% 45
Total	23% 62	49% 132	28% 76	100% 270

Decision to Major in Education

Education majors were asked a series of questions about the timing of their decision to become education majors. The first question asked when they first took an education class. Overall, eighty-two percent of education majors (n=217) took their first education class by the end of their first year in college. Most (67%, n=178) had their first education class in their first year of college. Thirty-nine respondents (15%) said they took an early college education class. Augusta (53%, n=10) and Orono campuses (76%, n=45) had the lowest percentage of education major students who took an education class by the end of their first year. Fifteen percent of

respondents (n=41) said that they did not take their first education class until their second or third year in college.

Students were asked when they first decided to major in education. Almost three-quarters of respondents (72%) said they made this decision prior to starting college. Another 16% chose an education major in their first year. Sixty-seven percent of third and fourth-year education majors (n=74) said they chose education as a major prior to starting college. Twenty-two percent of third and fourth year education majors chose this major during their first three semesters in college. Of those students who selected education as a major in their first three semesters of college, fifty-nine percent felt it was extremely easy and eight percent felt it was somewhat difficult to switch into education. Only eight percent of education majors (n=21) said they selected education as a major in their fourth semester or later. Students who switched their major into education at the end of their second year (fourth semester) or later were split on the ease of declaring education as a major.

Most education majors (86%, n=221) anticipated that they would student teach (i.e., gain classroom teaching experience while still an education student). Nine percent (n=23) were unsure if they would student teach and five percent (n=13) said they would not student teach. Both genders were equally likely to say they would student teach. Being a non-traditional student (12%, n=5), part-time student (23%, n=7), primarily online student (13%, n=8) or in the fourth year of an education major (12%, n=6) increased the likelihood that one would not student teach.

The thirteen respondents who said that they would not student teach were given an open-ended question asking about their reasons for not wanting to student teach. One who felt student teaching was not economically viable said they might or might not teach after graduation. One student in early childhood education wrote that student teaching was not required for their program. Of the early childhood majors who responded, 70% (n=26) do plan on student teaching. Sixteen percent of early childhood majors were unsure if they would student teach.

In an open-ended question, education majors were asked how they chose education as their major. Of the 223 respondents, 74 indicated a time period of when they made the decision. Forty-four said they always wanted to be a teacher. Fourteen said they made the decision in high school. Five had a high school class experience with teaching (mentoring class, working with SPED, interning with teacher, volunteering in elementary). Seven of those that made the decision to major in education in high school did so based on a job that they had. Eight wrote that they

made the decision to become a teacher in college and they changed their major to education. Two of those based their decision on a job they had during college teaching at the K-12 level part time or substituting. Three of those who changed majors said they were struggling in their prior major. Three non-traditional students said they were making a career change. Three respondents decided to go into teaching after their own children were in school. One volunteered in their children's classrooms and the other entered the field after working with her child during remote learning. Six are already working in schools primarily as paraprofessionals.

Interest in Teaching. One hundred-thirty-nine education respondents specifically mentioned teaching as their basis for choosing an education major. Twenty-six specifically said they had a passion for teaching. Sixteen of the respondents that used the terms "passion" or "passionate" (62%) were studying at Farmington. Forty-one others expressed a desire to help, inspire, make a difference or impact others. Seventy-two answered that they chose education as a major because they want to teach. Five said that they chose education because they enjoyed tutoring classmates and friends.

Working with Children. Fifty-nine education students said they chose an education major to work with children. Some words that respondents used to describe teaching and working with children were "fulfilling," "satisfying," and "exciting." They enjoyed seeing children learn. Several described their personal experiences working with children. Some had siblings or neighbors with special needs. Ten had high school jobs where they worked with children. Two had teaching internships in high school. Three had worked as substitutes.

Influence of Teachers. Twenty-one education students went into teaching due to the influence of their own teachers. Nineteen expressed admiration and appreciation for their own teachers. The teachers that inspired them included teachers at all grades from kindergarten to high school. A few said that their teachers provided them with a safe space and met other needs that their families did not meet. Others who cited teachers as influencing their choice also cited a positive influence from their educator parents. Thirteen chose education because their parents or other family members were teachers.

Skills for Teaching. Several education students felt that they had specific skills or interests that led them to select an education major. While most said they were good at teaching others cited creativity, intuition, organizational skills and subject-specific skills such as math. Twenty-one desired to teach a specific subject. The most common subject areas that students

specifically wanted to teach were history or social studies (n=6) and English (n=5). Math (n=3), art (n=3), life sciences (n=2), music (n=1), and reading (n=1) were also mentioned. Three physical education majors liked the idea of being active during the workday. One physical education major wants to coach. Three students liked the leadership aspect of teaching.

Work in Special Education. Fifteen education students said working with special education students led to them choosing an education major. Classmates, neighborhood children, a sibling, and their own child were mentioned. Two had participated in a program in high school where they worked with students that had a learning disability. One cited their own experience as a student with special learning needs.

Social Emotional Learning. Ten education students said that they chose an education major to help children with social emotional learning. Some mentioned teaching self-care, helping children with challenges in their lives, and helping children deal with trauma. Some want to provide children with a safe space. They want to be seen as a kind, caring, trusted individual. For others it was important to be a role model and “be representative.”

Financial and Practical Factors. Other reasons for choosing teaching included that it is practical. Twelve said that teaching was a stable job that allowed for financial stability and the ability to earn enough for a comfortable life. They felt that there are good job prospects in education and they could easily enter a teaching career upon graduation. Six felt they could get a job in teaching more easily than in other majors. Those who felt teaching provided better job prospects than other majors listed their interests as art, history, music, political science, and social science. Three felt teaching would allow them to work abroad. Four liked the schedule. Three others mentioned that there was a work-life balance that would allow them more time with their family.

Five education students said that they chose to major in education since they were unsure of what other careers entailed and how their skills would match into them. A few comments from these students were “I’ve only known school for my entire life” and “I do not know if I would be good at anything else.”

Three education students used this open-ended question to express regret about their choice of education as a major. All were in their fourth or fifth year. Two of the three realized they did not want to be a teacher. One wanted to be a college coach and realized that the major

was about teaching K-12 physical education. One wanted to do an art major but chose art education because it was more practical.

Administrator Career Path

Education majors were asked if they may become an administrator in PK-12 education. A quarter of respondents (26%, n=65) had not thought about this career path. Six percent (n=15) plan to become administrators. Six of the fifteen students who plan to become administrators were first year students, the remaining nine were third year or higher. Nine females (5%) and six males (15%) said they plan to become administrators. Among non-traditional students (41%, n=17) and female students (34%, n=67) most common response was “I do not want to become an administrator.” The most common response for traditional students (40%, n=83) and male students (48%, n=19) was “I may or may not become an administrator.”

Education Minor

Twenty students indicated they are planning on getting an education minor. Two of these students say their major is also education. Five students getting an education minor are in creative and performing arts and four are in the humanities. Two were STEM majors. All, but one education minor, are full time students. Seventeen are traditional students. Ten plan to teach. Six responded “No, I do not think I would ever teach.” Just four of these students (5%) had considered changing their major to education.

Non-Education Major Students

Non-education majors were asked whether they had considered changing into an education major. Thirty-four students (11%) had considered switching into an education major. The most common majors of those who had considered switching into education were humanities (n=8), creative and performing arts (n=5) and business (n=5). A third of those who had considered a switch into an education major (32%, n=11) strongly disagreed that it would be easy to switch their major to education. Another (29%, n=10) somewhat disagreed that it would be easy to switch their major to education. Two did not know if it would be easy to change their major.

Among all students, 44% disagreed that it would be easy to change their major to education. Thirty percent did not know if it would be difficult to change to education. The majority of students (53%, n=113) in their second year of college or further in their education disagreed that it would be easy to change their major to education. Only of 12% of students

(n=25) who had completed at least one year of college felt it would be easy to change their major to education. There was not a significant difference between online and in-person students.

