An analysis of theory, practice and projections for further development of the Multimode Programme in Teacher Education

A report prepared for:

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The mission of the University shall be to promote free research and scientific and artistic education, to provide higher education based on research, and to educate students to serve their country and humanity. In carrying out their mission, the universities shall interact with the surrounding society and promote the social impact of research findings and artistic activities.

- Strategic Plan of the University of Helsinki 2007-2009, p. 57

Multimode Teacher Education project description: Background discussion

The Multimode Teacher Education (MM-TE) Program is situated in the Helsinki University (HU) Faculty of Behavioural Sciences, Department of Applied Sciences of Education. It was launched in 2001, having accepted 40 students annually since that time. The last class of students assigned specifically to this project will be accepted in 2006. At the current time, there are 200 students in the Program. Student entry standards are very high (approximately 20% of applicants accepted) resulting in an elite, well-qualified student body. Funding has been awarded for Program continuation through 2009 to complete research and to continue serving students already accepted into the program. Relative to the size of the whole University, faculty and department, MM-TE is a relatively small project. Total HU enrollment is approximately 38,000, supported by a staff of 7,500.

Finland's exceedingly high standard of schooling and teacher education is worth noting in greater depth. Several interviewees have confirmed that Finnish admission into teacher education programs is more competitive than it is for medical school, even though the relative career compensation remains quite disproportionate. MM-TE has been funded through a blend of Finnish Ministry of Education and University support, depending critically on the Ministry portion of the funding. No additional students will be accepted beyond the current year. This project employs a full-time researcher -- rare for such Finnish projects. Ministry funding supports most of the project's operating expenses, including most of the highly labor-intensive costs of instruction.

Recently, the program was forward-funded for three additional years (through 2009) at an annual level of €450,000. This funding is expected to support the studies of students remaining in the program and refined in-depth project research. Funding to date has supported the project launch, the participation of students accepted to date, instruction, project research, and a variety of ancillary expenses. Generally, program research has been practical, producing a series of case studies primarily qualitative in nature. (While project-level qualitative research produces highly valuable knowledge, there may be opportunity for larger scale, quantitative study, and hence funding to support it, on the longer-term outcomes of this program.) According to the Program Research Group, the project is now expected to apply knowledge gained from the MM-TE project toward new applications and priorities. One such priority may be teacher preparation for multicultural learners. By the same token, the ministry expects the University to transfer

achievements of the MM-TE pilot effort to the basic, permanent range of departmental offerings.

Sustaining the project initiative beyond the initial funding phases is a major current challenge that the assignment represented in this paper has been asked to tackle. If the project fails to sustain itself, there would be tangible and intangible losses to the primarily targeted student audience. The project addresses a project constituency demonstrating substantial need. If the project were to cease formal operation, this need would become progressively unmet. The need would not disappear, however. According to the project researcher, core University funding levels are calculated according to the numbers of graduating students. Thus there is an incentive to move students successfully through programs in the shortest possible period of time. Core University funding pursuant to the graduation of MM-TE students might be applied to future project sustenance. Thus, it will be important to assure that MM-TE graduating numbers are earmarked explicitly to the forward project funding that these numbers produce.

The Finnish National Board of Education summary of OECD's 2003 PISA report indicates that the MM-TE project aligns with one of the world's best public primary and secondary school systems. Global reporting in respected journals supports the PISA findings (*Economist*, 2006, OECD, 2004). These strengths are based largely on effective teachers and efficient teaching. This in turn reflects directly and favorably on the quality of teacher education throughout Finland.

For the period studied, Finnish student mathematics achievement ranked at the top among the nations compared, with particular strength demonstrated in the weakest quartile of student performance. Contrary to the situation in many countries, student achievement in Finland is relatively uniform among schools in different regions and socioeconomic areas. However, according to PISA, the use of ICT in Finnish schools appeared to be dropping as at 2003. This shortcoming is troubling because it highlights particular challenges teacher educators confront as they integrate higher conceptual orders of ITC into their own learning, their teaching, and hence the future teaching practice of the students they supervise (Lavonen, et al., 2006).

This report is based partly on interviews with several personnel in and outside HU who share concern about the MM-TE project (please see list of interviewees at end of this Report.) Supporting these interviews is the study of relevant University documents, especially related to institutional mission and strategic planning. Related literature on research and practice was also consulted by the guest researcher in preparing this report.

MM-TE: Philosophy, vision, mission, conceptual foundation

From a variety of project documents provided by Dr. Kynäslahti the values outlined below have driven the MM-TE project since its inception, and continue to drive it today. The analysis of Dr. Kynäslahti's work is supported by communication and papers provided by his peers in the HU Department of Applied Sciences of Education, including Ms. Sari Koski-Kotiranta, Prof. Leena Krokfors, Prof. Jari Lavonen, Prof. Seppo Tella, and Ms. Annukka Uusitalo. The initial conceptualization of the MM-TE project sought to incorporate several unique attributes and strengths into its program design. These attributes were considered in the light of the overall strategic priorities published by the

University's Department of Applied Sciences of Education, the Faculty of Education, the Finnish Ministry of Education and other relevant entities.

MM-TE focuses on the "learning while working" needs of contemporary, mature class-level teachers who are practicing in schools, are not yet fully qualified for teaching beyond kindergarten, and need full qualification in order to secure permanent school teaching placements and to advance in their careers. This is the practical priority addressed by this project.

On a more philosophical level, however, MM-TE places a particularly high value on the importance of teacher research, exemplified by the scholarly habits of mind developed by students as a result of their participation in this program, and the daily research driven by action and classroom practice. Equally important is the consistent integration of research, theory and practice. Thus, MM-TE strongly emphasizes scholarship both as backdrop and foreground to the methodological and discipline-specific facets of teacher education. Teacher created and published research is therefore strongly encouraged.

Since MM-TE serves school-based working professionals who possess limited discretionary time for study, from its launch program delivery has been designed with combination of networked ICT and face-to-face (F2F) engagement. Consistent with University mission, the ICT components have been designed and executed to the highest possible quality standards so that students undertaking F2F project components enjoy first-rate experiences, but not necessarily the precise equivalent of F2F study.

