



CHAPTER 17

SUPPORTING THE ONLINE LEARNER

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INTRODUCTION

Creating a supportive learning environment for online learners is crucial for ensuring success, promoting persistence, and avoiding drop-out. The ideal learning environment aims to develop the learner's independence and facilitate the learning process by providing supports that are flexible, accessible, and readily available when needed. Certainly strong academic and tutorial support is necessary, and the special considerations in the case of online learning are the subject of earlier chapters. This chapter, however, deals with non-academic supports for the online learner and the important role they play in promoting a successful learning experience. In addition, practical advice is offered, as well as examples of the way such supports are provided in a variety of online learning contexts.

The ability and potential of online learning to enhance access to education, particularly higher education, is well recognized and evidenced by the way it has grown and expanded. Increasing numbers of learners

are finding that online courses best meet their needs. At the same time, increasing numbers of distance education organizations are finding that online learning best meets the diverse needs of their students.

The types of organizations that provide online learning vary and each has particular characteristics and ways of providing support to their online learners. One type is what Daniel (1996) refers to as the “mega-university” – distance-teaching universities with 100,000 or more students. Indira Gandhi National Open University, with an enrolment of 750,000 students, is one example, as is the Open University of Hong Kong, with more than 400,000 students. Due to the high concentration of students in geographic areas, these universities typically rely on a network of local learning centres to provide student support, tutorials, and other services as an adjunct to the distance and online courses they offer. While these centres continue to be used, there is increasing availability of online support services as well.

Another type is the distance education organization that serves a population of learners spread over a wide geographical area. Athabasca University – Canada’s Open University – is an example of this type of institution, with a current population of nearly 34,000 students worldwide (Athabasca University, 2006). Online student support is essential for serving students over such a great area. Athabasca University relies primarily on web-based information and resources, complemented by email, to provide learner supports, although telephone communications are used as well, especially with students located in Canada.

Still another type of organization providing online learning is the *dual-mode* institution, which provides face-to-face, classroom-based programs in addition to its online offerings. Such institutions are plentiful and their numbers are growing as traditional educational institutions embrace distance and online learning. These organizations, however, commonly face particular challenges associated with having to provide student support to two very different groups of learners – one onsite and the other at a distance – and often with very different needs. Thoughtful planning and significant financial commitment is often required to ensure high-quality student support for both groups.

Regardless of the context, student support is essential for successful online learning. Although supports may be provided in a variety of ways, the overall goal is to provide a learner-support-services system “where students feel at home, where they feel valued, and which they find manageable” (Tait, 2000, p. 289). Supports should be flexible, con-

tinuously available, easily accessible, and also genuinely useful. Learners have clearly told us that they need to see the value added by a resource; otherwise, they will not use it. They have also asked that supports be available, but not intrusive. With these caveats in mind, a constellation of learner supports is discussed in the sections that follow.

SUPPORTS FOR PROSPECTIVE STUDENTS

We can identify support needs best when we know our learners well. Each learner brings a unique set of skills, experiences, and expectations to the learning environment. As students' characteristics and needs are diverse, so too are their needs for supports and services. Therefore, we should ask questions about areas such as the prospective learner's readiness for online learning, access to and familiarity with the technology required, proficiency in the language of instruction, individual learning style or learning preference, and educational goals. These are things we need to know about our learners, and also things that learners need to know about themselves, in order to receive the greatest benefit from the learning experience.

With this information at hand, we can determine what supports are most critical for learners and establish priorities to ensure that resources, which are always limited, are directed to the most useful supports. When doing so, we must keep in mind that some learners will require more support than others, and that sometimes learners need more help at one point in their educational career than at others. Throughout the process, the focus should be on self-assessment to encourage independence in the learner, although counselling backup should be available when needed.

Making an informed decision to pursue online learning is the first step to a successful educational experience. The following section outlines resources that can assist potential online learners to a) assess their readiness for this form of learning; b) determine if they have adequate computing and connectivity requirements; and c) obtain advice for making specific program and career-related decisions.

Learner Readiness

The list below provides a series of questions for learners thinking about taking an online post-secondary program of studies, and identifies self-assessment tools that are available to help answer these questions.