Of the 312 students not majoring or minoring in education, sixty-seven (21%) had taken an education class. Thirteen of the non-education majors who had taken an education class (19%) were planning on getting an education minor and six (9%) were considering it. Of the sixty-seven students who had taken an education class, there were seven students who had considered getting an education major but not an education minor. There were 39 students (59%) who had taken an education class and had not considered getting an education major or minor. Twenty-two students who had not taken an education class had considered changing to an education major.

Student teaching did not appear to be a barrier to most of the students who had considered switching majors or are getting an education minor. Most (43%, n=16) disagreed with the statement “The thought of doing a semester of student teaching discourages me from getting an education major.” A quarter of those who had considered switching into education (24%, n=9) agreed with the statement. The remainder were neutral. Of the nineteen students who are getting an education minor, sixty percent (n=11) disagreed with the statement “The thought of doing a semester of student teaching discourages me from getting an education major.” Among all students who were not education majors, 24% (n=78) felt student teaching discouraged them from pursuing an education major. A similar percentage, 22%, of non-education majors who felt they might or might not teach or may teach K-12 at some point in their careers (n=17) felt the need for student teaching discouraged them from getting an education major.

Reasons for not switching into an education major were provided by twenty-three students of the students who said that they had considered changing into an education major. Transferring credits was a barrier to five third and fourth year students. One wrote “Time and money. If more of my credit hours transferred I would seriously consider it. Teaching is my dream career that will not happen.” Two said that they did not want to student teach. For one, student teaching would interfere with their job. The other felt student teaching would make their degree program longer and more expensive. Five said they were no longer interested in teaching. Seven felt low pay for teachers dissuaded them from an education major. One cited lack of career advancement.

Teaching in K-12 schools as a career was indicated as a possibility for over a quarter of students who were not majoring or minoring in education. Seventy-five (27%) of non-education majors said they might or might not teach. Of those who provided information on their gender, females (29%, n=42) were slightly more likely than males (25%, n=26) to feel they might teach. They were asked what K-12 content areas they might teach. Fifty-nine selected at least one content area where they may teach. Most listed more than one content area that they might teach. Majors with five or more students who said they might teach were humanities (n=9), creative and performing arts (n=8), life sciences (n=8), engineering (n=7), and business (n=6). For students indicating “other” area included interest in teaching at the college level, in “other”, technical education, computer science, library or adult education.

Table 11. Content Areas that Non-majors Might Teach

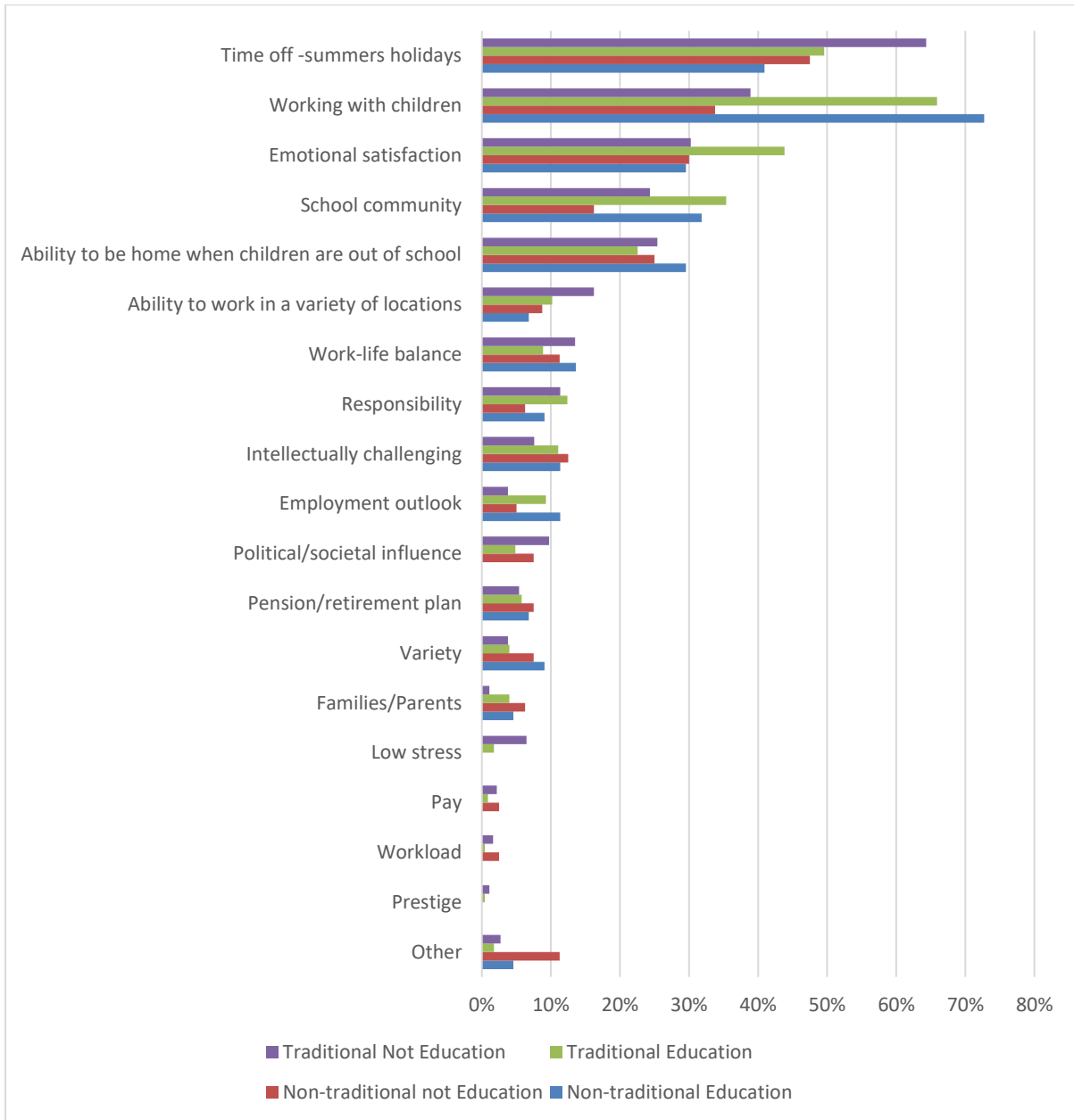
Elementary	41%	24
Art/Music	34%	20
Early childhood	25%	15
Secondary Physical Science (7-12)	25%	15
Secondary Math (7-12)	24%	14
Secondary Life Sciences (7-12)	22%	13
Secondary Social Science (7-12)	20%	12
Special Education	17%	10
Secondary English (7-12)	15%	9
Physical Education	14%	8
World language (Spanish, French ...)	8%	5
Other	22%	13
Total	100%	59

Benefits of a PK-12 Teaching Career

All survey respondents were asked to identify up to three perceived benefits of teaching as a career. Most respondents selected three benefits (84%, n=455). Most of the differences seen were between education and non-education majors and traditional and non-traditional students. The most commonly identified perceived benefit was time-off in the summers and for holidays (54%, n=287). This was more commonly identified by traditional students (56%, n=231) than non-traditional students (45%, n=56). The second most commonly chosen benefit was “working

with children.” This was the most often chosen benefit for education majors (67%, n=182). Over a third of non-education majors also identified “working with children” as one of the top three benefits to a teaching career. Emotional satisfaction was identified by over a third of all respondents (36%, n=194). A larger percentage of traditional education majors (44%, n=99) selected emotional satisfaction. School community was more often selected by education majors (35%, n=95) than non-education majors (22%, n=58). “Ability to be home when children are out of school” was chosen by a quarter of respondents (24%, n=132). Less than twelve percent of respondents selected any of the other potential benefits.

