A New Pathway for the Preparation of Highly Qualified Teachers: The Master of Arts in Teaching (MAT)

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This article reports on the development and initial implementation of a Master of Arts in Teaching (MAT) degree, an accelerated graduate program that encourages and scaffolds individuals with existing disciplinary expertise in entering the teaching profession. First, the context for developing the program is outlined. Next, the unique structure of the 15-month program, which consists of three blocks, is described. Expectations about students are...
then shared, quality control features of the program are highlighted, and the lessons we learned about program development and implementation are detailed. Finally, thoughts about the future of this program and others of its type are shared based upon our experience.

In the era of No Child Left Behind (NCLB) legislation, it is increasingly clear that teacher education programs will be held more accountable than ever before. Policies of the federal government demonstrate a fundamental mistrust of the field of teacher education, and the accompanying rhetoric implies that public schools fail, in large measure, because teacher preparation programs fall short in producing high quality educators (The Teaching Commission, 2004). While most of us in teacher education would dismiss this assertion and might take issue with what legislators and political pundits mean by a highly qualified teacher, we would certainly agree that producing knowledgeable and skilled education professionals ought to be our essential goal.

Of special interest in an NCLB context is the Bush administration's fondness for attracting individuals to the teaching ranks who possess content expertise, but have not been traditionally trained as teachers. This affinity centers on the twofold notion that: subject matter knowledge is more important to effective teaching than pedagogical skill, and that nearly anyone possessing this knowledge can be expected to convey it successfully to K-12 students. A related corollary is that alternative pathways to teacher certification are not only acceptable, but perhaps preferable. Understandably, such thinking deeply concerns teacher educators, particularly those of us who have witnessed the shortcomings of alternative certification programs on our own campuses. In many instances, these programs are rather makeshift in nature and lack an overarching direction. Moreover, they tend to depend heavily on academic advisors piecing together programs of study for individual students from among whatever courses happen to be offered. In effect, there may be very little customizing of typical alternative certification programs to the unique needs of non-traditional pre-service teachers as described by Eifler and Potthoff (1998).

Tensions that exist between traditional and alternative certification programs and between the relative importance of content
expertise and pedagogical skill are particularly acute in secondary education. Academics in the liberal arts tend to favor the content expertise perspective and place less importance on didactics. Those involved in teacher preparation understandably place pedagogy as the heart of their ideologies. Teacher educators believe that teaching is a true science and art that requires explicit training as well as intense practical experience in the form of guided apprenticeships. The debates, as we see them, detract from inescapable conclusions that: (a) both discipline-related knowledge and teaching competence are necessary for highly qualified secondary level teachers, and (b) multiple pathways can lead to the development of these individuals (Zeichner & Schulte, 2001).

In this sense, Fenstermacher (1990) noted that alternative routes to certification programs, if done well, can challenge traditional teacher education. He suggests that since both approaches must struggle to meet the profound ends of teacher education, that there may be value in ceasing to think of them as oppositional to one another. Perhaps the best course of action lies in blending these ideas such that "the benefits of being close to practice are maintained, but so are the advantages of reflective and critical approaches to pedagogy." This blending would require new models of teacher education, and may prove to be the "most enduring benefit of alternative certification's challenge to traditional teacher education."

As the developers of the Master of Arts in Teaching (MAT) program our aim was neither to replace undergraduate teacher preparation nor eliminate alternative certification programs. Rather, we set out to provide a high quality, technology-rich, accelerated certification option for liberal arts majors in certain disciplines who decide later on teaching as a career choice. Whether dealing with undergraduate or graduate students, our goal of preparing the best teachers possible remains the same. In our view, all routes to certification ought to inform and enrich the others.

With this spirit of compromise in mind, we created a unique pathway to secondary certification that honors all sides of these debates. In this paper, we describe the MAT degree, a new program that attracts individuals with existing disciplinary expertise to the
teaching profession and endeavors to scaffold them in a state-of-the-art fashion. Unlike some non-traditional routes to teacher certification, the MAT is designed not only to equal the integrity and rigor of typical secondary education programs, but whenever possible, to exceed them.

**Getting Started**

In this context, our five-member planning group met to discuss the possibility of designing and implementing a Masters of Arts in Teaching program. This program would become our first formalized plan for alternative teacher certification and also a new degree program in the university. During initial meetings, we identified the needs and opportunities present. As to needs, we recognized the demand for well-prepared secondary school teachers by the public schools in our largely rural region. In particular, there was a perennial need for teachers in science and mathematics that had not been met by our existing programs. We further recognized the increasing numbers of individuals with recent undergraduate degrees in the sciences or liberal arts coming to our college to ask about teaching certification as part of a graduate program. At about this same time, our college became involved with the Library of Congress's *Adventure of the American Mind* (AAM, 2004) project. This opportunity to participate in a cutting edge application of technology to instruction provided another important element to consider in designing our new MAT program.

