Assessing Student Needs in an Online Graduate Program

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The online Master of Distance Education (MDE) program at the University of Maryland University College (UMUC) has an excellent Foundations Course and a variety of student support services; however, many new graduate students need additional assistance to prepare them for future courses and improve their prospects for being trained as managers and leaders for distance education. This paper outlines specific needs of students and recommends ways to identify and meet those needs. Students should be evaluated regarding their readiness for graduate work and assisted in developing an educational plan based on a holistic perspective. Direction for students who need assistance can motivate them and enhance the course experience for fellow students.

1. Introduction

Many students entering the online Master of Distance Education (MDE) program at the University of Maryland University College (UMUC) do so as new graduate students. Both new and more experienced students may be taking their first online course. Although this situation has been recognized and addressed with helpful support, such as the WebTycho tour, the online library course and the offer of a tutorial for improving writing skills, there are broader student needs for both new and experienced students. These needs relate to the ability of students to perform at the graduate level and to the ability of the program to fulfill its mission statement to create leaders and managers for distance education (DE).

This paper will examine the needs of MDE students both as individuals and as participants in the program, particularly with respect to the program's mission. It will suggest some ways to identify needs and present recommendations for options to consider in addressing them. Included in the discussion will be comments about resources required and ways they could be provided in a cost-beneficial manner. Although the focus is on the MDE program, many of the concepts discussed can apply to any online graduate program.

2. The Needs

From their observations of online classes, both instructors and students in the program can readily list many of the skills lacking in participants. These needs and those less obvious may require a comprehensive assessment strategy and a team approach to address them. Students are not always aware of their deficiencies, and those with the greatest needs may be the least able to utilize the existing tutorials, suggestions, and learning aids.

The first question that may arise is "Should the staff for a graduate program accept the responsibility for addressing personal needs and building skills that students should or could acquire elsewhere?". There are several inter-related points here. At the front door, a relatively open enrollment policy implies acceptance of students with varying skill levels, some of which should have been acquired at lower levels of education. At the back door, the mission statement describes a "student product" that has the combined skills necessary for leadership and management in DE. The investment of a reasonable effort

in the development of the whole student can pay significant dividends, particularly if ways can be found to accomplish that goal in a cost-effective manner. If the investment is not made, the problem of inadequately prepared professionals may be perpetuated in DE as it is in other fields.

Even for the student who comes into the program with good basic skills, there are needs that extend beyond those that are addressed in individual courses. Peters (1998) describes DE students as being different from campus-based students in significant ways, including that they are usually employed adults. This characteristic has implications beyond those discussed by Peters. The educational program for adult students may require a shift in perspective from that of campus-based students. The campus-based student leaves the educational institution to enter the job market at a basic level, even if it is in a "professional" capacity. The adult DE student may need to be qualified to compete for jobs at a higher level if current living standards are to be maintained. In the MDE program, this may mean finding ways to provide students opportunities to gain experience in applying concepts and exercising management and leadership abilities.

The "whole student/whole program" perspective is in concert with the systems approach advocated by Banathy (1995), Betts (1992), Reigeluth (1992) and others. While this perspective may exist in the development and ongoing enhancements of the MDE program, a sharper focus may be possible as the program evolves.

The list of student needs can be divided into personal and professional categories. While the list of personal needs can be extended to include things like financial aid, those discussed here pertain directly to participation in the MDE program. The list of professional needs includes communication skills, thinking skills, and organization skills. Not all students would achieve maxim levels in these areas, but general improvement would result in (a) an enriched learning experience for all students in the program; and (b) persons better prepared to take their DE knowledge into the workplace.

Student Needs

Need	Comment
Personal	
Feelings of competence and being connected	Burge and Roberts (1998) identify these two needs as key motivators for adult learners. While efforts can be made to meet these need for students in individual classes, it might be beneficial to address these needs at the program level.
Understanding of online class work	Students need to understand and be encouraged to commit to their responsibilities for online interaction and group participation. A more proactive approach may be required for dealing with the problem of students who do not contribute adequately to online discussions and group projects.
Understanding of graduate level performance	Students need a baseline of graduate level performance against which to assess their own preparedness and needs.
Setting of goals and objectives	Students may need assistance in exploring options for use of their MDE education, whether as degree holders, certificate holders, or individual course participants. In addition to understanding their options, they also need to understand what special requirements any of these options may have. Included in this analysis is their own assessment of learning style, personality type, past education and experience, etc.