Figure 2. Benefits of a PK-12 Teaching Career



Drawbacks of a PK-12 Teaching Career

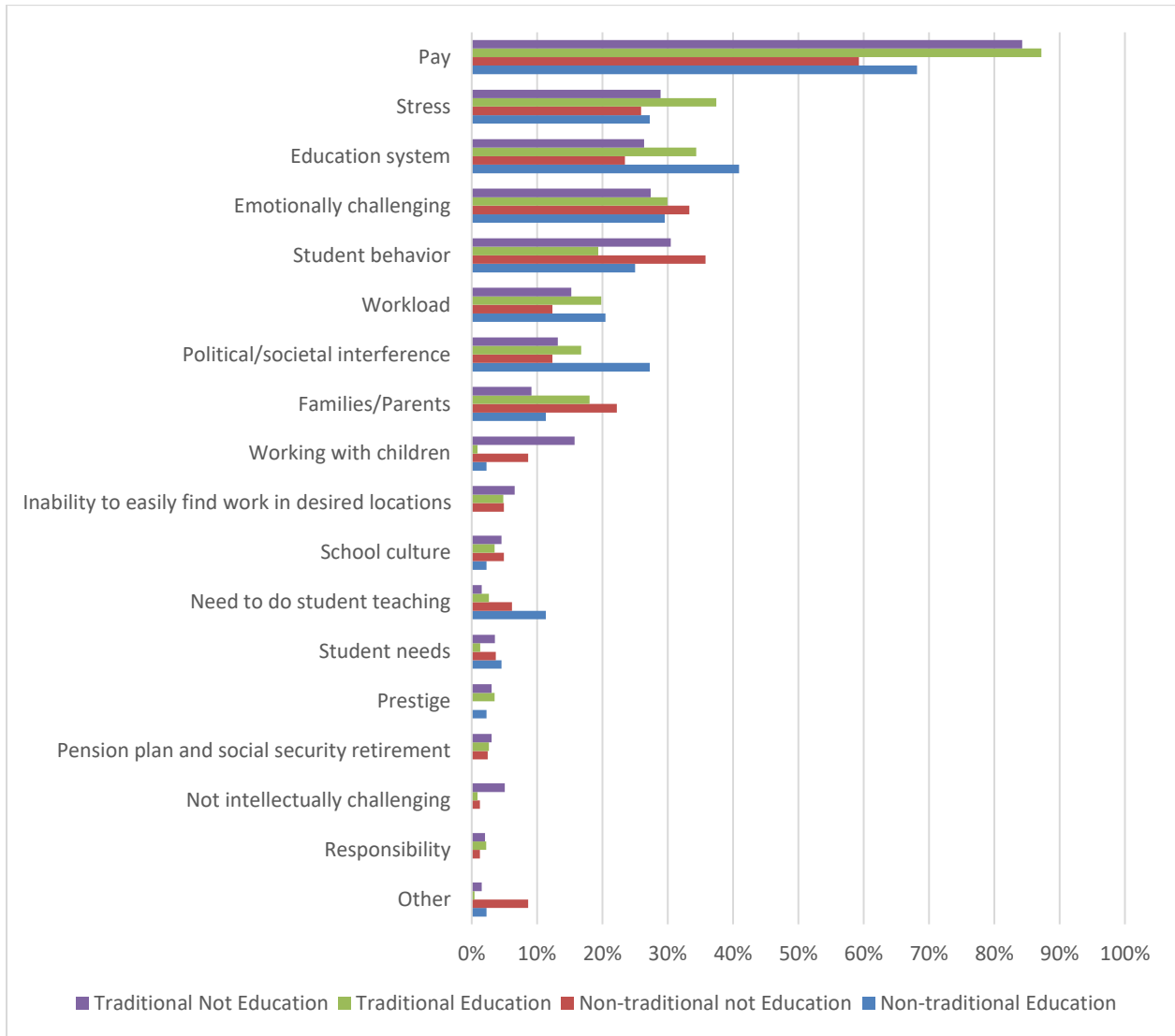
Respondents could choose up to three perceived drawbacks to teaching as a career. Of those answering the question, 89% chose three drawbacks. Pay was overwhelmingly chosen by most respondents (81%, n=444). No other draw back was selected by more than 40% of the respondents. Traditional students (86%, n=364) were more likely than non-traditional students (62%, n=78) to identify pay as a drawback to a teaching career.

The education system was identified as a drawback by several respondents. Education majors (36%, n=97) were more likely than non-education majors (26%, n=71) to identify the “education system” as a drawback to teaching as a career.

Education majors and non-education majors differed on other perceived drawbacks to a teaching career. A third of respondents (32%, n=176) selected stress as one of the top three drawbacks to a teaching a career. A higher percentage of traditional education majors (37%, n=85) selected stress as a drawback to a teaching career. Workload was also identified by more education majors (20%, n=55) than non-education majors (14%, n=40). Teaching being “emotionally challenging” was identified as a drawback by 30% of respondents (n=168). Non-education majors (32%, n=89) were more likely than education majors (20%, n=55) to identify student behavior as a drawback. More than a quarter of non-traditional education majors (27%, n=12) felt political/societal interference was a drawback to teaching.

Written comments describing perceived drawbacks to a teaching career included factors such as: understaffing, safety, not being able to work from home, and degree requirements.

Figure 3. Drawbacks of a PK-12 Teaching Career



Starting Teacher Salary

There was agreement among respondents (88%, n=491) that a starting salary for teachers of \$40,000 was too low. Over half of the respondents (54%, n=299) felt \$40,000 was “far too little” for a first-year teacher’s salary in Maine. Eleven percent (n=64) felt it was “just about right.” Similar patterns were seen among traditional and non-traditional students, education majors and non-education majors and by gender. Year in school, full-time or part-time status, and taking classes primarily online or in-person also did not show differences in perception of a starting teaching salary of \$40,000 being too low. The only difference noted was that a quarter of those in an early childhood concentration (23%, n=8) felt the salary was “just about right.”

Table 12. Views on a Salary of \$40,000 for First Year Teachers in Maine

	n=	Percentage
Far too little	299	54%
Slightly too little	192	34%
Just about right	64	11%
Slightly too much	2	0%
Far too much	1	0%
Total	558	100%