Our planning group agreed that we would design and implement the MAT program to prepare outstanding individuals with content area degrees to become knowledgeable, skilled, and technologically savvy entry level educators, while earning teaching certification and a Masters degree at the same time. We agreed to seek individuals with exceptional credentials who also expressed enthusiasm and certainty about teaching as an immediate career path. We agreed that the candidates would be immersed in both on-campus course work and an intensive yearlong field-based school internship and teaching experience. What follows is a description of the MAT program and our experiences in its first year of implementation.
Program Structure

In mid-May of 2003, the initial cohort of MAT students at SIUC began their course of studies. Our planning group had envisioned a program framed around three key components: (a) addressing teacher shortages in hard-to-staff disciplines such as mathematics and science; (b) recruiting and preparing talented secondary school teachers with strong content preparation; and (c) providing a year-long internship in a public school classroom. Moreover, we tried to model other aspects of exemplary alternative teacher certification programs including rigorous screening, mentoring, and high performance standards for completion (Feistritzer & Chester, 2000) as well as increased disciplinary knowledge (Valli & Rennert-Ariev, 2000), a factor reform efforts agree is important.

To be admitted to the MAT program, students needed an earned baccalaureate degree in the academic discipline they would teach to ensure deep content knowledge. The bulk of their MAT coursework would focus on pedagogical repertoires and the special developmental characteristics and needs of adolescents (Brabeck & Shirley, 2003). However, students would also be required to complete at least six additional hours of graduate coursework in their academic discipline. Still another special feature of the MAT would be its alignment with the Adventure of the American Mind program that introduces teachers to the digitized archives of the Library of Congress. During their first summer of classes, MAT students would be expected to take a technology course that prepared them to weave Library of Congress archival materials into their teaching, while also requiring them to use instructional technology more strategically in their planning and teaching.

More generally, the MAT program is designed for cohorts of students who complete their degree and certification testing within a time span of 15 months. The program starts in mid-May of each year and continues through early August of the following year. As Figure 1 shows, the program includes three distinct blocks of courses and field-based experiences that culminate in a total of 45 graduate credit hours. Tying together these program blocks is an action research theme that focuses on inquiry into school-based problems and issues.
which are identified and studied by students in the cohort. Working in multidisciplinary teams in collaboration with mentor teachers and university faculty, MAT candidates investigate problems that emerge from their field work. The following sections offer a description of the time line, purposes, courses, practicum experiences, and action research activities that comprise the three program blocks.

**Block One**

Block One begins during an inter-session in mid-May, one month prior to the official start of regular summer school courses. It continues through the end of the summer into early August. During this time, students take four graduate level courses, earning a total 14 credit hours. Block One serves as the introductory foundation for the MAT program and has three purposes. First, students become familiarized with the rationale, structure, expectations and opportunities of the program. Second, they begin to develop and cohesive ties with members of their student cohort as they meet and interact with one another as well as with faculty members, and as they begin to collaborate on class projects. These conditions develop during a series of program orientation events and through their shared coursework, which requires them to consult one another about class projects. A third purpose is to introduce, through a sequence of courses, the knowledge and skills essential to success in the teaching profession, including the theory and tools of action research.

The first course taken by students in Block One is a new 5-credit graduate offering that deals with the fundamental attitudes and skills involved in teaching and learning. It is taught in an intensive format and is the only course students take during the first month of the program. Students then proceed into the regular summer semester, during which they schedule three graduate courses in special education, action research, and technology, respectively, that results in earning the remaining nine credit hours for Block One. It is during the action research course in Block One that students are introduced to tools they will need to initiate and conduct action research investigations begun during Block Two and culminating at the conclusion of Block Three.
Block Two

Block Two starts at the beginning of the Fall semester in mid-August, continuing through the Spring semester and ending in mid-May. During this time, students complete three additional courses on campus as well as a one-semester, half-day internship in an area public school and a semester long full-day apprenticeship in the same school and classroom. Students earn a total of 19 additional graduate credit hours over these two semesters.