Certain kinds of teacher preparation activity, such as classroom-based practica, do not lend themselves particularly well to ICT delivery and are therefore managed on an in-person basis. The need for strong ICT components is further demanded by enrollments of many students who live elsewhere in Finland, substantially distant from Helsinki. Several department-based teacher education programs, including MM-TE, have blended ICT with site-based education to capitalize on the strengths of each (Meisalo et al., 2006). Lavonen et al. (2006) describe components for the successful preparation and support of University staff in personal adoption and institutional diffusion of ITC.

Multimode teacher education has been analyzed from various conceptual perspectives. The "learning while working" concept, briefly discussed above, has been given detailed treatment in Kynäslahti's papers cited in the reference section of this document. Other perspectives contributing to the conceptual analysis of MM-TE include consideration of "distance education" as distinct from traditional, classroom-based education. In this respect, the following categorizations of "distance education" are suggested:

- independent operations offered as extensions to traditional university programs
- consultation partnerships between traditional academic departments and other organizational entities (e.g., lectures are centrally distributed and personalized instructional service is provided locally by formal agreement)
- department-based side-by-side integrated systems in which parallel programs of identical content are offered simultaneously at-a-distance and face-to-face

Kynäslahti suggests that MM-TE falls into the "integrated systems" category, although it seems to have "consultative" elements as well, especially related to the University's partnership with schools. Finally, project documentation explores the question of alternative pedagogies that prompt the endless scholarly debates about the relative capacities and benefits of alternative choices in program design and project execution.

As individual segments, single parts of this theoretical scaffolding may appear somewhat pedestrian. Taken together as an integrated programmatic whole, however, they clearly advance research and program development in the field of teacher preparation and offer an attractive conceptual baseline for future support.

Observations about the documentation and discussion of MM-TE

Initial observations. Because, as suggested in one of the project documents supplied by Dr. Kynäslahti, teacher education throughout the developed world tends to follow a standardized program format, it is important to focus on the unique strengths of the MM-TE Project:

- Focus on "learning while working"
- Integration of research with theory in program design and student work
- Promotion of teacher-created research based on practice
- Facilitation of critical reflective practice that takes advantage of authoritative research while capitalizing on the intuitive knowledge that teachers gain only from experience
- Encouragement of habits of mind and work that respect diverse forms of teacher knowledge (thinking, action, reflection, evaluation, discussion and publication)
- Use of digital media and communications to enable scholarly engagement from the geographical, pedagogical and transactional distance described by Moore (1973, 1989)
- Blending of e-learning with site-based education to capitalize on the strengths of each

MM-TE has been analyzed from the following conceptual perspectives, among others:

1. Distance education
2. Alternative pedagogical interpretations
3. The "learning while working" concept

Combining these perspectives with fresh thinking offers a foundation to generate new external support for fresh initiatives, thereby better assuring continued service to the constituency that MM-TE was originally designed to help.

Updating the expressions of discourse. The term "distance education" might be re-considered as one of the conceptual underpinnings for MM-TE. "Distance education" now carries a connotation bringing to mind a traditional, centralized delivery of instruction and educational service to student populations who live too far away from a campus to attend site-based classes. Almost a decade ago, Tella discussed this perplexing "alphabet soup" of terminology in technology-based, network supported education (Tella, 1998). The intervening years have failed to clear up the confusion.

Although the MM-TE project serves such audiences, increasingly it is serving students who live close enough to commute to Helsinki. These students may not choose traditional teacher education for reasons other than geographical; such as their relative maturity, demands of home life, scheduling pressures, and/or the asynchronous benefits of program design. The concept "digitally-enabled," "digitally-enhanced," "digitally-networked" or "open and flexible" might better describe the modern character of this project. (For simplicity in this remaining discussion, I shall use the term "digitally-enhanced," although the choice of terms may not matter much.)

The "blended" approach to MM-TE study provides flexibility to all categories of project responsible parties: project directors, curriculum/course designers, instructors, students, administrators and funders. The term "blended learning" typically refers to multiple modes of engagement within the context of a particular course, but in the case of MM-TE the term is understood in different ways, for example:

- The variety of technologies employed in the academic delivery of the whole program
- Course delivery procedures that include F2F and digitally enhanced methods
- Individualized mentoring conducted in-person and in digitally-enhanced ways
- Whole-group versus small-group interaction within the learning community, digitally enhanced or F2F

These alternative understandings are not mutually-exclusive, and may be combined powerfully to meet a variety of needs and circumstances.

Additional issues of "alternative interpretations." Notwithstanding Simonsen's advocacy for learning equivalency between electronic and site-based learning (Simonsen et al., 1999), new modes of learning and teaching enabled by digital networks are rarely, if ever, "equivalent" (Kassop, 2003; Koory, 2003; LeBaron and Miller, 2004; Smith, Ferguson and Caris, 2001). Given education's emerging capacity to create and distribute information in a wide range of media from an enormous array of human and bibliographic databases, the power of asynchronous communication, the changing role of instruction from the transmissive "delivery" to the communal "construction" of knowledge (Kearsley and Schneiderman, 1999; Jones, 1998), the question for our education future, therefore, may not be "Can digitally-enhanced education match face-to-face settings," but "Can face-to-face teaching match digitally-enhanced environments?" Looking ahead, Simonsen's sense about the "appropriate application" of distance education methods may well become irrelevant when digital enhancement ultimately enables pedagogical procedures and methods that outstrip many, if not most, opportunities of the physically-bound classroom.

Questions of research. The MM-TE project places a high priority on research: connecting research to learning theory on the part of students; creating inquiry-centred "habits of mind" among the enrolled students; embedding continuous pedagogical reflection and research in practice emerging from school classrooms. Building on this commitment to research, MM-TE now has the opportunity to build on the work of Meisalo et al. (2006) by conducting research on its own unique practices. Such research is possible in the sub-fields of learning, pedagogy, andragogy, leadership, policy and other pertinent areas. Questions might include:

- In what ways do the unique project designs promote student learning?
- What is the relationship between specific project practice and improved classroom teaching?
- What project elements promote the attributes of student research and reflection valued by the project?
- How might new designs promote the diffusion of project-generated knowledge in affiliated schools?
- What is the iterative interplay between projects of this nature, university mission and national policy?