Teaching in Rural Maine

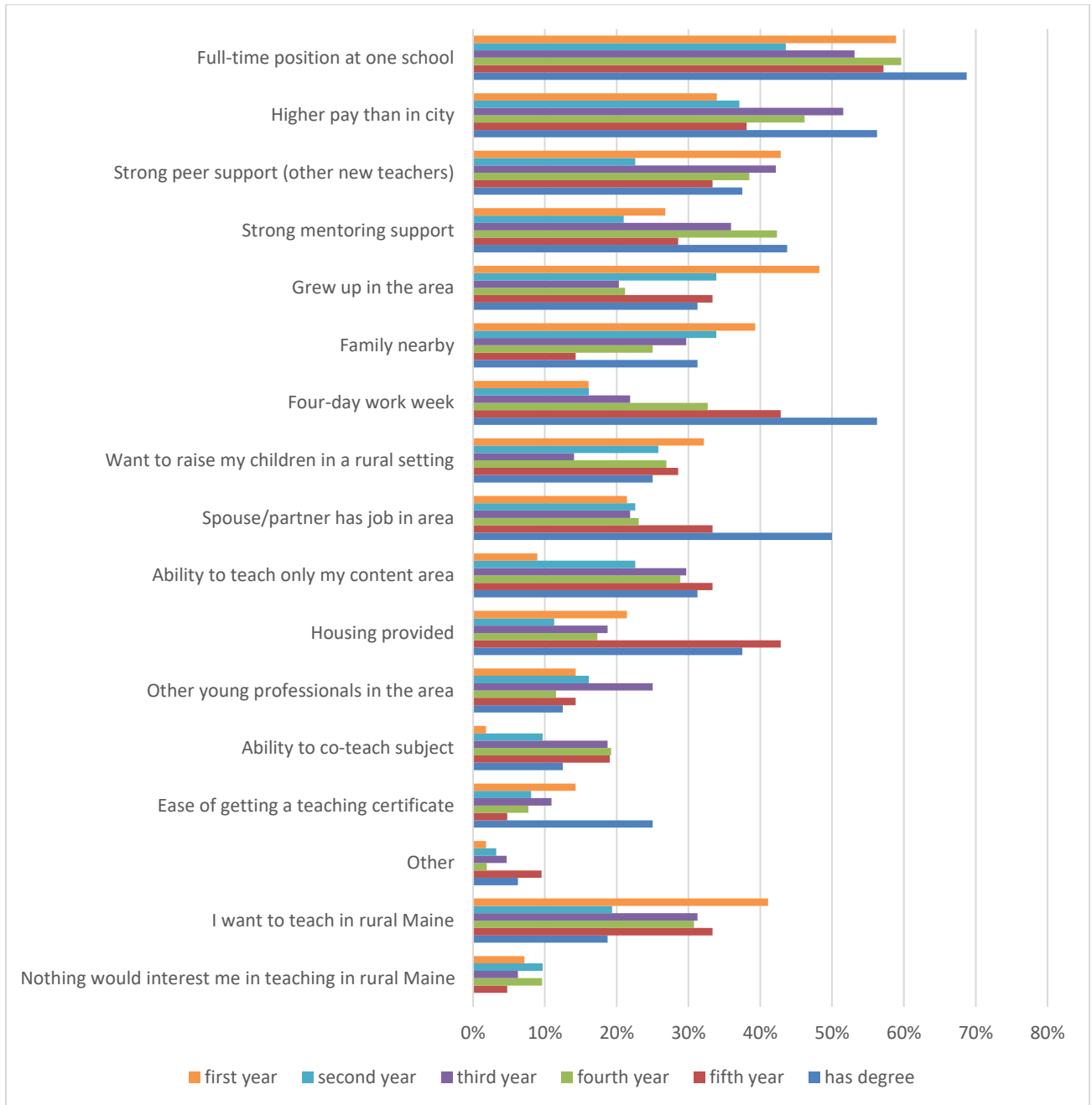
The respondents who reported that they are planning to teach or said they may teach were asked to select which factors would entice them to work in rural Maine. Rural Maine was defined as more than an hour from a city. They could select as many factors as they saw fit. Only seven percent (n=20) felt “nothing would interest me in teaching in rural Maine.” The largest differences between respondent groups were seen by year in school. First-year students were the most likely to say that they wanted to teach in rural Maine (41%, n=23), in an area where they grew up (48%, n=27) and where they had family nearby (39%, n=22). Fourth and fifth-year students were more likely to value higher pay than in the city (44%, n=32), four-day work week (36%, n=26), a job for partner or spouse in the area (26%, n=19), and having housing provided (25%, n=18).

Thirty percent of those who planned to teach or may teach said that they want to teach in rural Maine. Those who went to high school in rural Maine (44%, n=55) or an out-of-state rural area (44%, n=11) said they wanted to teach in rural Maine while just thirteen percent of those from a city/suburb (n=15) wanted to teach in rural Maine. The desire to teach in rural Maine was campus specific. About half of those from UMaine’s Fort Kent, Machias or Presque Isle campuses (48%, n=16) wanted to teach in rural Maine. By contrast, only nine percent (n=3) of respondents from USM wanted to teach in rural Maine. About half of those from a rural Maine high school selected “having family nearby” (45%, n=56) or “grew up in the area” (52%, n=65) as a draw to teaching in rural Maine.

More than half of the respondents to this question (55%) valued having a full-time position at one school. Three-quarters of respondents in the allied arts (art, music and physical

education) (73%, n=11) selected having a full-time position at one school. The next priority was higher pay than in a city (43%, n=116). This varied by where respondents attended high school. A higher percentage of those from a suburb/city either in Maine (52%, n=44) or out-of-state (53%, n=18) than those from a rural area in Maine (35%, n=44) or a rural out-of-state area (36%) felt higher pay than in a city would lure them to rural Maine. The group's third highest percentage of respondents (36%, n=98) selected "strong peer support (other new teachers)." The desire for strong mentoring support was the main difference between respondents whose classes were primarily in-person (28%, n=55) and those who are taking classes primarily on-line (44%, n=31). There were not strong differences seen by gender. The three areas selected by the fewest respondents were "other young professionals in the area" (17%, n=45), "ability to co-teach subject" (13%, n=35) and "ease of getting a teaching certificate" (11%, n=29).

Figure 4. Factors that Would Entice Teaching in Rural Maine



Summary of Survey Findings

The top reasons for selecting a major were similar for both education majors and non-education majors. These are also similar to those found in a recent national survey (Whillans et al., 2020). Their skills, their interests, a desire to make a meaningful difference, and a desire to

help others were ranked by most students as one of the top five reasons for choosing their current major.

This survey found that students view teaching as an emotionally satisfying profession with the advantage of having summers off, a large amount of vacation time and a schedule that fits with family life and allows for work-life advantage. The primary disadvantage was seen as low pay. Teaching is viewed as a career that will always be in demand. In choosing a major, those who selected education valued work-life balance and a schedule that allows more family time. Those who did not select an education major were more likely to value potential high future career earnings, ability to make a comfortable living, an intellectually challenging work, and career advancement potential. Although a starting salary of \$40,000 is the median salary reported by full-time, employed recent graduates of UMaine living in Maine in the UMaine First Destination survey teacher (Office of Institutional Research and Assessment, University of Maine 2022), most undergraduate respondents for the MEPRI survey felt \$40,000 was far too low pay for a first-year teacher.

Exposure to a teaching experience during the secondary school years did play a positive role in the decision to major in education. Most education majors made the decision to enter teaching prior to college. Teachers were cited by several participants as the reason they chose to major in education. Other education majors said they chose the field based on volunteer experiences or jobs. Fifteen percent of education majors had taken an early college course in education.

Students who are in their second year or later report that it would be difficult to change their major to teaching. Students may be aware of alternate pathways into K-12 teaching. Seventy-five (27%) non-education majors said they might or might not teach or may teach. Of those who provided information on their gender, females (29%, n=42) were slightly more likely than males (25%, n=26) to feel they might or may teach.

Based on survey responses, there appears to be a mismatch of education concentrations and need for educators. Although there were few secondary STEM concentrations among education majors, many education majors reported an enjoyment of using math and rated their skill in math equal or better than their college peers. Several students in concentrations that are not in areas of shortage, such as music and social sciences, said they chose an education major because “teaching had good career prospects.” Males were 16% of the survey population. The

male respondents in education were over-represented in physical education and secondary social sciences concentrations. These concentrations are not in areas of teacher shortages.

The possibility of teaching in rural Maine is something that over ninety-percent of education majors would consider. When given a list of factors that would draw them to a rural area, most chose several. Over half of the respondents said that a factor that would entice them to teach in rural Maine was a full-time position at one school. Higher pay than in the city would draw more respondents to teaching in a rural area. Nearly a third of education majors said that they want to teach in rural Maine.

There is a shift to online education. Students at the larger campuses and Farmington reported that their classes were primarily in-person. Over two-thirds of respondents from Augusta, Machias, Fort Kent and Presque Isle said their classes were primarily online. Slightly more than a quarter of education majors (27%) said that their classes were primarily online.

Conclusion

This study included an analysis of longitudinal data from the University of Maine System (UMS) on undergraduate student enrollment, retention and graduation for education and non-education majors, as well as an overview of the research literature on undergraduate enrollment and choice of education majors in particular. The data in Maine largely follow national trends showing a pattern of declining undergraduate enrollment in recent years as well as a decline in the number of students choosing to major in education and completing education degrees. Within the UMS, the percentage of all undergraduates who choose education has remained fairly steady these past five years. Education students changed their majors at slightly higher rates than non-education students, but also had a slightly higher 4-year and 6-year graduate rate compared to non-education students.