Block Two, combining continued academic study with fieldwork, serves several important purposes for students in the MAT program. First, they are engaged as developing professionals in actual school environments. Through substantial and extended field experiences, they learn the realities and purposes of public schooling. Next, in addition to gaining further knowledge and skills relevant to teaching and learning in general, MAT candidates begin to acquire more specialized knowledge about pedagogy in their chosen teaching fields. Third, students develop and expand their connections to teacher mentors and other school professionals. Finally, students acquire substitute teaching certification and real-life experience as curriculum planners and evaluators.

A content area methods course is the first of three taken during Block Two of the MAT program. Since students are preparing to teach in varied content areas such as history, mathematics, foreign languages, or science, different methods courses are offered. In general, each content methods course deals with the learning standards, teaching practices, learning strategies, and curricula associated with its particular discipline. The science teaching methods course, for example, focuses on teaching and learning through inquiry strategies using hands-on instructional materials. In addition to a specialized content area methods course, students take two content area electives, one during the first and one during the second semester of Block Two. Students select these courses to expand knowledge in their content area as well as to position themselves for meeting teaching licensure requirements.
The practica required during Block Two serve both to immerse students in the culture of public schools and to facilitate the formation of collaborative teams whose task it is to identify instructional problems and issues for investigation during the course of the school year. Practica begin with a half-day experience in the fall semester and move to a full day during Spring. Through this time, candidates work increasingly with mentor teachers and university faculty members to gain firsthand classroom management and teaching experience. Students also observe and write reflections about ongoing teaching, become involved in basic routines and activities of instruction, and develop and implement classroom management plans, lesson plans and cutting edge curricula. Simultaneously, they interact with the school-aged students with whom they work, and receive feedback from them as well as from their peers and mentors.

Block Three

Block Three serves as the capstone period for the MAT. It begins near mid-May once again, and continues through the end of the summer semester into early August. During this time, students take three remaining graduate level education courses, earning a total of nine additional credit hours. In this block, the students complete university coursework that will enhance their understanding and skills as professional educators, and hopefully, move them beyond levels achieved by traditional undergraduate students by the end of their teacher preparation programs. These courses include an advanced teaching methods class, a content area reading class, and an instructional leadership class. It is also during this final block that the multidisciplinary collaborative teams of MAT students finalize and report on their action research investigations of school-based educational problems and issues. Summative evaluations of student performance are then collected and final decisions are made regarding readiness for certification and the degree.

Expected Students

The MAT program seeks to attract a pool of students that is different from those who often apply for the campus-based, undergraduate teacher education program. Most notably, students
must already have earned a bachelors degree in an academic field. This requirement ensures a cadre of students who already have been successful in pursuit of a degree and are slightly older and more mature than those typically found in undergraduate programs. Moreover, each MAT cohort is limited to 25 students, which can increase competition for admission among the applicants, and allows us to select those most likely to attain the high standards necessary for degree completion.

Although our 2003-04 cohort included just ten students, their profile provides an indication of the quality of MAT cohorts to follow. Of the ten students, only half were graduates of our own institution. The others were either graduates of select liberal arts colleges, regional universities in other states, or Big Ten institutions. All students had received awards for their academic excellence, had traveled extensively, and were actively involved in academic, fraternal and service organizations.

**Quality Control Features**

The MAT program has several quality control features that distinguish it from many traditional programs. Most importantly, it provides several opportunities for mentor teachers and university faculty to assess the progress of the students with regard to the main tenets of national board certification (NBPTS, 2000) which include: (a) a demonstrated commitment to students and their learning; (b) knowledge of subject matter and how to teach those subjects to students; (c) management and monitoring of student learning; (d) systematic thinking about teaching practice and learning from experience; and, (e) active participation as members of learning communities.

For example, the program requires a yearlong school-based experience that is truly intensive and promotes reflective teaching practice. During the fall semester, students spend a minimum of ten hours per week in a high school classroom working with the teacher and students with whom they will student teach full-time in the spring. This arrangement provides them with a more in-depth experience and the continuity they need to enter student teaching prepared for the
teaching phase of their experience much earlier than most traditional students. Over the course of these practica, students are evaluated on a series of field-based events using specially designed rubrics.

In addition, MAT candidates conduct their action research projects in assigned classrooms. These efforts are assessed by faculty as part of the capstone experience. Another distinct feature of the MAT is that faculty assess sample lesson plans and unit plans that students develop based upon their technology experience in the Adventures of the American Mind program. Here the extent and quality with which the principles of the AAM program have been incorporated is critiqued. Finally, candidates are videotaped teaching at the beginning, middle, and end of their preparation program, and their pedagogical performance is assessed. The focus of all of the assessments is formative in nature until the end of the program necessitates summative evaluations.