The importance of this type of question is stressed by Derek Bok, former president of Harvard University who recently wrote, "…Studies indicate that problem-based discussion, group study, and other forms of active learning produce greater gains in critical thinking than lectures, yet the lecture format is still the standard in most college

classes, especially in large universities" (Bok, 2005). The lecture format, however, is anything but dominant in MM-TE practice. This reality warrants consistent articulation in the project's quest for continuing support.

Role of the Finnish Virtual University. There seems to be some ambivalence related to the Finnish Virtual University (FVU) role. FVU was conceived as a vehicle for cooperation among existing Finland institutions of higher education (IHEs), but FVU may have taken on a life of its own, competing with traditional institutions for scarce resources, and imposing overhead costs for services that the constituent IHEs might prefer to cover within their own fixed cost budgets through bilateral or multilateral agreements with other Finnish institutions. The problem here appears to exist at the highest levels of Finnish educational policy, insofar as a distinct FVU role remains unclear in relation to the responsibilities of the Nation's established campus-based universities. With or without FVU participation, there may be opportunity to support project sustenance and growth through collaborative agreements with other universities in Finland.

From some interviews, the FVU-HU relationship appears to offer benefits as well as costs. For example, if the MM-TE project were to pursue more aggressively the possibility of cross-institutional collaboration within Finland, FVU affiliation might afford greater institutional weight for achieving the following objectives:

- Building a more robust, inter-regional community of participating schools
- Securing network/software tools for technology-supported innovation
- Creating a more diverse community of project expertise (university supervisors, local school mentors)
- Establishing programmatic and political credibility for new infusions of external funding
- Creating a stronger national base for international cooperation

Of course, the objectives listed above must be perceived as relevant by local program personnel. The ambivalence of HU personnel toward the FVU is a particularly delicate problem because the HU Educational Centre for ITC coordinates the technical activities of the Virtual University. Special Ministry of Education support of €1.6 million for this service will end in 2006. The 21 individual member Universities will instead be assessed a share of future FVU support resulting in a support level significantly lower than that provided until now by the Ministry. Presumably, the shortfall will be reduced by FVU fees charged for special initiatives.

Variations on the "learning while working" theme. Several interviewees have pointed out that all teacher education students learn while working, whether or not they are enrolled in this particular MM-TE program. While this may be true, the nature of the scholarly work that contextualizes the learning is quite different when daily "real world" contexts are deliberately woven into the program of study than when it occurs in a more artificial practicum setting. Younger students studying in the basic Department programs are linking practice with theory in the context of a structured practicum (a "laboratory" of sorts). On the other hand, the more mature students in the MM-TE program are learning in the context of their full-time jobs. For them, every day is a "practicum" where the laboratory setting is the real world of their own classrooms rather than a structured setting designed specifically for their practical induction into the field. In a recent *Journal of Education for Teaching* article, Krokfors et al., (2006) describe this phenomenon very thoroughly. Thus, integration of MM-TE project into the basic teacher education program risks compromising this unique and valuable aspect of the "learning while working" concept.

Balancing learner autonomy with the benefit of social knowledge construction. Learner independence and autonomy can indeed be an advantage to the mature learner as suggested in the project documentation. Such a benefit, however, may be compromised by inappropriately designed and executed e-learning environments that fail to promote active student engagement with diverse learning resources and neglect to advance the social construction of knowledge among members of a learning community (Stepich and Ertmer, 2003). Failing to challenge mature students socially as well as academically essentially strips the "enhancement" from digitally-networked courses (Anderson, 1999). An aim of the MM-ET project, it appears, is to achieve precisely the opposite of this. MM-TE employs the utilities digitally-enhanced education for the communal scaffolding deemed important by e-learning designers to optimize purposeful communication among all members of the learning community (Woods and Ebersole, 2003).

The question of student autonomy bears further discussion because the Department's approach to it may influence the viability for future growth and funding. The mature students of this program may indeed be relatively autonomous, but the sense of community inherent in the triangular relationship connecting the student to a local school supervisor and a University mentor automatically constrains pure autonomy. It makes all members of this relationship mutually accountable in an informal social contract that trades certain facets of independence for enhanced opportunities to construct knowledge in social communities. Opportunities of this nature leaven student interaction with school and university-level experts with the day-to-day challenges that they collectively confront in their classrooms and discuss in a community of peers.

Learner autonomy and program design. In any legitimate scholarly program, some entity other than the student designs overall program aims, creates course titles, designs overall curriculum, establishes goals and objectives, and stipulates performance expectations. These decisions are made by some entity other than the student. Within these programmatic "givens," students may be accorded more or less independence to consult elective resources, select the modes, media and substance of their own expression, draw conclusions from their autonomous integration of research with their actual experience, interact at will (or not) with other members of the cohort. Students do not create the overall academic framework, however. If they did, there would be no need for this project, or for that matter, any structured University program. Students could simply read and write independently at their own personal will, without institutional intervention, more economically than the cost associated with formal university enrollment. We might call such independence the "Amazon.com" approach to higher education, an approach that may, as Drucker (2001) suggests, render universities as we know them irrelevant.

The question of future funding. Several interviewees were asked the following questions about the consequences of funding termination for MM-TE:

- What happens to the project constituency served by an extraordinarily funded project when the special funding ends?
- Is this special population simply cast aside as new funding is sought for new initiatives?

The questions appeared almost irrelevant to several interlocutors who seemed mystified that they should be asked. Several suggested that such things happen all the time. Programs like MM-TE are routinely incorporated into the basic University line-up of services. Specially-served constituencies (for example, mature, unqualified practicing school teachers) lose their special service, except as they become added to the

populations currently served generally in the Department's basic programs. Presumably, these basic programs are constantly re-shaped by the lessons learned from specially-funded projects, but little research evidently exists to support this presumption. To compensate for the special project funding loss, the University creates new proposals addressing fresh Ministry priorities. Former specially-served constituencies may or may not be served under such new funding, but their continued special status as a constituency appears not to be a major institutional concern.