The study also included a survey of UMS undergraduate students to explore what factors drive their choice of college majors, and their perceptions of PK-12 teaching as a career option. Our findings about the factors students consider were quite consistent for our Maine students compared with national surveys. We found some similarities across all the undergraduates but also some differences between education and non-education majors in what students were looking for in a career after college. We also found some gender differences in choice of major. Interestingly, many of the non-education majors remained open to the possibility of teaching at some point, which presents an opportunity to attract future teachers both through the delivery of

education courses for non-education majors and through alternative education preparation pathways later in life for career changers. While some of the UMS campuses feature part-time programs for non-traditional students, other campuses predominantly offer full-time, in-person degree programs. Many UMS students seem open to the idea of teaching in a rural location, but salary and housing incentives would be key to their decision-making. While students viewed a teaching career in fairly positive ways, they saw current salary levels as a major detractor. Few students indicated they would consider a career in PK-12 education administration where there are also concerns about shortages and high turnover.

While the literature includes growing concern about teacher shortages in PK-12 schools, there is also evidence of countering forces that might reduce the severity of these shortages. In particular, declining numbers of school-aged youth in some locales, such as Maine, will reduce PK-12 school enrollments and thus fewer teachers and school buildings may be needed in the future. Further, in some subject areas, there appears to be an oversupply of trained teachers, while other areas have a critical shortage of trained educators. The national literature and data, UMS enrollment data on number of students within particular areas of concentration within the education major, and the results of our undergraduate survey of UMS students, all point to the same conclusion that undergraduate students continue to select college majors based on their own interests, passions and desire to “make a difference” in society, but without much consideration about where the jobs are. This is particularly true for students that choose education concentrations in areas that are currently over-supplied in the job market. The challenge seems to be one of providing better college and career information to students at an earlier stage in middle and high school, based on actual employment needs and projections, to encourage students into education careers where there is a high need for educators. Finding a better alignment in our supply and demand for PK-12 educators could reduce some of the severe teacher shortages in certain areas.

Implications for Policy and Practice

Looking at the study’s findings as a whole, some thoughts about potential implications for policy and practice include the following:

- The number of education majors may be increased by providing high school students information on teaching PK-12 as a career and opportunities to experience working with children. Most education majors had decided on an education major prior to entering college. Early college courses in education had been taken by 15% of education majors.

- Non-traditional pathways into education careers should be promoted for adult learners. There are some online options and teaching certificate programs within the UMaine System. More than a quarter of non-education majors felt they might or might not teach at some point in their careers.
- Some respondents felt it was difficult to switch into an education when they were in their second year or more of college. Options for these students to enter teaching without incurring extra cost and academic time could be explored.
- While UMS has some master's degree programs for students with a degree in another field, Maine is an exception to the national trend of conferring significantly more master's degrees in education than bachelor's degrees.
- Providing students information on how teacher salaries increase with experience and average teacher salaries may increase interest in teaching as a profession. Most respondents saw low pay as a disadvantage to teaching PK-12 and felt a starting salary of \$40,000 was far too low.
- There is a national mismatch of students' choice of major and concentration within education and areas of need in PK-12 education. Providing potential education majors with reliable information on future teacher openings and areas of shortages may help students chose concentrations where job opportunities will be more plentiful. Although many respondents reported that they enjoy using math and were confident that their math skills were equal to or better than their college peers, very few had selected a STEM concentration.
- While male teachers are believed to have a positive effect on male students, there remains a shortage of male teachers. Nationwide, the number of males in bachelor degree education programs has been decreasing at a faster rate than that of females. Males composed 16% of the survey population of education respondents. The male respondents in education were over-represented in physical education and secondary social sciences concentrations. These concentrations are not in areas of teacher shortages.
- Designing and promoting education courses for students who do not plan on going into K-12 teaching could increase awareness and appreciation for the work of teaching as well as provide students useful knowledge. Understanding how people learn and helping others learn new skills is an asset in almost every career pathway. Yet, many individuals pursue education as a second career and having a college education course may help them consider this option. The majority of non-education majors in our survey sample have not taken an education course.
- While the focus of this report was on teaching PK-12 as a career, a holistic view of school district needs should be taken. Schools are increasingly employing professionals who are not teachers, such as specialists in areas of disability, school counselors, psychologists and coaches. Districts can emphasize recruiting under-represented populations into a variety of positions.

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Author Information

Janet C. Fairman is an Associate Professor in the School of Learning and Teaching, College of Education and Human Development, University of Maine, and co-Director of MEPRI. She holds a doctorate degree in education policy and has expertise in the areas of education policy analysis, program evaluation, and qualitative research methodology. Her research includes a focus on STEM education, innovative and reform practices in education and teacher leadership.

Patricia L. Lech is a Senior Research Associate in the School of Learning and Teaching, College of Education and Human Development, University of Maine. She has expertise in quantitative research methods and statistical data analysis, as well as education program evaluation.

Appendices

Appendix A: Survey Instrument for Undergraduate Survey

Appendix B: Additional Tables for UMS Enrollment Data

Appendix A: Survey Instrument for Undergraduate Survey

Undergraduate's Choice of Major

This survey is being conducted at the request of the Maine legislature to better understand how undergraduate college students are selecting their major. Your responses will remain confidential.

What is your enrollment status?

Full-time

Part-time

Not currently enrolled

Skip To: End of Survey If What is your enrollment status? = Not currently enrolled

What academic year are you?

1st year

2nd year

Third year

Fourth year

5th year or higher

Undergraduate who already has a degree

Graduate student

Skip To: End of Survey If What academic year are you? = Graduate student

Display This Question:

If What is your enrollment status? = Part-time

How many credit hours have you earned in total toward your current undergraduate degree? (include transfer credits, AP credits, Early College and University of Maine system credits, do not include this semester)

0-30

31-60

61-90

91-120

121 or more

I am not in a degree granting program

Skip To: Was your first degree a bachelor's degree If How many credit hours have you earned in total toward your current undergraduate degree? (include... = I am not in a degree granting program (will go to preferences if they do not already have a degree)

Display This Question:

If What academic year are you? Not= Undergraduate who already has a degree

Have you declared a major?

Yes

No

Skip To: Preferences If Have you declared a major? = No

Display This Question:

If What academic year are you? = Undergraduate who already has a degree

Have you declared a major?

Yes

No

Skip To: Was your first degree a bachelor's degree If Have you declared a major? = No

Are you getting a double major?

Yes

No

Display This Question:

If What academic year are you? = Undergraduate who already has a degree

Are you getting a second Bachelor's degree?

Yes

No

Display This Question:

If Are you getting a double major? = No

What category best describes your intended major?

- Creative and Performing Arts
- Humanities (English, history, political science, French...)
- Life Sciences (biology, marine science, forestry, nutrition...)
- Physical Sciences (chemistry, physics...)
- Engineering
- Mathematics
- Business, Economics, Accounting
- Health Professions (nursing, athletic training, speech therapist...)
- Education
- Criminal Justice, Law enforcement
- Public administration and social services (social work...)
- Computer Science
- Communication (journalism...)
- Psychology (counseling...)
- Cultural, gender, ethnic, and group studies
- Parks, recreation, leisure, fitness, kinesiology

If Are you getting a second Bachelor's degree? = Yes

What category best describes your major for your first bachelor's degree?

- Creative and Performing Arts
- Humanities (English, history, political science, French...)
- Life Sciences (biology, marine science, forestry, nutrition...)
- Physical Sciences (chemistry, physics...)
- Engineering
- Mathematics
- Business, Economics, Accounting
- Health Professions (nursing, athletic training, speech therapist...)
- Education
- Criminal Justice, Law enforcement
- Public administration and social services (social work...)
- Computer Science
- Communication (journalism...)
- Psychology (counseling...)
- Cultural, gender, ethnic, and group studies
- Parks, recreation, leisure, fitness, kinesiology

Display This Question:

If Are you getting a double major? = Yes

What category best describes your primary major?