- *Am I ready for university (or college)?* This online resource allows prospective learners to determine their readiness, from academic, financial, family support, and time perspectives. Prospective students are provided with a series of questions to help them examine their expectations and readiness; the process serves to highlight areas that might need special attention. Once the self-assessment is complete, follow-up email counselling concludes the process. For an example of such a self-assessment tool, see the “Am I Ready” web site (Athabasca University, 2007) at <http://amiready.athabascau.ca/>.
- *Am I ready for studies in the English language (or other language of instruction)?* This online resource assists the learner to determine if their command of the language is sufficient to allow for success, and places the learner in specific language course levels. The learner may be directed to online remedial resources, and should always have the option of contacting an advisor. For an example of such a resource, see the Online Resources at <http://www.athabascau.ca/main/studserv.htm>.
- *Am I ready for university-level mathematics?* Proficiency in mathematics has proven to be a significant success factor for certain courses, particularly for adult learners returning to the educational environment after some time away. Assisting prospective learners to identify their strengths and weaknesses in mathematics, and making remediation available, can avoid difficulties and promote success. Online self-assessment tools can help learners to determine their readiness for particular mathematics courses, to recommend a mathematics course appropriate to the learner’s level, and to identify remediation resources. For an example of such a tool, see the Online Resources at <http://www.athabascau.ca/main/studserv.htm>.
- *Do I have the skills to be successful in my chosen program?* This online resource outlines what skills are needed for particular areas of study. The resource should be program-specific and refer the student to online tutorials if needed. For an example of a resource that assists the learner to make program choices, see “Study at the OU” at the Open University (UK) web site at <http://www.open.ac.uk>.

Minimum Computer Requirements

At its most basic level, information should be provided so potential learners can determine if they have (or have access to) the necessary

hardware, software, and connectivity to study online. Additional resources may be provided to help prospective students gauge their comfort with an online learning environment; for example, short sample experiences can be described to show students what they can expect, such as those provided in Deakin University's (2003) Learning Toolkit web site at <http://www.deakin.edu.au/dlt2007/>.

Career-Planning Resources

Potential learners often seek out online learning opportunities to initiate, further, or enhance their careers. Indeed, most learners will experience several career changes – some of them quite significant – throughout their working lives. As such, viewing the educational experience within the context of career development is important.

Online resources that assist learners to determine their interests and skills and that provide a career map aligned with educational programs are valuable. For example, see the United Kingdom's Open University (2007) web site at <http://www.open.ac.uk>, which focuses on the learner's need to contemplate the future in making educational choices, or "Mapping Your Future" on Athabasca University's (2007) Services to Students web site at <http://amiready.athabascau.ca/>. Resources such as these provide learners with a means of exploring career clusters and the credentials required to pursue them. After an initial exploration, learners may wish to communicate (via email and/or telephone) with a counsellor or program advisor to refine their career goals. Once this is achieved, electronic program plans may be designed, which take career goals as well as prior learning into account. In this process, it is important to have the learner explore first, and then to have the counsellor or advisor provide assistance as needed.

Program Advising

Distance and online learners frequently extend their learning over a number of years. As such, they require program planning that will help them achieve their educational goals in the most expedient manner possible. Moreover, learners often transfer between institutions and jurisdictions, increasingly so in our global learning environment, and as such require a means of coordinating their studies and ensuring transferability of courses when necessary. Proper academic advising is essential to meet the diverse needs of these online learners.

The role of the program advisor is to help learners understand program requirements, to take into account any courses being transferred

into a program, and then to plan the remainder of their program accordingly. Moreover, as learners frequently change career and educational goals during the process of completing a program, academic advisors need to be readily available and have access to all program and transfer information in order to accommodate changes in students' program plans throughout their period of study.

SUPPORTING THE LEARNER

By assisting potential learners to make an informed decision to pursue online learning, we have enhanced their chances for success. Once a student has enrolled in a course, however, quite different support is required. Learners need to know what kinds of support they can expect and from whom, how to interact with the institution, what is expected of them, and how to know when they need assistance. As educators, we must anticipate an array of needs, and then plan accordingly to ensure that learners have what they require throughout their educational programs.

Learners require support in a variety of areas, such as administrative and logistic support, information and technological support, and assistance with studying, exam-taking, and writing skills. For learners with disabilities or other limiting conditions, specific supports may also be necessary. Some learners find that peer support or the availability of a learning community adds significantly to their educational experience. In addition, a students' union and an alumni association, as well as opportunities to participate in institutional governance, can be invaluable for promoting a successful and meaningful educational experience.