Lessons Learned

Despite the best efforts of everyone involved, implementation of any new degree program requires that designers make a series of assumptions, some of which eventually prove to be faulty. Further, it is impossible to predict all of the problems that might arise, or to prepare, in advance, every response or every person who may be contacted for information about the program being developed. While development and implementation of the Master of Arts in Teaching progressed, we learned much that seems worth sharing, especially in terms of program development and implementation.

Program Development Lessons

The first and perhaps most painful lesson involved an early need to forward all concerns to a program coordinator so that responses would be consistent and could be tracked. This realization occurred even before the program was publicly announced because, as our colleagues across campus heard about the program and recognized implications for their advisees, five or six prospective students began arriving each day in the offices of the Dean, Student Advisement, and our department. Still others telephoned staff, checked with the...
graduate school, or e-mailed specific faculty members for confirmation of the program's existence and for information and admission packets. Sometimes students received accurate information; sometimes they did not. Sometimes the information students needed was available, but more often, questions they posed involved decisions we had not yet finalized. Eventually, it became necessary to rely exclusively on the program coordinator to answer all student and faculty queries. She did so by using information from a database that included contact information for prospective students and a list of their questions as well as information she had garnered as a member of the development team. Students were contacted as answers became available.

Another lesson during program development involved philosophical differences expressed by faculty and deans in the College of Liberal Arts and College of Science. At first, we anticipated strong support from both entities for a program that graduates of their respective colleges would embrace. As expected, our College of Science counterparts were pleased with the six-to-nine hours of content area coursework required for MAT degree completion. They were also keenly aware of the critical shortage of teachers in mathematics and science. However, key players in the College of Liberal Arts demanded greater involvement in the planning process and sought sole control of the degree program. As a result, our college was forced to defend its right to offer the degree before the campus Graduate Council.

In addition, faculty in the Department of Curriculum and Instruction, where the program is officially housed, insisted that a curriculum course be added to the proposal. While neither this request nor resistance from the Liberal Arts proved insurmountable, program development and state approval processes were delayed significantly while issues could be resolved to everyone's satisfaction.

Program development also demonstrated that not everyone in the profession understands the concept of a Master of Arts in Teaching. For many of our colleagues both within and beyond the college and university, the concept was a new one for them. Consequently, considerable time was spent educating public school and university personnel about the nature of the degree as well as the
design being considered. Many faculty members in our college wanted reassurances that this Master's degree would not detract from those designed for persons whose undergraduate degrees involved teacher certification.

Another point of confusion centered on the issue of secondary versus middle level certification. It is law in our state that those who possess certification to teach at the secondary level must take nine credits of course work specific to the middle school, if they wish to teach in grades six through eight. It took many extensive discussions before colleagues understood that the additional credits were not required of persons wishing only to teach in grades nine through twelve, those for which the MAT is designed. In the event that MAT candidates wished to add an endorsement for middle school teaching, they would be encouraged to schedule necessary coursework after completion of the degree, not concurrent with it. At any rate, responding to these arguments added to the delay in final planning and approval processes.

**Program Implementation Lessons**

Tom between student demand for quicker implementation of the program and a need to remedy political differences surfacing on campus, we were forced to make a decision in early April about whether or not to launch the pilot program that May. To delay meant that a fair number of excited and worthy students would be denied access for at least a full year, but to proceed meant some important decisions would need to be made "on-the-fly." After weighing the pros and cons and receiving assurance of eventual program approval from the State Board of Higher Education, we decided to launch the pilot, a decision that presented its share of challenges.

Forty-one students expressed interest in the pilot. Unfortunately, most received requests for admission materials too late to meet deadlines or to make necessary adjustments in their lives to be part of the first cohort. Twelve eventually met application deadlines, and ten were ultimately accepted.
There were other noteworthy issues related to timing that arose. Admitting these students prior to official state approval meant that they would not be recognized by computerized registration programs. This circumstance caused all manner of problems related to parking permits, financial aid, and assistantship processes. To eliminate problems related to program approval, students were moved temporarily to the ranks of those enrolled in our regular Master of Science in Education degree. Once official program approval occurred in August, students were moved to the ranks of the new MAT. This process resolved some immediate problems, but created tense moments for graduate school and departmental personnel, as well as for students and their advisors.