The following sections of this document will address the conceptual foundations for future funding, keeping in mind the current conceptual project themes, the strategic and visionary priorities of the University, and constituent needs as understood at this moment.

Re-thinking the conceptual framework for future action and support

Although a current program objective is to sustain and develop the ICT aspect of MM-TE, an overriding goal is to provide high-quality teacher education according to its traditional guiding principles, and to re-think those guiding principles where indicated. "Learning while working" and "serving mature school practitioners" are two principles that need not be lost. The first of these principles seems secure in the basic departmental teacher education program, However, tailored service to meet the unique needs of mature professional constituencies and the contextualization of such learning in daily classroom practice seem more at risk. Because MM-TE students are relatively mature and highly qualified, they should stand to benefit from programmatic reconceptualization.

As MM-TE maps out its future course of action, several conceptual departures present themselves. These may support arguments to secure fresh support that would take the project in new directions while not discarding the population originally targeted by this project. Four conceptual frameworks are suggested here:

1. The "professional development schools" concept
2. The "reflective practitioner" (RP) model
3. Andragogy versus pedagogy
4. Shared institutional partnerships
5. Internationalization of program aims and activities

The "professional development schools" concept. Meisalo et al. (2006) devote significant attention to the continuous professional development (CPD) needs of practicing teachers. Related to Meisalo's discussion is a relatively recent scholarly focus on "professional development schools," where university-based teacher education programs enter into formal, multi-faceted agreements with area schools. Under such arrangements, to put it simply, schools agree to serve as supervisory settings for teacher education student practica and to provide real-world "laboratories" for continuing university research. In return, the University makes a long-term comprehensive commitment to support local curriculum improvement and the professional development needs of its teaching staff, from initial professional qualification through the many stages of lifelong CPD.

As Meisalo et al. point out, digitally-enhanced (Web-based communities) can play an important role in supporting initiatives of this kind. Such arrangements also offer fertile ground for University and teacher-driven research. Kynäslahti mentions the unresolved

MM-TE goal of diffusing innovative, project-based, research-supported practice within the participating schools. Under the PDS concept, explicit measures may be proposed to remedy this shortcoming. Moreover, pursuit of the digitally-enhanced PDS concept offers opportunity for development as a re-shaped local HU project, or as a shared initiative with institutional partners within the University, in Finland and/or abroad.

In the United States, the PDS concept has been strongly endorsed and promoted by that Nation's premier accrediting agency for teacher education, the National Council for the Accreditation of Teacher Education (NCATE). Professional development schools are described, with their underlying conceptual base on the Web (NCATE, 2006). Teitel (1997, 2003) offers extensive research on many years of PDS development in the USA and guidelines for establishing successful programs. Levine (1998, 2002) presents powerful rationales for university investment in professional development schools.

The PDS concept may offer MM-TE a framework for future, funded project development encouraging new initiatives, further research and more comprehensive school service while respecting the aims and constituencies targeted by the original project. While the PDS research base is quite strong, scholarly examination of the relationship between PDS and digitally-enhanced teacher education is significantly weaker. Killion (2000), for example, describes conditions and benefits related to computer-networked support of PDS projects, without serious research analysis. Therefore, in addition to offering a research rationale for future external support, the PDS model may also present the Department of Applied Sciences of Education new opportunities to create:

- More robust school-university partnerships, placing school needs on a higher priority
- Formal cooperative contracts between UH and its participating schools (according to Krokfors, et al., (2006) such contracts do not yet exist)
- Lifelong learning opportunities for teachers
- Improved curriculum for schools
- Opportunity for university, school and teacher-based research
- Service to school administration and teachers, from entry level to highly experienced, in the contexts of formal teacher education and CPD
- Specialized service to adult and entry-level learners, with specialized research and development designed deliberately the need of both audiences in common settings.

Research and development on the "reflective practitioner" (RP) model. By encouraging "habits of scholarly research" among its students, MM-TE has explicitly endeavored from its inception to shape future teachers into career-long patterns of reflective practice. Accordingly, student teachers are led to inspire their practice with theory and to derive new theory from their field practice. The concept of reflective practice in the MM-TE project is supported by Bengtsson's (1995) research in teacher education, and could be further supported by a more critical application of the rich "reflective practitioner" (or "theory-in-use" or "reflection-in-action") literature (for example, Schön, 1987a, b; Bengtsson, 2003). In confronting questions of theory, research obligations consistently challenge MM-TE students, especially as they evaluate their own efficacy, engage in discussion with their colleagues, and express the consequences of their private and public reflections.

The "reflective practitioner" concept has informed the education field for several decades. It has its roots in the progressive schooling movement of Europe and America in 1930s and 40s, but most recently has been championed by the late Donald Schön.

Historically identified with the progressive education, reflective practice has drawn criticism as well as praise. Schön's own work is a reaction to rigidly positivistic accountability pressures so globally prevalent in contemporary educational policy. He urges teacher education programs to base significant portions of their enterprise on "reflective practica," where teacher intuition interplays with "received knowledge" (i.e., formal research) in close coaching environments where the coach assumes more the Socratic role of "critical discussant" than of "knowledge dispenser." Such emphasis on coaching not only dovetails well with the PDS concept, but it also supports continuous, digitally-enhanced communication for initial teacher preparation and for CDP.

Extensive criticism of the RP model bears discussion, because it addresses the efficacy of a hybrid approach to future MM-TE research, where the benefits of reflection-in-action are reinforced by more positivistic models of research-based teacher education. One such criticism points to the presumably excessive emphasis of RP on intuition and impulse as classroom decisions are taken. Fendler (2005) reports, "A major focus of criticism [of RP] is the degree to which reflective practices serve to reinforce existing beliefs rather than challenge assumptions. Some reflective practices may simply be exercises in reconfirming, justifying or rationalizing pre-conceived ideas." Finally, a comparative study by Korthagen and Wubbels (1995) "found no indication of a link between reflectivity and inclination towards innovation (p.69).