ADMINISTRATIVE AND LOGISTIC SUPPORT

Daniel (2000) points out that a key component of supported open learning is effective administration and logistics. Institutions engaged in distance and online education know that smooth administrative processes can be as much a factor in learner satisfaction and success as the design of learning resources, and learners themselves report that flexibility of access and smooth administrative support are important to creating a supportive learning environment.

As online learning has grown and evolved, so too have online administrative supports and services. Institutions that provide online

learning report that students express a preference for having the control that online administrative processes afford. Online functions, such as course registrations, examination requests, or purchasing textbooks and course materials have become commonplace. Still, there are particular considerations in the provision of these services to online learners, such as those discussed below.

- Course registration and the maintenance of student records for dual-mode institutions may pose particular challenges, especially for organizations that offer continuous enrolment for online learners, as well as semester- or term-based enrolment for on-site students. Maintaining two forms of course registration may prove problematic and create redundancy and parallel systems along with commensurate high costs for maintaining them.
- Even though much of the course content may be provided online in a web-based course, there is usually still a need for print-based course materials, such as textbooks or readers. Students may obtain these materials in a number of ways. For example, some institutions provide these through their own course materials distribution system; however, factors such as warehousing, inventory control, and materials distribution must also be considered in this arrangement. Other institutions are choosing to use commercial online booksellers to fill students' textbook orders. Dual-mode institutions often "piggyback" an online ordering component to their existing bookstore operation to serve the needs of their online learners.
- Increasingly, publishers are offering online resources to supplement their textbooks as well as electronic versions of texts for students who may prefer these over-bound versions. Also, customized publishing is offered by many publishers.
- Some institutions provide printed versions of online learning materials for students who do not wish to read online, or to reduce their need for printing materials themselves. Some materials may be made available on CD-ROM or other storage media to reduce the need for lengthy downloads. These materials may be included as part of the course package or may be available on demand, perhaps for an additional charge.
- In addition to books and printed course materials, students may purchase some additional products at an online bookstore. Students often wish to purchase memorabilia or "logo-wear" as a symbol of belonging to the university or college. Computer software may be also sold at reduced student rates.

Above all, learners need to know what services they can expect to receive from the institution and how they will be provided. *Service standards*, such as those implicit in the following questions, should be clear and easily available: How long should it take to receive confirmation of a course registration? How much time does it take to receive an examination grade or feedback on an assignment? How quickly should a response be expected to an email message? How long does it take to receive a requested book from the library? These standards should be readily available to students and should serve as benchmarks for service units within the institution.

INFORMATION AND TECHNOLOGICAL SUPPORT

Drawing the line between academic support on the one hand and students' needs for information and technological support on the other is often a challenge, and these types of support must be coordinated carefully. There are three common formats for providing information and technological support:

1. An information centre, which provides institutional and program information;
2. A computing helpdesk, which troubleshoots students' technological difficulties and provides information; and
3. A call centre, which fields students' questions and requests, typically in a particular program area.

All three can work together to support the online learning process.

Ideally, each should have the following characteristics:

- Reliable networks;
- Asynchronous access (e.g., email) with "24/7" availability;
- Synchronous access (e.g., toll-free telephone) at clearly identified times;
- Quick response, with acknowledgement and follow-up;
- Follow-through to resolution of issues or difficulties that students encounter;
- Simple, clear instructions;
- Access by attendants to all critical databases and expertise; and
- Ability to identify problems with policies, procedures, or systems, and to suggest change.

Portals

Increasingly, portals are used to provide learners with easy access to their online courses, as well as to a variety of web-based functions. Online learning is often accompanied by a plethora of different web sites to access, and multiple sign-on procedures and passwords. Portals can alleviate this situation by individualizing and integrating online interactions, thus enhancing the learner's experience by making access easier and more efficient.

METACOGNITIVE SUPPORTS

Some online learners are returning to learning after some time away, others may be new to post-secondary study altogether, and many may not have experienced online learning before and do not know how best to approach this new mode of study. By providing metacognitive supports like the ones described in this section, we can help online learners develop more effective and successful learning processes.

