Council of Ministers of Education, Canada

Postsecondary Expectations Project
Learner Pathways and Transitions

LEARNER PATHWAYS AND TRANSITIONS IN POSTSECONDARY EDUCATION: BACKGROUND TO THE ISSUES

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SUMMARY

The Council of Ministers of Education, Canada (CMEC) is undertaking a project on pathways and transitions in postsecondary education. There are three components currently under study: (1) transitions from secondary to postsecondary education, (2) progress through postsecondary programs, and (3) transitions from postsecondary education to working life. A fourth transition - among postsecondary education programs and providers - is being studied separately.

This paper deals with the following issues:

- background of the study and concerns of governments in relation to postsecondary education
- patterns, trends, and perceptions in the environment of postsecondary education, and challenges facing postsecondary institutions and learners
- questions about our assumptions and expectations for postsecondary education and policy implications arising from these questions
- major variables affecting postsecondary pathways and transitions related to individuals, the environment, the system, and institutions, together with examples of the influence of variables and possible interventions to improve success
- the kind of knowledge base we need about the present situation of pathways and transitions, our current knowledge base, and research that may need to be done
- conclusions and possible next steps

Major steps suggested include

1. defining the real and perceived challenges
2. collecting more complete quantitative data
3. collecting samples of best practices
4. sponsoring studies of the differences between successful and unsuccessful students
5. establishing a system for determining the effectiveness of different interventions
6. encouraging pilot projects
7. improving links among institutions and stakeholders
8. making more effective use of information and communications technologies

LEARNER PATHWAYS AND TRANSITIONS IN POSTSECONDARY EDUCATION

INTRODUCTION

The Council of Ministers of Education, Canada (CMEC) is undertaking a project on postsecondary education in Canada, entitled *Learner Pathways and Transitions: Moving from Planning to Implementation*. This is part of CMEC's Postsecondary Expectations Project, and it has as its purpose to improve the effectiveness and efficiency with which students (1) progress in their postsecondary education, (2) meet their personal and professional goals, and (3) get quick access to appropriate and rewarding employment opportunities. (CMEC, 1998a)

This part of the project is concentrating on three key components:

- transition from compulsory education (K-12) to the first postsecondary experience (college, university, or equivalent program)
- progress through a postsecondary program
- transition from a postsecondary program to work

A fourth transition — among postsecondary education programs and providers — is being studied separately.

The project is being undertaken to provide a basis for policy decisions by governments, institutions, and other bodies concerned about the quality and effectiveness of postsecondary education in Canada.

Background

The 1993 CMEC Victoria Declaration outlined a vision of education for Canada. In it, the ministers expressed the need to have the highest quality education based on shared and relevant goals in which students can fulfill their personal and professional development goals and contribute to the social, economic, and cultural development of their community and the country as a whole.

Governments across Canada recognize the social, economic, and academic importance of timely, effective, and efficient transitions through the different stages of learning. Key elements of concern include ensuring that academic requirements do not pressure learners to extend their programs beyond a reasonable time frame, recognition of prior learning and work experience, and the ease of learner movement among educational providers.

From the social perspective, broad societal expectations of lifelong learning opportunities are putting pressure on postsecondary providers to facilitate transitions among different types and stages of learning.

From the economic perspective, learners are selecting their postsecondary education options more carefully, as the cost of postsecondary education rises and the cost to the individual learner increases.

From the academic perspective, universities, colleges, and other postsecondary providers are experiencing more competition for learners and are rethinking the way they deliver educational services and respond to learner needs.

Governments have a responsibility to promote the public interest in education, and every provincial government has sponsored at least one study of postsecondary education. Examples of provincial government policy documents on the Internet are included in the endnotes of this paper. At the outset of this CMEC study, the Government of New Brunswick conducted a survey that asked all jurisdictions to assign priorities to the transitions they felt were the most important and required further exploration. All jurisdictions responded and contributed to selecting the focus of the initial priorities for action. The four highest ranking transitions were

- transitions from K-12 to postsecondary education
- transitions through the PSE program
- transitions from postsecondary education to employment
- transitions between postsecondary institutions/programs.

There are numerous initiatives now under way concerning transitions. However, the focus of this project is the creation of a tangible, useful “deliverable” — a "handbook" that will (1) provide specific examples of interventions that will facilitate transitions, and (2) catalyze action by those bodies concerned about the quality and effectiveness of postsecondary education in Canada.