Thus, the debate about RP seems to be one of "relevance" versus "rigor." These two values need not be mutually-exclusive, however. As Kernaghan (2005) points out, "Schön did not intend his model to be a perfect, unproblematic process, but one grounded in reality with all its messy problems and difficulties" (p. 5). From interviews and project documentation studied to date, MM-TE seems already to strike a healthy balance between the relative benefits of RP and the "received knowledge" of grounded research. As the project advances its case for future support, it could persuasively base a portion of its conceptual foundation in the constructive blend between the intuitive and the positivistic action-research models that already characterize the project, making better use of the RP literature in the process.

Whatever emerges from the MM-TE project, this report suggests that it remain true to the value of school-based practice as a legitimate data source for research and the improvement of teaching. As Schön has noted, "...The introduction of a reflective practicum *into a [university-situated] professional school* is an uphill business. The introduction of reflective teaching *into a primary or secondary school* is an uphill business. If you think about introducing a reflective practicum into a school of education you must work against the view that practice is a second-class activity, because in the [typical] school of education I think it is (1987, unpaginated, emphasis Schön's)." MM-TE is already a good distance up that hill; the project can strengthen its political case by making its achievements in this respect more explicit.

Andragogy versus pedagogy. Related to the issues of student autonomy and the social construction of knowledge discussed in an earlier section of this report is the question of adult learner needs. Kynäslahti discusses this problem in one of the project documents. The particular constituents of MM-TE are, on average, ten years older than the students typically enrolled in HU teacher education programs. Such students have significantly different backgrounds and needs from younger students such as those typically enrolled in the basic teacher education programs (Knowles, 1984a, b).

When service to such students is integrated into the overall basic program, measures to address their particular needs are indicated. By the same token, measures may be undertaken to promote the cross-fertilization of perspectives between these students (possessing relatively deep school-life experience and maturity of perspective) and the relatively fresher orientations and skills of their younger peers (for example, regarding the use of new of emerging ICT tools, unfamiliar generational values, and so forth). This challenge may provide several viable rationales for new project funding.

Andragogy rests on the belief that adults learn quite differently than children, yet there is much evidence that certain core principles of learning apply across diverse age groups. For example, all human beings construct knowledge socially (Vygotsky, 1978). Reflective, critical engagement with learning resources promotes constructive cognitive development for all (Bruner, 1986). The efficacy of discovery learning and scaffolded teaching, for example, is not limited to any particular age group. Yet, adult learners bring unique attributes to any nexus of learning and instruction: practical experience in work and life, mature independence, scholarly knowledge, intrinsic motivation, solid grounding in their personal values, readiness to learn, and a need to apply their learning to the solution of authentic problems.

Knowles suggests that adult learners are not only *capable* of scholarly self-direction but also *need* latitude to exercise such independence freely (Smith, 2002). As many teachers of totally online courses have discovered, less mature learners require extraordinary structure and guidance for academic success. Computer networked ICT settings pose particular challenges for program designers and teachers of adult learners, as recently described by LeBaron and Santos (2005). Thus, the MM-TE project is challenged simultaneously to serve the unique learning needs of students of diverse maturity levels and to create common learning environments where each member “generation” can capitalize on the scholarly and cultural strengths of the other.

Adults, therefore, are particularly amenable to the informal learning structures characterized by reflective practice models found especially in the CPD elements of professional development schools. Serving as role models to their younger colleagues, they can promote the discipline needed for success in digitally-enhanced learning environments. Whether explicitly articulated or not, effective professional development project models will carry built-in commitments to andragogy. Therefore, a clear articulation of andragogical research and practice strengthens the conceptual base of a program that seeks external support and funding not only in reference to adult learners but also as continuously learning adults model behaviors for their younger colleagues.

One of the difficulties cited in carrying out a successful “working while learning” project such as MM-TE is to secure, as Krokfors et al. (2006) put it, for the over-extended student-teachers to have “...time to reflect and to plan their work.” (p. 33). Requests for future funding might consider including a budget line explicitly to address this challenge. Funds could be requested to provide schools with back-up resources to cover the project teacher-students while they are accorded time to study, reflect, discuss, collaborate, and find ways to apply their academic study to their classroom work.

Shared institutional partnership. At the moment, MM-TE operates as a program situated locally at Helsinki University. Yet, there is an institutional tradition of shared program development. For example, in Finland the five-university TieVie project to support ICT innovation in higher education is coordinated by the University of Oulu through the FVU. Similar collaborations exist throughout Europe (the Socrates-Erasmus student

exchanges), and outside the EU (the foreign language cooperative projects with Stanford University and the University of California San Bernardino). This inquiry cannot possibly shed more light than what is already known about such opportunities in Finland and Europe, and will not attempt to do so here.

However, the following scenario is presented for consideration. The MM-TE and KasVi projects both began in 2001; funding for new development of both projects is scheduled to end in 2006. In many ways these projects are very different, yet there are similarities that might encourage a collaboration to seek future funding together. Both projects share a commitment to the integration of school-university service.

In an interview, HU KasVi project coordinator, Annukka Uusitalo, indicated her sense that two of the sharpest damages to be caused by a termination of KasVi funding will be:

- The loss of human infrastructure (shared project expertise painstakingly created over the past six years)
- The loss of institutional infrastructure (inter-institutional cooperation across the eight participating universities)

Another major loss, already mentioned, resulting from a termination of external support would be the end of specialized teacher education service to mature student audiences. In both cases, the termination of support would result in a diminution of talented human capital, among whose members specialized skill, expertise, and frame-of-mind have been developed from resources already invested by the University and the Ministry.

KasVi is a Finland-wide cooperative project. MM-TE operates locally at HU. KasVi is explicitly dedicated to promoting ICT utilization as a study minor at all levels of teacher education; MM-TE focuses across disciplines, particularly at the class teacher education level. Yet both projects jointly share an agenda for future research that might qualify for funding by the Academy of Finland. An opportunity exists for MM-TE to transform its scope to a nation-wide level based on the successful model and contacts already demonstrated by KasVi. By the same token, KasVi could refine its conceptual base by applying lessons learned about ICT into the more general mainstream of teacher preparation exhibited by MM-TE. Although the Ministry of Education apparently has not yet revealed its funding priorities for the coming year, both Ms. Uusitalo and Director of the HU ICT Centre, Ms. Sari Koski-Kotiranta, suspect that proposals promoting cross-institutional developmental partnerships would be favorably reviewed. Equally important, however, both projects currently face an immediate funding crisis.