Coursework outside of our department presented its share of problems as well. For example, we were unaware that the special education graduate course we had chosen to meet certification guidelines required 50 hours of experience working directly with exceptional children. This course was scheduled concurrently with another course, and MAT students exhausted themselves completing requirements for both courses in time to qualify for the internship phase during fall semester. And interestingly, despite the rigors of the MAT, some students tried to frontload their programs by taking some of their discipline-specific coursework early. We needed to caution them about taking on additional courses, a practice they were accustomed to doing successfully as undergraduates. In truth, though, their motivation to take this coursework derived from the fact that the courses they needed in either the College of Liberal Arts or in the College of Science were only offered during daytime hours. Because MAT students were assigned to half-day field experiences in the public schools during most of those hours, finding appropriate discipline-specific courses proved challenging even in the semesters when students were supposed to be taking them.

**Future Directions and Final Thoughts**

Overall, we believe that the decision to offer the MAT degree program was well founded. Despite the numerous problems associated with launching it, students who enrolled remained resilient. Although often frustrated, this fine group of individuals consistently allowed us
the opportunity and time to resolve issues effectively. They also
provided honest feedback and offered worthy suggestions about how
to overcome barriers. Throughout the process, they asked appropriate
questions and overcame any fears about expressing concerns when
they were warranted. More importantly, they helped us learn about
program "wrinkles" that needed to be “ironed out.”

Because of lessons learned during the pilot year, we are
reconsidering the sequence of coursework and certain program
requirements. Additional conversations with colleagues in the
Colleges of Liberal Arts and Science are scheduled, especially to
resolve problems related to course availability and scheduling. As it
turns out, the MAT program highlighted problems that many in-service
teachers encounter in trying to schedule courses from other colleges
across campus that are not sensitive to educators' work schedules.
Decisions must also be made soon about how to staff the program
fully when the cohort number increases to two or three in the near
future. Although it is unlikely that the program will be expanded to
include elementary or special education options any time soon, we
have an increasing demand for these programs. Neither economic
conditions nor numbers of faculty in the relevant colleges and
departments would justify expansion along these lines at this time, but
the pressure continues.

Perhaps the most pleasant lesson of all is that there appear to
be significant numbers of minority students interested in this program.
While these students enroll in impressive numbers on our campus as a
whole as undergraduates, few choose teacher education, particularly
at the graduate level. However, the large list of prospective students
for the 2005 cohort currently suggests that about 30% are minority.
Because of the program's desire to attract minorities, especially those
whose majors are in content area specialties where shortages of
teachers exist in the state, these are promising statistics. Reasons for
minority student interest are not yet clear, but it appears that a
competitive program of this type, which recognizes talent and limits
enrollment selectively, appears to be attractive to the very types of
students our college and department seldom attract.
Overall, MAT programs appear to be worth considering by institutions wishing to enhance their alternative certification pathways for secondary teachers. Such programs can prepare non-traditional students broadly and deeply in their content areas, and position them for leadership roles in public school settings. An MAT option permits individuals, who may have relevant work experience and an appropriate degree to make a mid-life career change with minimal interruption to their personal lives. These programs are also responsive to the state and national need for high quality teachers of science, mathematics, foreign language, and other academic disciplines. Interestingly, they allow for the hiring of better educated teachers who command less salary. Moreover, they increase the number of teacher certification options currently available at an institution, and especially increase employment options for liberal arts and science graduates. In addition, they support content-specific methods classes across campus. In sum, these many benefits can serve as a springboard for much-needed dialogue between academics in Education, Liberal Arts, and Science and public school professionals in an era where partnerships that marry content and pedagogy will be highly valued.

Biographies

Donna M. Post is Associate Professor of Education and Coordinator of Secondary Education at Southern Illinois University, Carbondale. Her research interests include teacher supervision and assessment, metaphors of teaching, and teacher cognition.

Kevin C. Wise is Associate Professor of Education in the Department of Curriculum and Instruction. His research interests include teaching strategies, curriculum, and inquiry in science, as well as applications of technology to science teaching.

William A. Henk is Chair and Professor of Education, Department of Curriculum and Instruction. His research interests center on the enhancement of children’s literacy instruction and assessment.

D. John McIntyre is Associate Dean for Teacher Education and School Partnerships and Professor of Education. His research interests focus on teacher development, teacher education policies, and instructional supervision.

R. Keith Hillkirk is Dean and Professor of Education, College of Education and Human Services. His research interests include school partnerships, mentoring, and professional development program design.
References


## Appendix

**Figure 1: MAT courses and major projects by block**

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<td>Action Research Methods (3 credits)</td>
<td>Content Area Methods (3 credits)</td>
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<td>Introduction to “Adventure of the American Mind” Technologies (3 credits)</td>
<td>½ day Field (Classroom Management) (4 credits, 16 weeks-5 days/week)</td>
<td>Action Research Project Presentation</td>
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