Metacognitive skills are those associated with “learning how to learn.” For online learners, these kinds of supports enhance their ability to study online and facilitate their access to and retention of knowledge. Providing such supports can increase students' confidence, reduce stress, and enhance their learning experience. Resources to enhance the metacognitive skills of online learners include the following:

- Web-based resources that assist in the development of time management strategies and study schedules and that help students balance educational pursuits with other life demands;
- Online strategies and exercises to reduce exam anxiety;
- Resources that teach how to become a successful online learner;
- Online services and web-based resources that assist students in writing papers;
- Intellectual property-related resources that teach students how to use appropriate referencing, make correct citations, and avoid plagiarism;
- Library resources that teach students how to search online databases, critically analyze information from online publications, and so forth;
- Community-building tools and social software for facilitating learner interactions, such as making “study-buddy” connections for peer assistance.

Learning How to Learn Online

Learning online is different than learning in a conventional classroom-based setting. The pedagogical approach underlying online learning is commonly based on constructivism, where learners actively create knowledge in a personally relevant and meaningful manner. This mode of learning lies in stark contrast to the passive, receptive mode typical of traditional face-to-face instructional settings. To make the transition to online learning, Wang (2005) describes a “whole person” campaign aimed at transforming passive, receptive students into competent, self-directed, active learners (a description of this campaign is provided in *Mandarin* (http://www.beiwaionline.com/degree/zx/daohang/t20040924_1110.htm). However, the need for learners to become more independent, involved, and dynamic – actively seeking and using online information and supports – is certainly not restricted to China. Such resources are no doubt useful for distance learners worldwide, particularly those for whom online learning is a new experience.

Writing Resources

Good writing skills are a mainstay of successful learning. The ability to produce well-written assignments, cogent reports, and clear presentations is facilitated by providing online learners with resources to assist with improving their writing skills. Online resources, such as the *Paradigm Online Writing Assistant* (<http://powa.org/my/>), provide instruction in a variety of different types of writing. Online support services are also useful. For example, Athabasca University’s *Write Site* (<http://www.athabascau.ca/html/services/write-site/>), allows students to submit a draft of an academic assignment and receive feedback about organization, mechanics, grammar, and style before submitting it for marking.

Intellectual-Property-Related Resources

Traditions regarding what constitutes intellectual property and what is generally accepted common knowledge are not universal concepts, nor are they always understood. Cultural views about ownership of knowledge vary. Students do not always understand the concept of plagiarism, much less how to avoid it.

Institutions should ensure that intellectual honesty expectations are readily available to online learners and referred to frequently. Reminders in directions for assignments, links to approved style guides, links to anti-plagiarism services (see, for example, www.turnitin.com), and online tutorials on correct attribution of scholarly material and

bibliographic citations reduce the chance that learners will fail to provide proper scholarly acknowledgement in their assignments and research. For example, the University of Puget Sound (2003) has designed an excellent resource that provides learners with exercises to enhance their understanding of the concept of plagiarism and to assist them in avoiding it (see <http://library.ups.edu/research/guides/plagrsm.htm>).

Community-Building Tools

As online learning has grown and evolved, so too has recognition of the importance of student interaction and the role it plays in peer support and the creation of an online or virtual community of “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002, p. 4). Indeed, Lentell and O’Rourke (2004) include “supporting self-directed learner groups” and “supporting discussions” (online or face-to-face) that build “communities of practice” as a promising means of providing learner support for institutions with large numbers of students, especially those with limited resources in underdeveloped countries.

Tools to support interaction among online learners include asynchronous computer-mediated conferencing (electronic bulletin boards), text-based chat, synchronous audio conferencing, blogs, and wikis, among others. New forms of social software are constantly being developed with the aim of fostering student interaction, supporting individual and collective learning, and promoting a sense of belonging and mutual support.

While most online student interaction typically takes place within the course environment, usually in asynchronous conferences moderated by instructors or facilitators, there are also opportunities for students to join together informally outside of the courses in which they are enrolled. For example, program web sites may include an interactive “meet-and-greet” area where students can introduce themselves or discuss shared interests and concerns. At Athabasca University (2008), the Student Union offers clubs and groups, study buddies, mentoring, and discussion forums and chat through their web site at <http://www.ausu.org/>.