CONTEXT

The Environment

Size

Postsecondary education has expanded dramatically in recent decades in the quantity and diversity of institutions, programs, student population, and expectations. According to Statistics Canada data, Canada has over 200 community colleges and Cégeps and over 75 universities; there are 400,000 college students and 600,000 university students served by 60,000 instructors and professors. In addition, there are other postsecondary level programs offered by private providers in specialized institutions and by various units in business and industry. About $16 billion is spent on college and university education in Canada. (Statistics Canada 1997)

Patterns and Trends

In recent years, there has been an increase in full-time postsecondary enrolment, a decrease in part-time enrolment, and a significant increase in the rate of participation of young people in postsecondary education.

- 85% of young people now complete secondary school, of whom 40% go to university and 30% to community college.
- Between 1984 and 1994, total postsecondary enrolment increased by 22%; enrolment in colleges increased by 18% and in universities by 25%.
- 80% of the 15-19 age group are full-time students.
- 32% of the 20-24 age group are full-time students.
- Between 1989 and 1996, the proportion of young people 15-24 years of age attending school full time increased by 8.8%, reaching 56% in 1996. The increase during this period for the 20-24 age group was over 10%.
- Between 1990 and 1994, enrolment of full-time students increased 15% in colleges and just under 9% in universities; on the other hand, part-time enrolment declined by 15% in colleges and 7% in universities.
- Women now form 53% of full-time college and university students and 61% of part-time students.
- Part-time employment for students involves an average of 14 hours per week and 30% of students age 20-24 work 20 hours or more a week.

(adapted from *Education in Canada 1996,* Statistics Canada)

Variety

Institutions vary in mission, size, target population, and complexity of structure. Programs vary by level of attainment (postsecondary certificates to doctoral studies), length, cost, relation to specific careers, flexibility, and enrolment. Postsecondary students today are more diverse in background, expectations, and abilities than in the past. There are increasing expectations of what a postsecondary education can and should provide in

terms of personal development, intellectual attainment, and career preparation. It is difficult and often misleading to generalize about postsecondary education because of this diversity.

Success

By many criteria, postsecondary education in Canada is a success story.

- Canada has one of the highest postsecondary participation rates of the 18-21 age group among OECD countries.
- Canada has the second highest university graduation rates after the United States; graduation rate is the ratio of university graduates to population at the theoretical age of graduation.
- Postsecondary graduates have higher employment rates than secondary school graduates.
- Postsecondary graduates have maintained their level of earnings in recent years despite (a) the increasing number of graduates and (b) the general decline in youth income. (See OECD 1996, *The Economist* 1997, and Statistics Canada 1997.)

Perceptions, Realities, Expectations

The successes, limitations, and cost-effectiveness of postsecondary education can be viewed in different ways, depending on the perceptions of different groups: (a) governments, politicians, and policy makers (who must provide major financial support), (b) the institutions (which have their own traditions, structures, and goals), (c) the business community (which hires most of the graduates), (d) the clients (the students and the parents who have their own expectations and demands) and (e) the general public (which is often remote from the realities of postsecondary education and influenced by media images and critiques). Reconciling these different perceptions is a major challenge for policy makers at all levels.

The discussion of the changing role of postsecondary institutions, especially the universities, is taking place in many countries. Despite differences in social, economic, and political context, many of the issues are similar. (See *The Economist* 1997.)

General Climate

Postsecondary education is operating within a general climate marked by these characteristics:

- rapid social and technological change in all areas
- economic restructuring and fragile job market
- reduced public funding as governments attempt to balance budgets
- pressures to align programs more closely with the needs of business and industry
- public skepticism and criticism
- rapid developments in information and communication technologies
- general demand for greater accountability for both the efficiency of operations and the effectiveness of results

Learners recognize that economic security and success are increasingly dependent on a good postsecondary education, and they are acquiring an increasing debt load to pay for this education. The ethnic and age mix of postsecondary education is changing to reflect the demographic trends. Postsecondary expectations of Aboriginal peoples are influencing policy in many jurisdictions especially in the west and the north.

Institutions

Despite differences between universities and colleges, and among institutions within each category, there are a number of patterns and trends that have an impact on issues related to pathways and transitions. Some of these issues are as follows:

Concern about Resources and Costs

- decreased government funding
- high operating costs
- labour-intensive nature of postsecondary education
- need to replace aging facilities and equipment
- search for alternative sources of funding (business grants, endowments, gifts, tuition, user fees, service charges, contracts)
- impact of budget constraints on staffing, instructional services, student services, and the reputation of institutions and programs
- decline in research funds and increasing competition for funding, linked with the growing importance of research grants as an element of faculty promotion and tenure.