- Creative and Performing Arts
- Humanities (English, history, political science, French...)
- Life Sciences (biology, marine science, forestry, nutrition...)
- Physical Sciences (chemistry, physics...)
- Engineering
- Mathematics
- Business, Economics, Accounting
- Health Professions (nursing, athletic training, speech therapist...)
- Education
- Criminal Justice, Law enforcement
- Public administration and social services (social work...)
- Computer Science
- Communication (journalism...)
- Psychology (counseling...)
- Cultural, gender, ethnic, and group studies
- Parks, recreation, leisure, fitness, kinesiology

Display This Question:

If Are you getting a double major? = Yes

What category best describes your second major?

- Creative and Performing Arts
- Humanities (English, history, political science, French...)
- Life Sciences (biology, marine science, forestry, nutrition...)
- Physical Sciences (chemistry, physics...)
- Engineering
- Mathematics
- Business, Economics, Accounting
- Health Professions (nursing, athletic training, speech therapist...)
- Education
- Criminal Justice, Law enforcement
- Public administration and social services (social work...)
- Computer Science
- Communication (journalism...)
- Psychology (counseling...)
- Cultural, gender, ethnic, and group studies
- Parks, recreation, leisure, fitness, kinesiology

Display This Question:

If What category best describes your intended major? = Education

Or What category best describes your major for your first bachelor's degree? = Education

Or What category best describes your primary major? = Education

Or What category best describes your second major? = Education

What is your program area in Education?

Early childhood

Elementary

Secondary English (7-12)

Secondary Math (7-12)

Secondary Life Sciences (7-12)

Secondary Physical Science (7-12)

Secondary Social Science (7-12)

Physical Education

Special Education

Art/Music

World language (Spanish, French ...)

Other _____

Have you changed majors since you enrolled?

Yes

No, but I plan to change it

No

Display This Question:

If Have you changed majors since you enrolled? = Yes

Or Have you changed majors since you enrolled? = No, but I plan to change it

What category best describes your major when you enrolled?

Explorations/ Undecided

Creative and Performing Arts

Humanities (English, history, political science, French...)

Life Sciences (biology, marine science, forestry, nutrition...)

Physical Sciences (chemistry, physics...)

Engineering

Mathematics

Business, Economics, Accounting

Health Professions (nursing, athletic training, speech therapist...)

Education

Criminal Justice, Law enforcement

Public administration and social services (social work...)

Computer Science

Communication (journalism...)

Psychology (counseling...)

Cultural, gender, ethnic, and group studies

Parks, recreation, leisure, fitness, kinesiology

Display This Question:

If Have you declared a major? = No

And What academic year are you? = Undergraduate who already has a degree

Was your first degree a bachelor's degree?

Yes

No

Display This Question:

If Was your first degree a bachelor's degree? = Yes

And Have you declared a major? = No

And What academic year are you? = Undergraduate who already has a degree

What category best describes your major for your first bachelor's degree?

Creative and Performing Arts

Humanities (English, history, political science, French...)

Life Sciences (biology, marine science, forestry, nutrition...)

Physical Sciences (chemistry, physics...)

Engineering

Mathematics

Business, Economics, Accounting

Health Professions (nursing, athletic training, speech therapist...)

Education

Criminal Justice, Law enforcement

Public administration and social services (social work...)

Computer Science

Communication (journalism...)

Psychology (counseling...)

Cultural, gender, ethnic, and group studies

Parks, recreation, leisure, fitness, kinesiology

Display This Question:

If How many credit hours have you earned in total toward your current undergraduate degree? (include... = I am not in a degree granting program

And What academic year are you? = Undergraduate who already has a degree

Was your first degree a bachelor's degree?

Yes

No

Display This Question:

If Was your first degree a bachelor's degree? = Yes

And How many credit hours have you earned in total toward your current undergraduate degree? (include... = I am not in a degree granting program

And What academic year are you? = Undergraduate who already has a degree

What category best describes your major for your first bachelor's degree?

Creative and Performing Arts

Humanities (English, history, political science, French...)

Life Sciences (biology, marine science, forestry, nutrition...)

Physical Sciences (chemistry, physics...)

Engineering

Mathematics

Business, Economics, Accounting

Health Professions (nursing, athletic training, speech therapist...)

Education

Criminal Justice, Law enforcement

Public administration and social services (social work...)

Computer Science

Communication (journalism...)

Psychology (counseling...)

Cultural, gender, ethnic, and group studies

Parks, recreation, leisure, fitness, kinesiology

Preferences

In this section you will be asked questions about why you chose your current major and your views about certain activities.

Select up to five top factors in your choice of your current major

- My interests and passions
- My skills and talents
- My parent(s)' preferences
- My ability to complete degree in a timely manner
- Potential high future earnings
- Potential for career advancement
- Future career has reasonable expected hours per week
- Future career has workplace location flexibility (remote/hybrid work)
- Future career has workplace hour flexibility
- Positive long-term employment outlook
- Future ability to do meaningful work
- Future ability to help others
- Intellectually stimulating career
- Ability to live in a desirable place after graduation
- Ability to live in a desirable place later in my career
- Typical pension/retirement plans
- Parent or sibling works in same field
- Will lead to a well-respected career
- Career choice will allow work-life balance
- Ability to earn enough for a comfortable life
- Work schedule will be compatible with family life
- Other _____

I enjoy tutoring and/or helping others learn in courses I am taking or in courses that I have taken.

- Strongly disagree
- Somewhat disagree
- Neither agree nor disagree
- Somewhat agree
- Strongly agree

I enjoy working in a leadership role with groups of children. (for example: camp counselor, coach...)

Strongly disagree

Disagree

Neither agree nor disagree

Agree

Strongly agree

Not applicable, I have not had this opportunity

I enjoy using mathematics.

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

How would you rate your math skills compared to the average college student?

Far below average

Somewhat below average

Average

Somewhat above average

Far above average

Education as a Major

In this section, you will be asked questions about your consideration of Education as part of your degree program.

Display This Question:

*If What category best describes your intended major? = Education
Or What category best describes your primary major? = Education
Or What category best describes your second major? = Education*

During which **academic year**, did you first take an Education class?

- Prior to starting college (Early College)
- First year
- Second year
- Third year
- Fourth year
- Fifth year or higher
- After earning first bachelor's degree
- I have not taken an education class

Skip To: During which semester did you declare education as a major If Education as Major In this section, you will be asked questions about your consideration of Educa... , Prior to starting college (Early College) Is Displayed

Display This Question:

*If What academic year are you? = Undergraduate who already has a degree
And What category best describes your major for your first bachelor's degree? = Education*

During which **academic year**, did you first take an Education class?

- Prior to starting college (Early College)
- First year
- Second year
- Third year
- Fourth year
- Fifth year or higher
- After earning first bachelor's degree
- I have not taken an education class

Skip To: Views About Teaching If Education as Major In this section, you will be asked questions about your consideration of Educa... , Prior to starting college (Early College) Is Displayed

Display This Question:

If Have you declared a major? = No

Are you taking or have you taken an Education class?

Yes

No

Skip To: Have you considered changing your major to education If Education as Major In this section, you will be asked questions about your consideration of Educa... , Yes Is Displayed

Are you taking or have you taken an Education class?

Yes

No

Skip To: Are you getting an education minor If Education as Major In this section, you will be asked questions about your consideration of Educa... , Yes Is Displayed

Display This Question:

If What category best describes your intended major? = Education

Or What category best describes your primary major? = Education

Or What category best describes your second major? = Education

During which **semester**, did you declare Education as your major?

Before starting college

First semester

Second semester

Third semester, start of second year

Fourth semester

Fifth semester, start of third year or later

Skip To: Why did you select education as your current major If During which semester, did you declare Education as your major? = Before starting college

Was it easy to declare an Education major in your \${ SelectedChoice from previous question} without losing credits toward graduation?