LIBRARY RESOURCES

In the early years of distance education, providing library support to learners was a challenge. Courses were developed in print format and

comprehensive course packages were sent to each learner. The library typically provided a collection that was made available to the learner on request, either by mail or fax. Online sources of information, however, have transformed libraries in distance education. Where libraries once focused on holdings, they now focus on access; where they once were information repositories, they now are gateways to information. This transformation has allowed the library to become better integrated within courses and more actively involved in the overall learning process. Online learners require resources and support to make full use of the digital library that has evolved, and to use it effectively in their studies and written work. Moreover, as distance education institutions expand into offering post-graduate programs, there is increasing need for the library to be involved in facilitating student research, providing web-based information on topics such as searching online journals or conducting literature reviews.

ONLINE EDUCATIONAL COUNSELLING

Well-prepared resources can be provided online, but counselling assistance, both synchronous and asynchronous, is required as well, particularly for learners who are experiencing difficulty. In the online environment, learners can “fall through the cracks” if assistance is not readily available. From time to-time, a learner may need someone to assist in keeping a positive outlook and determining if an intervention is needed. Learners need to know that help is there if they need it. The institution should provide this resource and all institutional staff should be trained to identify when a learner might benefit from a session with a counsellor. It is important to remember, however, that while referrals can be made, the decision to pursue them belongs to the learner.

The work of the counsellor in an online learning environment has three aspects. The first is to be involved in the development of online resources that help learners to identify and address barriers to reaching their educational goals. The second is to interact with the learners when an intervention is required. The third is to work with other institutional staff to ensure that processes and procedures support and enhance learning.

While educational and career counselling are well suited to the online environment, personal counselling is less so. Generally speaking, personal counselling should be limited to immediate crisis resolution

and referral. As such, counselling staff need information about local community resources, in a variety of locations, to which they can refer students in need.

STUDENT RIGHTS AND OMBUDS SERVICES

Online learners have as much need of clearly articulated rights as do learners in traditional educational settings. An advocacy process designed for online learners is one in which the learner is made aware of student rights and responsibilities. An institution can fulfill its basic legal responsibility by making a student code of conduct available online and in print upon request. A prudent institution, however, will go well beyond this demonstration of due diligence, particularly with regard to intellectual property and plagiarism, as discussed earlier.

All efforts to provide smooth interactions between the learner and the institution notwithstanding, there will be situations in which the learner becomes ensnared and does not know where to turn. A highly visible ombuds office should be available. Moreover, from an institutional perspective, the ombuds office can assist in identifying policy and procedure problems that require attention within the institution. Information about the Ombud's Office at Athabasca University can be found at <http://www.athabascau.ca/ombuds/index.php>.

Institutional Governance and the Students' Union

Institutions involved in distance and online learning may wish to provide opportunities for students to participate in institutional governance, as online learners can make valuable contributions and contribute unique insights in policy, planning, and similar matters. Including student representatives on the Board of Governors and on senior-level administrative and academic committees helps to ensure that student perspectives are considered and results in more informed decision-making. Involving students in such capacities also sends an important message – that students are valued, respected, and contributing members of the organization with a legitimate role to play in how the organization is governed.

Student government in the form of a student union is also possible in such institutions, although administration may need to make special arrangements to facilitate the process. In many ways, a student union faces the same issues as the institution to keep in touch with its constituency. Both are vying for the attention of learners, who are often juggling

learning with many other life demands. Still, it is in the institution's best interests to have a healthy student union and to work together to meet the needs of the learners. Some means by which to achieve these goals include

- making networks available to the student union;
- providing one main institutional contact with whom student union representatives can interact;
- assisting in collecting student union fees;
- making information available, within confidentiality provisions;
- including student representatives on governing and decision-making bodies;
- having decision-making bodies meet through electronic means (e.g., teleconference, online conference) to maximize participation of students;
- keeping the student union and student representatives apprised of significant events, initiatives, and issues (e.g., strategic planning, budgeting, tuition fee increases);
- engaging in shared initiatives with the student union (e.g., including student union representatives in convocation, co-publishing newsletters);
- seeking advice from the student union on important issues; and
- demonstrating appreciation for the work of the student union.

Resources for Alumni

After graduation, students often wish to maintain contact with the institution and with fellow students. The educational institution, either on its own or through the student union, may wish to provide resources for alumni. Including a section for alumni on the institution's web site is one way to keep former students involved and informed. In addition, opportunities for fundraising and planned giving may be included. Some institutions have established an alumni association to maintain contact with former students.