Professional	
Communication Skills	The importance of communication skills has been emphasized in a variety of areas in the MDE literature and course materials. Perhaps the biggest challenge is that of helping students to understand the extent of their developmental needs in this area so that they will be motivated to take advantage of the assistance that is available.
Writing	The need for further development of writing skills is acknowledged not only for under-graduate students but graduate students as well.
Online discussion	Online discussion has its own techniques for effective communication in an environment where no visual cues are present.
Thinking Skills - Analysis/Synthesis	Although assignments within courses can be highly challenging and require a student to exercise advanced thinking skills, research papers and group projects are not likely to provide practice at the same level of critical thinking, creativity and problem solving that will be demanded in a professional position.
Critical thinking	There is a need to expand the development of critical thinking to encompass a broader context. Students can have a tendency to lose sight of relationships of subsystems to the larger entity. Another way to express this is to say that the macro level can be forgotten when examining the micro and vice versa.
Creativity and problem solving	Exercising creativity and developing problem solving skills requires an approach beyond the traditional assignments found in an online class.
Ability to stay focussed on the topic	A lack of ability to stay focussed on a topic in online discussions can translate into an inability to remain focussed on goals and objectives in a professional setting.
Learning how to get beyond the level of personal experience	Even after completing the introductory course, students can still have difficulty by generalizing too much from limited experience. There is a need to develop a much broader perspective and awareness of national and international practices, conditions and issues.
Team/Management/ Leadership Skills	Learning to work in study groups is an important feature of online course work; however, many students have little knowledge or practical experience regarding the formation of teams, group dynamics, or project management. These things are difficult in a face-to-face environment, and dealing with them online greatly exacerbates problems. The needed skills cannot be adequately developed merely by assigning students to work in study groups.
Group work	Students need assistance in learning how to form teams (when they are not pre-assigned). They also need to understand how to define tasks needed to complete a project, how to plot a timeline, and how to monitor progress and take corrective action. In addition to learning the roles in collaborative writing, they need to understand group dynamics and the various stages of team development.
Management	Group leaders may exercise management skills while working on class projects, but a different environment is needed for the development of the broader range of abilities that must be present in the professional DE manager of a department or an institution.
Leadership	In an online course environment, students who are already confident leaders tend to lead, while students who lack confidence may remain followers even though they have leadership potential. The development of leadership skills in a larger proportion of students requires an effort specifically designed for that outcome.

3. Assessment

Instructors of individual courses should not be assigned the primary responsibility for assessing student needs and addressing them. Although some instructors already provide assistance for basic skills, such as writing, the course environment is not always the most appropriate or most effective place to identify and deal with student needs. Nor should the faculty advisor bear all of the responsibility. The key member of the assessment team must be the student, who has the support of a group that includes a faculty advisor, instructors, and mentors (who may be more advanced students). In addition, the assessment team needs a strategy and a set of integrated tools.

Strategy

The effectiveness of an assessment strategy is likely to depend on the degree to which the institution takes an active role rather than waiting for students to request assistance. The strategy and its accompanying plan to address needs must not depend on a new student's ability to direct *all* aspects of her or his educational program. The delicate balance between the student's autonomy and the institution's responsibility to ensure that the student has every opportunity to succeed has been acknowledged as something of a dilemma. Holmberg (1995) discusses the two opposing questions. On one side we can ask whether responsible, adult students shouldn't be left to search out their own solutions and ask for support when they perceive it is needed. On the other side, the question to be asked is whether the special circumstances of adult learners merits special support. While respecting the student's right to choose, it can be helpful to provide an early realistic appraisal of strengths and weaknesses and a set of guidelines for maximizing the first and reducing the latter. Characteristics of an assessment strategy for an individual might include:

- determining the student's educational goals;
- assisting the student in performing a self-assessment of needs relative to goals;
- feedback by instructors in individual courses to the assessment team; and
- development of an educational plan that includes ongoing feedback about the student's progress (i.e., information beyond course grades).