- Extremely difficult
- Somewhat difficult
- Neither easy nor difficult
- Somewhat easy
- Extremely easy

Why did you select Education as your current major?

Are you planning to do a semester of student teaching?

- Yes
- Unsure
- No

Skip To: Views About Teaching If Are you planning to do a semester of student teaching? = Yes
Skip To: Views About Teaching If Are you planning to do a semester of student teaching? = Unsure

Why are you planning not to do a semester of student teaching?

Skip To: End of Block If Condition: Why are you planning not to... Is Displayed. Skip To: End of Block.

Are you planning on getting an Education minor?

Yes

Maybe

No

Have you considered changing your major to Education?

Yes

No

It would be easy for me to change my major to Education without losing credits toward graduation.

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

I do not know

The thought of doing a semester of student teaching discourages me from getting an Education major.

Strongly disagree

Somewhat disagree

Neither agree nor disagree

Somewhat agree

Strongly agree

Display This Question:

If Have you considered changing your major to Education? = Yes

What are the reasons you chose not to change to an Education major?

Views About Teaching as a Profession

In this section, the questions explore your views about teaching as a career.

Do you plan to teach in Pre-kindergarten to Grade 12 (PK-12) as a career?

Yes, I am taking Education courses and plan to teach

Yes, I may teach

I might or might not teach

No, I do not think I would ever teach

Display This Question:

If What is your program area in Education? , Early childhood Is Not Displayed

And Do you plan to teach in Pre-kindergarten to Grade 12 (PK-12) as a career? = Yes, I may teach

What content area(s) in education best describe(s) what you might teach? (Check all that apply)

Early childhood

Elementary

Secondary English (7-12)

Secondary Math (7-12)

Secondary Life Sciences (7-12)

Secondary Physical Science (7-12)

Secondary Social Science (7-12)

Physical Education

Special Education

Art/Music

World language (Spanish, French ...)

Other _____

Display This Question:

If What is your program area in Education? , Early childhood Is Not Displayed

And Do you plan to teach in Pre-kindergarten to Grade 12 (PK-12) as a career? = I might or might not teach

What content area(s) in education best describe(s) what you might teach? (Check all that apply)

Early childhood

Elementary

Secondary English (7-12)

Secondary Math (7-12)

Secondary Life Sciences (7-12)

Secondary Physical Science (7-12)

Secondary Social Science (7-12)

Physical Education

Special Education

Art/Music

World language (Spanish, French ...)

Other _____

Display This Question:

If What category best describes your intended major? = Education

Or What category best describes your major for your first bachelor's degree? = Education

Or What category best describes your primary major? = Education

Or What category best describes your second major? = Education

Or What category best describes your major for your first bachelor's degree? = Education

What are your thoughts about becoming a school administrator?

Yes, I plan to become an administrator

I may or may not become an administrator

I do not want to become an administrator

I have not thought about this career path

What do you consider to be the top benefits of a PK-12 teaching career? (Select up to three)

Emotional satisfaction

School community

Pay

Prestige

Time off -summers, holidays

Ability to be home when children are out of school

Variety

Employment outlook

Ability to work in a variety of locations

Working with children

Families/Parents

Intellectually challenging

Responsibility

Political/societal influence

Work-life balance

Low stress

Workload

Pension/retirement plan

Other _____

What do you consider to be the top drawbacks of a PK-12 teaching career? (Select up to three)

Pay

Prestige

Inability to easily find work in desired locations

Emotionally challenging

Student behavior

Student needs

Working with children

Families/Parents

Education system

School culture

Not intellectually challenging

Political/societal interference

Expected work hours

Responsibility

Stress

Workload

Need to do student teaching

Pension plan and social security retirement

Other _____

A salary for a first year teacher in Maine of \$40,000 per year is:

- Far too little
- Slightly too little
- Just about right
- Slightly too much
- Far too much

Display This Question:

If Do you plan to teach in Pre-kindergarten to Grade 12 (PK-12) as a career? = Yes, I am taking Education courses and plan to teach

Or Do you plan to teach in Pre-kindergarten to Grade 12 (PK-12) as a career? = Yes, I may teach

What are the factors that would entice you to teach in rural Maine (more than an hour from a city).

(Check all that apply)

- I want to teach in rural Maine
- Higher pay than in city
- Four-day work week
- Ability to teach only my content area
- Full-time position at one school
- Strong mentoring support
- Strong peer support (other new teachers)
- Other young professionals in the area
- Ability to co-teach subject
- Ease of getting a teaching certificate
- Grew up in the area
- Family nearby
- Spouse/partner has job in area
- Want to raise my children in a rural setting
- Housing provided
- Other _____
- Nothing would interest me in teaching in rural Maine

Demographics

Are you a traditional student? (Began attending college within two years of high school graduation and plan to complete degree within six years)

Yes

No

What is your gender?

Female

Male

Non-binary, trans-gender, other

Prefer not to say

How would you best describe the area where you attended high school?

Rural Maine

Suburb/City in Maine

Out-of-state rural area

Out-of-state suburb/city

International, not in the United States

Which is your primary campus?

University of Maine (Orono)

University of Maine at Augusta

University of Maine at Farmington

University of Maine at Fort Kent

University of Maine at Machias

University of Maine at Presque Isle

University of Southern Maine

Are your classes primarily online or in-person?

Online

In-person

This is the end of the survey. To edit your answers, you may click the back button. To submit your survey, click the forward arrow.

Appendix B: Additional Tables for UMS Enrollment Data

Table B1. UMS Enrollment by Campus and Education Concentration

Institution	Education Areas	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2022
UM	Art Education	38	35	26	30	29	37
	Early Ed./Child Devel. Family Rela.	71	62	51	43	53	57
	Elementary Education	200	191	197	219	217	204
	Music Education	67	64	74	80	69	50
	Other/Not Specified	34	59	58	49	64	37
	Physical & Health Education	35	24	32	40	50	48
	Secondary Education	135	119	124	126	133	117
UM Unduplicated Headcount		571	534	540	572	597	531
UMA	Early Ed./Child Devel. Family Rela.	49	44	33	34	29	36
	Elementary Education	113	99	101	94	123	132
	Music Education	5	3	5	1	0	0
	Other/Not Specified	2	22	25	31	18	21
	Secondary Education	59	41	39	30	39	48
	Special Education (Level Not Specified)	20	13	13	14	12	10
	UMA Unduplicated Headcount		235	210	206	194	209
UMF	Early Ed./Child Devel. Family Rela.	207	200	184	167	146	127
	Elementary Education	240	219	214	209	191	161
	Other/Not Specified	4	7	13	21	26	30
	Physical & Health Education	13	10	5	4	17	25
	Secondary Education	190	178	169	172	161	150
	Special Education (Level Not Specified)	41	38	43	47	41	38
	UMF Unduplicated Headcount		665	620	599	582	545
UMFK	Elementary Education	23	8	0	0	0	0
	Other/Not Specified	4	6	4	4	3	6
	Secondary Education	9	0	0	0	0	0
UMFK Unduplicated Headcount		35	14	4	4	3	6
UMM	Early Ed./Child Devel. Family Rela.	0	0	3	6	7	8
	Elementary Education	37	40	34	27	20	21
	Other/Not Specified	1	2	1	3	0	1
	Secondary Education	31	24	23	22	19	16
	Special Education (Level Not Specified)	15	11	12	24	23	25
UMM Unduplicated Headcount		84	77	73	82	69	70
UMPI	Art Education	0	0	0	0	1	0
	Elementary Education	41	53	88	91	103	97
	Other/Not Specified	6	4	27	28	35	46
	Physical & Health Education	18	10	13	14	16	24

	Secondary Education	22	26	26	15	22	21
	UMPI Unduplicated Headcount	86	91	152	148	175	188
USM	Art Education	29	29	26	29	31	34
	Early Ed./Child Devel. Family Rela.	28	28	16	3	0	0
	Elementary Education	114	119	104	111	134	103
	Music Education	48	62	68	59	50	41
	Other/Not Specified	40	40	55	68	46	36
	Secondary Education	101	107	88	92	87	82
	USM Unduplicated Headcount	336	357	338	340	338	289
System	Art Education	67	64	52	59	61	71
	Early Ed./Child Devel. Family Rela.	355	334	287	253	235	228
	Elementary Education	767	729	737	750	788	718
	Music Education	120	129	147	140	119	91
	Other/Not Specified	91	140	183	203	191	177
	Physical & Health Education	66	44	50	58	83	97
	Secondary Education	546	494	469	456	461	434
	Special Education (Level Not Specified)	76	62	68	85	76	73
Systemwide Unduplicated Headcount	2,009	1,902	1,911	1,917	1,932	1,795	

Note: Enrollments show unduplicated headcounts for students enrolled in Education programs in UMS.