RESOURCES FOR ONLINE LEARNERS WITH DISABILITIES

Increasing numbers of students with disabilities are recognizing the benefits of distance education and realizing the enhanced access it provides to post-secondary educational opportunities. Flexibility in the

location of study, scheduling, and delivery of distance and online programs provide many students with disabilities with what may be their first real access to higher education (Paist, 1995; Kim-Rupnow, Dowrick, & Burke, 2001). On the other hand, distance learners with disabilities also face numerous barriers to success, including factors related to learner characteristics, life circumstances, workload, social integration, locus of control, study-time management, organization, satisfaction, motivation, and interaction with the instructor and other students.

Online learning presents additional challenges, especially for students with physical, sensory, and learning disabilities (Burgstahler, 2001; Fichten, Asuncion, Barile, Fossey, & De Simone, 2000). For example,

- keyboarding is difficult (or impossible) for learners with fine-motor problems or conditions such as Carpal Tunnel Syndrome;
- learners with hearing impairments are unable to comprehend uncaptioned video presentations;
- learners with hearing impairments or communication disorders (e.g., aphasia, severe stuttering) are unable to participate in audio-conferences;
- accessible web pages are a must for learners with visual impairments who use screen-reading software;
- the text-based nature of distance and online learning materials presents difficulties to students for whom the written word is a barrier, such as those with certain learning disabilities or reading comprehension problems.

These are but some of the challenges that online learning presents to the diverse population of learners with disabilities. To overcome barriers and achieve success, these online learners require appropriate, individualized, disability-specific support services and, when required, suitable assistive technology, as discussed in the case below.

DISABILITY SERVICES AT ATHABASCA UNIVERSITY

In April 1998, the Office for Access to Students with Disabilities (ASD) at Athabasca University was established (see <http://www.athabascau.ca/asd/>). Two years later, in November 2000, the *Policy for Students with Disabilities* was adopted. This policy defines students with disabilities as “those individuals who are disadvantaged by reason of any verifiable and persistent physical, learning, cognitive, sensory, psychological, neurological,

or temporary impairment that may affect their academic progress” (Athabasca University, 2000). The policy further states that students with disabilities will receive the following services:

- Information
- Assessment of academic and technological accommodations and support requirements
- Educational and career counselling as it pertains to the disability
- Referrals to additional services or agencies
- Program planning as it pertains to the student’s disability
- Time-management assistance (respective to the disability)
- Monitoring of progress in course work
- Registration assistance
- Information and assistance with applications for funding
- Assistance to obtain alternate format materials if materials cannot be produced on campus
- Support service arrangements (e.g., tutoring, academic strategist, interpreting, aide, reader, scribe)
- Exam accommodations
- Time extensions for courses
- Advocacy
- Liaison with departments and faculties
- Available volunteer assistance, including note taking, exam-writing assistance, mobility assistance, taping of readings, library research help, study help, tutoring, special project help.

The list above reflects the broad nature of services required by distance and online learners with disabilities. Certainly, not all of these learners require extensive services, but some do. Also, like any student, some learners with disabilities require more support at certain times in their program of studies than at others. This is especially true for prospective students. We have found that taking a proactive approach and planning disability-specific supports prior to enrolment is important in order to initiate a supportive environment that will promote successful learning and avoid many problems encountered after studies have commenced. As the statistics below show, prospective students make up a significant number of the total students receiving disability services at Athabasca University.

Students Receiving Disability Services

Since its inception, the number of students receiving services from the Office for Access to Students with Disabilities (ASD) has grown steadily.

In the five-year period between 2002 and 2007, numbers nearly doubled (see Figure 1). In April 2002, 709 active students and an additional one hundred prospective students received services through the ASD office; in April 2007, there were 1,584 active students and 193 prospective students receiving services.

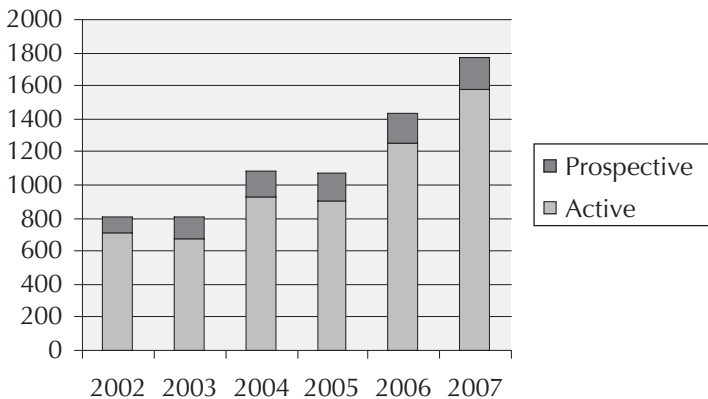


FIGURE 1. Students Receiving Disability-Specific Services at Athabasca University (Source: Athabasca University, Office for Access for Students with Disabilities, 2007)