Self-Assessment Tool

New graduate students may not have a clear picture of what they want to accomplish beyond taking courses for upgrading skills, acquiring a certificate or working towards a degree. Those who believe they have well defined goals may revise their thinking as they proceed through the program. More specific goals than those mentioned are based on a good understanding of one's interests, personality type, abilities, strengths, weaknesses and perception of self - all of which must be considered relative to the opportunities that may be available upon completion of the educational program. Providing a set of guidelines for performing this assessment would be a valuable service to students and a helpful resource for faculty to use in their advisory function.

A self-assessment tool can be a valuable "living document" that the student creates at the beginning of her or his education program and updates as experience and reflection dictate. It can be a focal point for the development of an educational plan that will be

designed to enable the student to reach her or his goals. The following is a list of some of the features a self-assessment tool might contain:

- statement of goals and objectives;
- student attitudes and expectations regarding graduate school, DE, team work, etc.;
- examination of personal learning style(s);
- analysis of personality type;
- self-perception concerning the student's ability to function as a leader or manager;
- review of educational history;
- review of job experience, particularly in leadership, management, and team-building; and
- student perception concerning the characteristics needed to serve in the professional capacity as described in her or his goals and objectives.

Many of the items on this list can be developed by the student's review of personal history and self-reflection. Others, such as the analysis of personality type and leadership style, may require the use of instruments created for this purpose. Students may already have the results from instruments such as the Meyers-Briggs test for personality types (available at http://meyers-briggs.com/) or the Hersey and Blanchard (1993) instruments for evaluating leadership style, perception of self, and adaptation of behavior to situations.

Students coming into the program may have no formal leadership or management experience. They may not have considered how the mindset of a leader differs from that of the traditional follower. For example, in a recent MDE class where students were asked to form their own teams for study groups, several students posted messages with their group interests and ended with the statement that they hoped they would be picked for a team. It was interesting that in the class environment, all were free to take whatever initiative they chose to form teams. No one was instructed to wait to be picked. The experienced leaders in the class immediately set about collecting team members.

Some of the material in the student's self-assessment document, such as a description of personal learning style, might be helpful information to include in the short descriptions students are asked to provide for themselves upon beginning a new class.

The exercise of self-assessment can be valuable on several levels. In addition to serving as the foundation for the student's educational plan, it can provide another opportunity to develop skills and experience in leadership and management. In conducting a self-assessment, preparing documentation and maintaining it throughout the educational program, the student is assuming the responsibility for managing her or his education. She or he is taking the lead in identifying needs in coursework and personal development. And finally, the student is creating a vision of her or his future.

Ongoing Assessment

Having course instructors provide feedback to the assessment team can reduce the current burden instructors face in trying to deal with student needs that do not relate directly to the course content. Sometimes this burden takes the form of extra tutorial work for basic skills that instructors voluntarily perform to help the student succeed in

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the course. It may also take the form of the instructor having to resolve problems in class proceedings, such as study group collaborations. Finally, the instructor may observe needs in advanced skill areas that would be more appropriately addressed by the assessment team and the overall educational plan rather than in that particular course.

4. Suggestions and Recommendations

The following is a list of suggestions and recommendations that could be considered for assessing and addressing student needs in the MDE program. A number of these could also be generalized for any online graduate program. Each item contains a description and comments about ways in which resources could be provided to implement it. The items offered include:

1. MDE Program Manual
2. Tutorials
3. Program/Learning Matrix
4. Virtual Institution Project
5. Student Mentoring Program

Since the MDE program includes the concept of a student portfolio, a number of the items could be produced as portfolio projects that would be valuable to reference in resumes when graduates begin to look for a position in DE. Other items on the list describe activities that could be equally beneficial to include in a resume.

1. MDE Program Manual

Description

A learner's manual can be an indispensable tool for a student in a course. Holmberg (1995) discusses the concept of advance organizers and the circumstances under which they can be useful in helping the student move from what she or he knows to what she or he needs to know. The advance organizer is something more than a summary or overview. The concept can be adapted and raised up a fractal level (cf. Tiffin & Rajasingham, 1995) to extend to the student's entire graduate program, whether it is for a degree, certificate, or lesser amount of coursework.