Table B2. Number of Education and Non-Education UMS Students Who Changed their Field of Study

Field of Study (First Major)	Changed Field of Study?	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021
Education	Changed Field of Study	115	108	108	90	82	12.0%	12.1%	11.6%	10.0%	7.9%
	Did Not Change Field of Study	842	785	825	810	960	88.0%	87.9%	88.4%	90.0%	92.1%
	Unduplicated Headcount	957	893	933	900	1,042	100%	100%	100%	100%	100%
Non-Education	Changed Field of Study	1,150	1,150	876	919	869	10.7%	10.7%	8.2%	9.1%	8.9%
	Did Not Change Field of Study	9,571	9,611	9,819	9,234	8,903	89.3%	89.3%	91.8%	90.9%	91.1%
	Unduplicated Headcount	10,721	10,761	10,695	10,153	9,772	100%	100%	100%	100%	100%
System Total	Changed Field of Study	1,265	1,258	984	1,009	951	10.8%	10.8%	8.5%	9.1%	8.8%
	Did Not Change Field of Study	10,413	10,396	10,644	10,044	9,863	89.2%	89.2%	91.5%	90.9%	91.2%
	Unduplicated Headcount	11,678	11,654	11,628	11,053	10,814	100%	100%	100%	100%	100%

Note: Enrollments show unduplicated headcounts for students enrolled in UMS programs.

Table B3. Number of Education and Non-Education UMS Students Who Changed their Field of Study by Credit Hours Completed

Credit Hrs	Field of Study	Changed Field of Study?	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021
0 to 29 Credit Hours Completed	Education	Changed Field of Study	58	40	45	35	32	17.4%	13.7%	14.0%	13.7%	10.6%
		Did Not Change Field of Study	276	251	277	220	270	82.6%	86.3%	86.0%	86.3%	89.4%
		Unduplicated Headcount	334	291	322	255	302	100%	100%	100%	100%	100%
	Non-Education	Changed Field of Study	615	571	437	461	440	19.1%	18.7%	14.7%	17.0%	15.3%
		Did Not Change Field of Study	2,603	2,481	2,543	2,258	2,444	80.9%	81.3%	85.3%	83.0%	84.7%
		Unduplicated Headcount	3,218	3,052	2,980	2,719	2,884	100%	100%	100%	100%	100%
30 to 59 Credit Hours Completed	Education	Changed Field of Study	35	36	35	28	24	13.5%	13.9%	13.4%	9.6%	8.5%
		Did Not Change Field of Study	225	223	227	263	259	86.5%	86.1%	86.6%	90.4%	91.5%
		Unduplicated Headcount	260	259	262	291	283	100%	100%	100%	100%	100%
	Non-Education	Changed Field of Study	335	374	264	272	260	11.0%	11.7%	8.5%	9.4%	9.8%
		Did Not Change Field of Study	2,708	2,813	2,854	2,628	2,396	89.0%	88.3%	91.5%	90.6%	90.2%
		Unduplicated Headcount	3,043	3,187	3,118	2,900	2,656	100%	100%	100%	100%	100%
60 to 89 Credit Hours Completed	Education	Changed Field of Study	16	24	21	26	18	5.9%	9.5%	8.0%	10.0%	5.7%
		Did Not Change Field of Study	255	229	242	234	298	94.1%	90.5%	92.0%	90.0%	94.3%
		Unduplicated Headcount	271	253	263	260	316	100%	100%	100%	100%	100%
	Non-Education	Changed Field of Study	144	145	125	135	126	4.9%	4.8%	4.0%	4.4%	4.5%
		Did Not Change Field of Study	2,768	2,907	2,969	2,904	2,666	95.1%	95.2%	96.0%	95.6%	95.5%
		Unduplicated Headcount	2,912	3,052	3,094	3,039	2,792	100%	100%	100%	100%	100%
90+ Credit Hours Completed	Education	Changed Field of Study	6	8	7	1	8	6.5%	8.9%	8.1%	1.1%	5.7%
		Did Not Change Field of Study	86	82	79	93	133	93.5%	91.1%	91.9%	98.9%	94.3%
		Unduplicated Headcount	92	90	86	94	141	100%	100%	100%	100%	100%
	Non-Education	Changed Field of Study	56	60	50	51	43	3.6%	4.1%	3.3%	3.4%	3.0%
		Did Not Change Field of Study	1,492	1,410	1,453	1,444	1,397	96.4%	95.9%	96.7%	96.6%	97.0%
		Unduplicated Headcount	1,548	1,470	1,503	1,495	1,440	100%	100%	100%	100%	100%

Table B4. Number of Non-Education UMS Students who Changed their Field of Study to Education

Changed to Education in Next Fall Term	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021
Changed to Education	133	139	106	197	114	1.1%	1.2%	0.9%	1.7%	1.1%
Did not change to Education	11,984	11,926	11,756	11,115	10,600	98.9%	98.8%	99.1%	98.3%	98.9%
System-wide Unduplicated Headcount	12,117	12,065	11,862	11,312	10,714	100%	100%	100%	100%	100%

Note: Enrollments show unduplicated headcounts for students enrolled in UMS programs.

Table B5. Number and Percentage of Education and Non-Education UMS Students who Continued or Completed their Degrees

Field of Study	Subsequent Fall Term Status	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021	Fall 2017	Fall 2018	Fall 2019	Fall 2020	Fall 2021
Education	Completed	258	255	247	233	260	17.5%	18.6%	17.7%	16.9%	16.4%
	Did Not Return or Complete	212	186	182	229	259	14.4%	13.5%	13.1%	16.6%	16.3%
	Returned to UMS	1,001	933	965	917	1,067	68.0%	67.9%	69.2%	66.5%	67.3%
	Edu Unduplicated Headcount	1,471	1,374	1,394	1,379	1,586	100%	100%	100%	100%	100%
Non-Education	Completed	3,365	3,373	3,495	3,558	3,508	17.5%	17.6%	18.5%	19.1%	19.7%
	Did Not Return or Complete	3,723	3,764	3,547	3,717	3,610	19.4%	19.6%	18.8%	20.0%	20.2%
	Returned to UMS	12,117	12,065	11,862	11,312	10,714	63.1%	62.8%	62.7%	60.9%	60.1%
	Non-Edu Unduplicated Headcount	19,205	19,202	18,904	18,587	17,832	100%	100%	100%	100%	100%

Data show students who returned to UMS within their programs in the subsequent fall term or completed and unduplicated headcounts.

Table B6. Number & Percentage of Education & Non-Education UMS Students Graduating in 4 or 6 Years, Summer-Fall 2016 Cohort

	Summer/ Fall 2016 Cohort	Completed 4 Years	Completed 6 Years	4-Year Graduation Rate	6-Year Graduation Rate
Education Major/ Concentration	295	117	171	39.7%	58.0%
Non-Education Major/ Concentration	2,937	1,031	1,553	35.1%	52.9%
Undeclared and/or Conditional Admit	823	139	329	16.9%	40.0%
Total	4,055	1,287	2,053	31.7%	50.6%

Unduplicated headcount of UMS students, both part-time and full-time.