To obtain a greater understanding of the nature of students with disabilities at Athabasca University and the services they receive, an exploratory study (Moisey, 2004) was conducted to coincide with the first three years of the operation of the ASD office (1998–2001). A total of 604 undergraduate students with disabilities were enrolled during this period. More than half (52%) had a physical disability, 20% had a learning disability, 20% had a psychological disability, and 7% had some form of sensory (hearing or vision) impairment. Their overall course completion rate – 45.9%, including early withdrawals – was somewhat lower than the general Athabasca University population – 52.5% when early withdrawals were included; and 59.5% when early withdrawals were excluded.

The study also found that students who received disability-specific services tended to have more success in terms of course completions. This finding is further supported by a more recent study, as yet unpublished, involving undergraduate students with disabilities ($n = 652$)

enrolled between April 2003 and April 2005 at Athabasca University. Statistical analysis reveals that students who received disability-specific services had significantly higher course completion rates than students with disabilities who did not receive such services. In short, it appears that providing support for distance and online learners with disabilities is important for promoting success in the courses in which they are enrolled.

Services and Accommodations

Learners with disabilities at Athabasca University are identified in three ways: a) they indicate on the General Admissions Form that they have a disability; b) they self-refer, often after viewing the ASD web site (especially true for prospective learners); or c) they are referred by their tutor or instructor (usually after encountering difficulty in a course). Once the initial contact is made, the next step in determining the student's particular needs is assessment.

Determination of learner support begins with a comprehensive, detailed self-assessment, which ascertains the student's level of ability in a variety of functional areas. Following verification of the assessment, consultation takes place with a specially trained service coordinator to determine what services and accommodations may be required.

Course accommodations: The most common type of course accommodation involves adding one or more two-month extensions to the normal six-month contract time for completing a course. Another form of course accommodation involves providing alternative formats of course materials (e.g., electronic or recorded audio versions of textual material, transcripts of audio materials).

Exam accommodations: These learner supports involve four types of accommodation: a) accommodation to the timing of an examination (e.g., deferral, additional time to complete the examination, provision for breaks during the exam); b) assistance with presenting questions and recording answers (e.g., printing the exam in larger font, giving an oral exam instead of a written exam, use of a scribe to record answers); c) environmental changes involving the exam room (e.g., taking the examination alone; playing relaxing music); and d) using an alternative format for the examination (e.g., substituting multiple-choice test items with short-answer questions).

External support: This service involves the provision of support from outside the university (e.g., the use of an academic strategist, interpreter, note-taker, study aide, support worker).

Assistive technology: This service involves assessment of learner needs for special equipment or software to assist in the learning process. Assistive technology commonly includes using adaptive software, such as programs for text-to-speech conversion and word prediction, screen readers, voice input and optical character recognition, and screen enlargers. Assistive-input devices may also be recommended, such as large-key keyboards or special trackballs. Services also include procurement of equipment, liaison with funding sources, and training.

Depending on their circumstances, students may receive one-time, occasional, or ongoing support to attain their educational goals. Because the characteristics of students with disabilities are as diverse as those of the general student population, a variety of services and accommodations is required. Each student's situation is different, and each has a unique set of goals and abilities; therefore, each requires an individualized set of supports to maximize their learning and to achieve the highest possible level of success.

CONCLUSION

Creating a supportive environment in which the online learner can flourish is a complex task requiring careful analysis, thoughtful planning, and ongoing monitoring and revision to ensure that students' needs are truly met. A constellation of resources and array of services are required to support the online learner in a manner that acknowledges individual differences and addresses them in the design of learner support services. Depending on the nature of the organization – a mega-university, a dedicated distance learning institution, or a dual-mode institution – the manner in which services and supports are provided may vary. But the aim remains the same: to provide an ideal learning environment that promotes the learner's independence while facilitating the learning process with supports that are flexible, accessible, and readily available when needed.

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