Although there is considerable information available in various forms on the UMUC web site, the MDE web site, in tutorials, and from distribution within courses, it could be helpful to: (a) consolidate those materials (conceptually if not physically); (b) add features like the self-assessment tool and guidelines for an educational plan; and (c) organize them as a management guide for the student's education process. The manual might be produced in paper form, as a UMUC web site from which the student could download material, or a combination of both.

Providing such an aid could increase the student's feelings of competence in directing her or his education program and being connected with the institution.

The following might be included in an MDE Program Manual:

- table of contents and links/directives for locating all manual materials;
- introduction and guidelines for how to use the manual (with distinctions for degree, certificate and limited course study students);
- overview of the MDE program (existing);
- description of MDE courses (existing);
- description of employment options in DE and the course work, skills and experience related to each (partially existing);
- self-assessment tool;
- format for education plan;
- list of learning resources and opportunities to meet educational needs beyond the MDE courses (partially existing);
- tutorials (some existing) on individual writing, team development, group work, collaborative writing, project management, etc. (partially existing);
- description of mentoring program;
- directory of persons, services, resources (partially existing);
- bibliography; and
- glossary.

Resources

A considerable amount of useful material already exists. The UMUC MDE web site (http://info.umuc.edu/) has many of the features in the above list. The program manual could be produced as a portfolio project for one or more students with input from UMUC staff.

2. Tutorials

Description

A series of tutorials on subjects such as team work, group dynamics, and project management could provide a good introduction to these areas and include bibliographies where students could do further reading to increase their general knowledge and help prepare them for online course work. In addition to printable materials, a short course with online practice in these areas during students' first terms could improve their performance as well as enhance the learning experience for students they will encounter in future courses. The course could be offered without an instructor or alternatively with an elder student mentor who could respond to questions.

Resources

Most tutorials could be produced as portfolio projects for one or more students with input from UMUC staff. Some projects might benefit from participation by graduate students in other subject areas, such as business administration. If the tutorial includes a short course online, a small fee from students could defray costs to support the course.

3. Program/Learning Matrix

Description

A program/learning matrix could be a useful resource for students in identifying their educational needs and determining where specific subject matter and skill development opportunities could be obtained in the program. The matrix would help to provide a systems approach for the student's educational planning. If a program manual is produced, the matrix would be included in that material; however, it could also be created as a stand-alone product if no program manual exists.

A participant in the MDE program needs to gain knowledge in specific subject matter that is presented in the various courses. In addition to that knowledge, the student needs to develop knowledge and skills that are more general and that must be acquired in order for the subject knowledge to be applied effectively. While some of the general knowledge can be developed within courses, a holistic view of the needs and learning opportunities would aid in determining how the student's objectives can be met.

The following table uses a few knowledge and skill areas and hypothetical learning resources to illustrate the matrix concept. The first column contains a partial list of knowledge and skills that the student may need for personal goals and objectives. The remaining columns present courses, tutorials, and other learning opportunities where the student can obtain knowledge and experience in the areas identified in the rows under the first column. Each cell in the matrix contains commentary about the nature of the learning and experience opportunity that the intersection provides. In order to use the matrix, the first step would be to highlight the knowledge and skills (first column) the student needs. Next, cells would be highlighted under courses that are required in the program. Finally, the remaining sections of the matrix would be reviewed to select the additional courses and learning opportunities that would provide the best overall profile for meeting the student's goals and objectives.

An expansion of the concept either within the matrix or as a companion piece would be a mapping of knowledge and skills to specific jobs for DE professionals.

Program /Learning matrix Concept					
Knowledge/ Skill	Course A	Course B	Team Work Tutorial	Virtual Institution Project	etc.
DE Pedagogical Theory	Primary subject			Practice projects	
Management in DE Institutions		Primary subject	Secondary subject	Practice projects	
Course Design	Primary subject 2 class projects	Secondary subject		Practice projects	
Leadership		Primary subject 1 class project	Secondary subject	Practice projects	
Team Work	1 class project	Primary subject 2 class projects	Primary subject	Practice projects	
etc.					