Such a programmatic collaboration is presented simply as one possible example. Shared program development of this kind inevitably requires compromise in aims, attitudes and culture that universities so typically find difficult to confront. Although collaboration would mean that neither project could continue in its current form, there is no loss in this sense because neither project can continue in its current form in any case. Finding common ground for development could assure a better future for the constituents of both projects, while drawing on the accumulated expertise of each. Moreover, since KasVi is a project of the FVU, a formal collaboration could establish a well-defined, constructive FVU role in a manner that serves the interests of both projects, its institutional partners, and its target populations.

Internationalization of program activity. Shared partnerships need not be confined only to Finland. In a recent issue of the Finnish Virtual University newsletter the following comment about the future of Finnish higher education was attributed to Mr. Jyrki Kasvi,

Member of the Parliamentary Committee for the Future. “We are in crisis,” he said. “We have the best primary school system in the world, but our university system is mediocre…. In order to prosper, universities also need international interaction – but where are the Finnish universities’ foreign students, teachers and researchers?” Kasvi asked (Finnish Virtual University, 2006). The HU Strategic Plan places a very high priority on internationalization (pp. 69 and 78).

While cross-border initiatives offer exciting prospects for program development and external support, they also pose very steep challenges. Some of these challenges are outlined in a study by LeBaron, Pulkkinen and Scollin (2000) describing several years of cross-border graduate study involving students from Finland and the USA. This project later expended to include students from Portugal and South Africa. As the cross-border partnership grew, the challenges multiplied exponentially. These challenges were only partially embedded in issues of course design, pedagogy/andragogy and ancillary student-staff support.

Gerbic (2005) describes similar challenges in an online business course that simultaneously served Chinese and Australian students. Peña-Shaff and Nicholls (2004) contend that natural dialogue does not occur naturally in CMC settings. If true, this challenge requires focused, targeted curricular strategy to overcome. This problem is evidently intensified in cross-border courses that must address diverse cultures, values, languages, and communication conventions in common scholarly settings. Thus, international initiatives must be pro-active in designing curriculum to overcome these barriers.

Broader questions of policy, regulation and overall program harmonization also arise. If and as MM-TE globalizes its scope, with or without the cooperation of other Finland-based projects, these questions demand attention. As a matter of principle, the broader the international participation base, the greater the cross-cultural challenges.

What are a few of the academic questions that crop up as a local project like MM-TE “goes global?”

- Are geographical, cultural and linguistic differences related to the way students learn?
- Does internationally disciplinary study in a different language, despite superficial social fluency, disadvantage non-native speakers of the language of discourse?
- How is authentic, purposeful cross-border communication assured across learner populations possessing diverse values and cultural protocols for communication?
- How are inconsistencies between the dominant values of instruction in one culture reconciled with student populations immersed in contrary cultural values of learning?
- How is local program support infrastructure reconciled with global support in a way that most effectively serves teachers and learners from the representative nations?
- Will technology-based language translation protocols of the future ever be capable of going beyond the translation of mere words and simple phrases to conveying subtle inflections of cultural intent? (Present Web-based language translation algorithms are unacceptably crude in these respects.)

These academic questions are further complicated by quandaries of administration and policy, such as:

- How is academic credit transferred across borders equitably to a common standard? (Within Europe, the ECTS initiative is addressing this question, but the problem remains unaddressed beyond the EU.)
- How are project resources effectively distributed across national boundaries?
- How are the costs of participation charged and allocated when policy conditions governing the relationship among students, staff, institutions and governments in apply in diverse and seemingly irreconcilable ways across nations and territories?
- Is it worth the trouble to engage these issues at all?

This issue carries implications for teacher education, especially for the more mature teachers for whom the fluid digital navigation of "tiny planet" communication is not second nature. Is this important? Regardless of the decision of any particular university, constructive cross border program development serves the interests of broad constituencies in the public and private sectors alike. The Web-based video, EPIC 2015, produced by the USA-based Museum of Media History offers a futuristic insight as to why this might be so.

Alignment of the MM-TE project foundation with institutional priorities

According to the HU-Virtual University strategic priority, 2003-06 statement, the University intends to be the leading online academic provider among Finnish universities. In practice, this means that the University is committed to:

- integrating teaching, research and student learning within a virtual communications framework
- supporting flexible forms of teaching, especially online and blended teaching and learning
- assuring that at least one-third of all HU courses to consist of "multiform online teaching" by the end of 2006. (Total number of students using some form of WebCT training now numbers over 14,100 (significantly more than one-third of the entire HU student body)

Other key elements from various strategic planning documents call for several emphases related to the MM-TE project. For example, close association of the University's work with the external workplace, public and private, is urged. Through its virtual activity, the University is strongly committed to student-centred learning. In order to support excellence in student-centred learning teaching and research competence must be enhanced. Flexible coalitions of responsible HU units and parties demand consistent, continuous strategic reflection. Adequate ICT infrastructure (hardware, software, networks, e-study/library resources, training and consultation) are necessary to support effective teaching, learning and research. Commitment to open & flexible (multi-mode, digitally-enhanced) learning and to robust programs of continuing education are similarly stressed.

Programmatic implications of the HU-VU strategic priority document, 2003-06 firmly commit the University to excellent teaching and the preparation of excellence among Finnish primary and secondary schools. Such a commitment promotes the development of strong:

- Student academic skills, deep knowledge, lifelong habits of scholarship
- Skill, disposition, behavior, and perception among staff to advance academic strength
- Sufficient infrastructure to support flexible, networked scholarship

A recent paper by Lavonen et al. (2006) describes initiatives to assure the organization of such infrastructure among the Department's teacher education programs. Effective infrastructure development depends not only on sensible allied policies on such related matters as copyright and intellectual property but also on the appropriate reallocation of University resources to meet these strategic institutional priorities.