Resources

Much of the material that describes the MDE courses and tutorials already exists. The task to be completed involves analyzing the material to summarize and supplement it to create the matrix. The program/learning matrix could be produced as a portfolio project for one or more students with input from university staff.

4. Virtual Institution Project

Description

A student who has just completed an educational or training program is expected to "have room to grow" when hired into a job in her or his field. However, the lack of experience in practical application of the knowledge gained can be a hindrance both to the person's ability to get hired as well as to perform in a new job. Just as the acquisition of doctoral level knowledge in a subject does not automatically prepare one to be an expert teacher, neither does the study of distance education subjects necessarily create one who is ready to be an effective manager or leader in the field. The final project course for the program can add to the foundation of the student's knowledge but is not a comprehensive answer to the problem. Those who are studying towards certificates also may be limited by a lack of experience.

In some fields there are internships that offer practical experience that students can reference on job applications. It may be possible to create an environment in which MDE students can practice applying their knowledge and have additional experience to reference on their resumes.

The Concept:

The concept is a virtual distance education institution (VDEI) that has an organization and set of staff positions like those of a real institution. The imaginary institution would exist as an online environment with facilities for student interactions and project development. It would be staffed by students who are "hired" into various jobs for limited periods of time in order to experience the different types of realistic issues, projects, problems and team interactions that can be encountered in the professional world. Students would include course work and experience on their VDEI job applications to demonstrate that they have the proper prerequisites for participation. Students would move through as many different jobs as their time and interest permit.

Objectives:

- provide an opportunity for students to apply principles learned in courses;
- allow students more extensive development of team skills than is possible in classes; and
- give students practical experience with management and leadership functions that can be referenced on resumes.

Operation:

The VDEI would be an ongoing operation open for student participation in each school term. There could be two (or more) versions: One might be structured as an online, open university, another could be an online training center. The VDEI could be fully described by a design team prior to student participation, or it could be planned and designed by students as a practical learning experience. At some point, students would

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apply for and be "hired" into the various positions in the VDEI: department heads, course designers, technological support managers, etc. Each position would be held for a limited amount of time and would require a tangible product by the end of the tenure. Products would be peer reviewed by other students who are in relevant VDEI positions to do so. VDEI products might be submitted as course assignments, also, where the two efforts coincide. The products could be included in student portfolios.

Examples of VDEI Projects and Student Products	
Managers	vision document, strategic plan, policy document, staffing plan, staff development plan
Faculty team	curriculum plan, new course proposal
Course design team	course development plan, course design
Student support team	student support program
Technology team	evaluation of new technology options, cost-benefit analysis for implementing a new technology, implementation plan

In the VDEI environment, students would experience interacting with other students in a setting that presents many of the same challenges they will experience as professionals.

Resources

Creating the Virtual Institution Project would require the efforts of university staff or contracted course developers to design and implement it, although it may not demand the same level of effort as a regular course. It is possible that it could be established within the WebTycho classroom environment. The project would need a faculty member to be available to respond to participants' questions.

5. Student Mentoring Program

Description

New graduate students could benefit from the knowledge and support of more experienced students. Since many other specific support services are already available, the mentoring effort would be along the lines of collegial sharing of experience, networking and general information discussion. Student-to-student contact could be made by any means convenient to both parties, but a bulletin board for this purpose might be a place for initial contacts and sharing of information of general interest.

Resources

A student mentoring program could be staffed by volunteer experienced graduate students. Documentation of the mentoring experience might be developed as a portfolio project.

5. Summary

The two key motivators Burge and Roberts (1998) cite for adult actions are the need to feel competent and the need to feel connected. The student needs in an online graduate program described in this paper and the recommendations and suggestions all relate to those two basic needs. By providing an assessment strategy with the student in a

leadership position in the assessment team, the student can gain a sense of independence and competence while feeling connected to a supportive environment. The student requires tools to aid in the assessment process and to provide a holistic view of the educational choices available for designing a plan to meet her or his goals and objectives. And finally, the student can benefit from opportunities to apply knowledge with other students in a simulated real-world setting in order to gain practical experience that is necessary for the development of the leadership and management skills that lead to the fulfillment of the MDE mission.

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