From the Web sites of the Faculty of Behavioural Sciences and the Department of Applied Science of Education, in all academic programs there are solid commitments to priorities of research, the creation of original knowledge, and social inclusion along demographic, socio-economic, geographic dimensions. More specifically, the faculty and department expects its programs and personnel to apply received knowledge judiciously and to integrate of research with practice, not only within its own structural framework but also across the public entities that it serves, particularly schools. In such a context, units within the faculty and its served entities are expected to create, execute and evaluate programs as cooperative partnerships are stressed. This, too, carries powerful implications for future planning related to the MM-TE project.

Various strategic documents commit the University and its sub-units to inter-institutional articulation, both domestic and international. For example, the University belongs to the League of European Research Universities. It coordinates the Nordplus Network for Teacher Education. It is engaged in 80 formal program articulations with universities throughout the world and participates in nearly 40 bilateral Socrates-Erasmus agreements with other European institutions. Although MM-TE elements are already well-aligned with department, faculty, and University visions, mission statements and strategic plans, these documents also point a possibility of new curricular directions driven by a fresh conceptualization of programmatic collaboration.

The following table outlines key elements of University strategy, mission and vision, as shown in various official documents and Web sites. This table is meant to demonstrate strategic areas where MM-TE reflects the priorities of its institution (column 2), and where (column 3), mission-driven priorities seem particularly suitable for future development and support. The absence of indicators in Column 3 is not intended to suggest that the current MM-TE project is deficient in the indicated respects, but that these strategic components present particularly promising opportunities for future development and external support. An "abbreviation legend" appears at the bottom of the grid.

Table 1.

1. Elements of strategy and vision	***2. Currently related in current MM-TE model***	***3. Opportunities for possible future MM-TE models***
HU teaching and learning will be of the highest quality - *HUPDTS* - *SPHU*	**X**	
HU studies will be internationally competitive - *HUPDTS* - *SPHU*		**X**
HU practice will both inform and be informed by research in close mutual integration - *HUPDTS* - *WEB* - *SPHU*	**X**	
HU scholarship will be centred on students - *HUPDTS* - *HUVUS* - *SPHU*	**X**	
HU studies will be competency-based - *HUPDTS* - *SPHU*	**X**	
HU studies will promote interpersonal, communicative capacities necessary for success in a modern world - *HUPDTS* - *HUVUS* - *SPHU*	**X**	
HU academic work will promote global and domestic student mobility through degree harmonization and other means - *HUPDTS* - *WEB* - *SPHU*		**X**
HU will be the nation's leading online learning provider - *HUVUS*		**X**
One-third of all HU courses will consist of "multiform teaching" by end of 2006 - *HUVUS*	**X**	
HU academic work will respond to realities of external workplace, public and private - *HUVUS* - *WEB* - *SPHU*	**X**	
HU research will promote the reduction of poverty and wealth disparity, globally and locally - *SPHU*		**X**
HU will scholarship, teaching and service will conform to high ethical standards - *SPHU*	**X**	
HU academic work will commit itself, where indicated, to multi/trans/interdisciplinarity - *SPHU*		**X**

HU programs will promote social inclusion and combat exclusion - *WEB* - *SPHU*		**X**
HU academic development will promote global engagement and capacity - *HUPDTS* - *WEB* - *SPHU*		**X**
HU academic work will address cross-cultural needs stemming from unprecedented levels of immigration to Finland - *SPHU*		**X**
Student-centred learning will stress research and teaching - *HUVUS*	**X**	
University initiatives will support and be supported by flexible program coalitions and partnerships - *HUVUS* - *WEB* - *SPHU*		**X**
HU programs will be supported by robust technical, informational, human and training infrastructure - *HUVUS* - *SPHU*	**X**	
HU programs will support continuing adult education - *HUVUS*		**X**
HU will invest in social capital in ways that promote community, cultural heritage, equality and social well-being - *SPHU*	**X**	
HU programs will promote excellence at all levels of teaching, including schools - *HUVUS* - *WEB* - *SPHU*	**X**	
Significant future funding for HU research and innovation will be competition-based - *SPHU*		**X**
HU will consider developmental sustainability in its research, teaching and service - *SPHU*		**X**
HU research will serve as incubator for revue that will support future research and innovation - *SPHU*		**X**
HU will market its programs in a manner that attracts the highest possible human talent to the University - *SPHU*		**X**
HU will dedicate sufficient resources to program quality assurance gauged to the highest national and international standards - *SPHU*	**X**	

Abbreviation legend for Table 1

- *HUPDTS = UH Programme for Development of Teaching & Studies, 2004-2006*
- *SPHU = Strategic Plan of the University of Helsinki, 2007-2009*
- *HUVUS = University of Helsinki Virtual University Strategy*
- *WEB = Web sites of Faculty and Department*

Questions of future project funding and support

It is beyond the scope of this report or the expertise of the reporter to recommend specific sources of future funding related to Finnish or European assistance. In general, however, support for domestic program development, scholarship and research seems available from:

- The Finland Ministry of Education
- The Academy of Finland
- The Finnish Funding Agency for Technology and Innovation (TEKES)

Research and technical support for program development is available through the National Board of Education, which establishes policy at all levels of Finnish public education.

The University of Helsinki is conforming to the European Credit Transfer System (ECTS) emerging from the Bologna process launched in the late 1990s. Because MM-TE mission, goals, and activities appear well aligned with the overall Bologna vision, funding opportunities may be available through the European Commission within and beyond the Erasmus-Socrates framework.

Possible scenarios are suggested below for securing future MM-TE support. The scale presented below proposes "0" as "no chance whatsoever" and "5" as "success virtually guaranteed." In other words, "5" exists pretty much in the realm of academic fantasy; therefore none of the proposed scenarios is rated at "5". Program developers may select strategies that approach as close to "5" as possible.

1. The University assumes full responsibility for continuing support of the project "as is" requiring no additional external funding (likelihood of success = approximately "0")
2. External funding sources commit additional funding beyond the originally agreed-upon time period, without significant re-configuration of project aims, activities or research agenda (likelihood of success = slightly > "0")
3. External funding sources commit additional funding beyond the originally agreed-upon time period, with the condition that new research is undertaken and existing research is refined (likelihood of success = > "1")
4. External funding sources commit additional funding beyond the originally agreed-upon time period, with the condition that new research is undertaken, existing research is refined AND the University offers firm evidence that it is internalizing the proven practices authenticated by research from the project's early phases (likelihood of success = > "2")
5. External funding sources commit additional funding beyond the originally agreed-upon time period, with the condition that new research is undertaken, existing research is refined the University offers firm evidence that it is internalizing the proven practices authenticated by research from the project's early phases, AND new project departures are proposed based on lessons learned from existing project evaluation and from field-based research; e.g., piloting new technological configurations, expanding the project participation base within and outside Europe, creating strategies to include developing countries, creating field-available resources for public access by other institutions (likelihood of success = < "3")
6. The same as 5, above, but external funding sources are combined with other external AND internal funding sources (likelihood of success = approximately "3")

7. The same as 5, above, but lessons learned from several existing projects are combined into a new organizational paradigm, with local commitment of resources during and beyond the term of external funding contracts (likelihood of success = < "4")

All of the scenarios above assume that the project, and its future plans support, and are supported by, the key institutional statements of vision, mission and strategic plan. (Please see discussion on this topic in the previous section of this paper.) This document, therefore proposes action based on the relatively more likely scenarios 5-7, above.

European cooperation with US higher education is supported through the EC's EU-US Higher Education and Vocational Training program (Atlantis). The concomitant Atlantis support in the USA is provided through the Washington-based Fund for the Improvement of Post Secondary Education (FIPSE). Finally, the Finland Fulbright Center and the US Center for the International Exchange of Scholars (CIES) serve as information resources for Fulbright scholarships, exchanges, and cooperative agreement between Finland and its potential partner institutions in the USA.

EU higher education cooperation with Canada appears to be suspended for 2006, but may be reinstated in 2007. Past projects cover a wide range of fields, including business, engineering, health, law, agriculture, communications, education, and environmental studies. Each project is carried out through a transatlantic consortium partnership comprised of at least six institutions. In Canada, this program is called the Canada-European Union Program for Co-operation in Higher Education and Training. Senior professional staff at the Finland Fulbright Centre suggested the following Canadian organizations as possible resources for cross-border cooperation:

- Association of Universities and Colleges of Canada
- Natural Sciences and Engineering Research Council of Canada
- Social Sciences and Humanities Research Council of Canada

Project cooperation within and outside Europe might be promoted by an association with the European Distance and E-Learning Network (EDEN), headquartered since 1997 at Hungary's Budapest University of Technology and Economics and/or the European Association for Distance Learning (EADL) located in the Netherlands. Both organizations promote cooperation among their member institutions and individuals. EDEN actively supports the new scholarly journal, *The European Journal of Open Distance and E-Learning*. EDEN might serve as a viable medium for professional networking. Its institutional membership includes prominent universities worldwide, including North America (e.g., Canada's Athabaska University), developing nations, and Europe (e.g., the University of Helsinki Open University).

Since one possible avenue of growth is the internationalization of MM-TE in the developing world, an interview was conducted with Dr. Jyrki Pulkkinen of the Finland Foreign Ministry (FFM) on Tuesday, 23 May, 2006. Dr. Pulkkinen spoke on behalf of himself (responsible for e-society FFM technical assistance) and on behalf of Mr. Jussi Karakoski (responsible for education). Dr. Pulkkinen made clear that the FFM provides advice and technical assistance to Finnish educational bodies seeking to design educational partnerships in developing countries, especially in Africa. Moreover, the Ministry helps match Finnish institutions with potential foreign partners based on developmental interests.

Dr. Pulkkinen stressed that the FFM is not a funding conduit in its own right, but rather works collaboratively with project developers in proposal preparation to third-party funding agencies. One such agency is the Finnish Center for International Mobility (CIMO) North-South Higher Education Network Programme that explicitly supports student and teaching exchanges between Finnish universities and the targeted countries. He suggested that the Academy of Finland holds a particular interest in University-sponsored research in the developing world. Through its Mundus Program for collaboration on masters' courses, the European Commission supports third-country student attendance at European institutions and development partnerships with third countries, principally but not exclusively, in the developing world.

Dr. Pulkkinen also indicated that Finnish embassies abroad occasionally support cross-border collaborations, especially with NGOs, but also with universities when suitable. FFM assistance with such initiatives is best secured by approaching the appropriate regional or country desks of the Ministry. These offices sometimes help Finnish institutions coordinate with the foreign ministries of other European Union countries.

Summary

This report intended to examine the University of Helsinki MM-TE program in the light of its current status and its future needs. This analysis is particularly timely in view of the impending end of the current external Ministry of Education funding cycle.

Following a program description, this report examined the conceptual foundations of MM-TE, the overarching mission and strategy of the Department, Faculty and University, and the relationships between program and institutional strategy. From the researcher's external perspective, suggestions have been made about potential reconceptualization, considering relevant literature on research and practice. A major goal of this research has been to consider what course of action presents itself for the future development of MM-TE, as it integrates with the Department's core teacher education agenda, and as it seeks fresh programmatic departures with new sources of support. Finally, alternatives have been presented for a project reconceptualization and growth, with a discussion of strategies for securing the funds to support whatever new direction the project chooses to take.

The researcher is grateful for the excellent, helpful cooperation so generously accorded by several personnel in and outside the University of Helsinki. Contributions of time for personal interviews or written communication are recognized at the end of this report. In addition, access was provided to numerous articles, reports and internal documents relevant to this research. In particular, the researcher thanks Dr. Heikki Kynäslahti, MM-TE Program Director, without whose guidance and support this report would have neither context nor value.

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Ms. Sari Koski-Kotiranta (26.5.06)

Prof. Leena Krokfors (22.05.06)

Senior Lecturer and Adjunct Professor Heikki Kynäslahti (ongoing)

Ms. Tuula Laurila (Finland Fulbright Center, 8.6.06)

Prof. Jari Lavonen (24.5.06)

Dr. Jyrki Pulkkinen (Finland Foreign Ministry, 23.5.06)

Prof. Seppo Tella (E-mail, 21.5.06; in-person, 1.6.06)

Ms. Terhi Lopi (Finland Fulbright Center, 8.6.06)

Researcher and Project Coordinator Annukka Uusitalo (1.6.06)