Policy Tensions

- tension between the trend towards bureaucracy and corporate management style and collegial decision making
- tension between the value of closer links between institutions and business (research contracts, grants, business arrangements) and the value of the independence of postsecondary institutions (academic freedom, critical role of institutions, pure research, liberal education)
- pressure to give more secondary school graduates (and others) access to postsecondary programs (broadening admission criteria and standards) without compromising standards of quality
- demand for accountability for “results” (productivity in terms of number of graduates, duration of programs, cost-effectiveness of methods, greater relevance of content and skills)

Competition

- increasing competition for students among institutions, between universities and colleges, between traditional postsecondary institutions and other providers (private institutions, industry)
- increasing competition between traditional campus-based programs and Internet-based virtual distance-education resources and services, often provided by major institutions outside Canada

Communication Technologies

- impact of information and communication technologies on postsecondary teaching practices and operating costs (management systems, program structure, delivery systems, research activities, and outreach such as distance education)

Research and Teaching Programs

- concern about the quality, relevance, and cost-effectiveness of institution-based research in relation to government, industrial, or private research units
- concern about the quality and relevance of postsecondary teaching practices in relation to current learning theory, student abilities and needs, cost and technological facilities
- relevance of programs to the needs of students, changing society, and evolving labour market (general knowledge and skills vs. specialized training)
- efficiency of postsecondary programs in terms of curriculum structure, delivery system, success rate, cost effectiveness, resource allocation, accessibility, clarity of outcome, accountability, and competition with other programs and institutions

Many institutions are addressing these challenges; some are attempting to deal with many of them, others are concentrating on a few. Questions arise about the clarity with which the challenges are perceived in different institutions, the nature of the challenge presented, the strategies to deal creatively with the challenge, the pace of change, and even the capacity of some institutions to change enough and quickly enough.

Learners

The learners are the people who actually look for and follow the pathways and who must make the transitions from secondary school to postsecondary education to working life. For a variety of reasons, some learners want to make the transitions and make them successfully. Some learners want to make the transitions but are unsuccessful. Other learners do not want to make the transitions. Some groups of learners (for example women, those from upper socioeconomic categories, some visible minorities) seem more successful than others (for example, many men, the poor, Aboriginal people, the handicapped, other visible minorities).

Some learners move directly from secondary school to a postsecondary program, follow the program on a full-time basis (likely with a part-time job), complete the program in the expected time frame, and move immediately into a career directly related to the field of study. Many policy makers and planners, in institutions and governments, consider this the ideal, the norm for postsecondary efficiency.

But many other students interrupt their studies at one or more points, to work full-time or travel or do something different; many mix part-time study and part-time work; many shift from one program to another as they move through an institution; some change institutions in the midst of their passage through postsecondary education; some complete a program in one institution and go on to a more advanced or parallel program in another institution; some students begin one or more programs but never continue to completion. Many policy makers and planners consider these pathways repetitive, inefficient, and costly to the individual and the society.

SOME QUESTIONS

These issues raise some questions:

Secondary-to-Postsecondary Transitions

1. Do we expect every young person to obtain a secondary school diploma?

2. If so, do we want to (1) lower secondary school graduation requirements or make them more flexible, (2) develop separate programs for those who want to go on to PSE and those who do not, (3) take the steps necessary at the secondary level to ensure that all students qualify for postsecondary studies, (4) use some combination of the above?

3. Do we expect that every secondary school graduate should go on to some form of postsecondary education, and can we afford it?

4. If so, do we want to (1) give everyone a chance by lowering admission requirements and accepting high attrition and failure rates, (2) maintain clear admission criteria but provide special support services to high school graduates who do not yet qualify, (3) expand the range of postsecondary programs, (4) make serious adjustments in postsecondary curriculum and instructional practices.

Passages within Postsecondary Education

5. Do we expect to improve the success rate in postsecondary education programs to approach 100%?

6. If so, do we want to (1) reduce graduation standards, (2) improve support services to students, (3) make program structure more flexible, (4) be more selective in admitting students, (4) improve the quality of learning services provided, (5) follow mastery models with duration of programs a variable, (6) provide more diverse pathways and programs?

7. Do we expect to reduce the average time it takes a student to complete postsecondary studies?

8. If so, do we want to (1) make it difficult to follow part-time studies and part-time work, (2) provide better financial support to students to encourage full-time study and completion on schedule, (3) reduce incidence of moving from one program to another?

9. Are part-time programs better or worse learning experience, more or less costly, better suited to certain clientele than full-time programs, and under what conditions?

10. Are there benefits to a more circuitous progress through postsecondary education?

11. Can more effective use of communication and information technologies and more reliance on independent study reduce costs and improve the effectiveness of postsecondary programs?

12. Is it necessarily a "success" for a student to complete a postsecondary program or a "failure" for a student not to complete a program?

Postsecondary Education to Work

13. How can postsecondary institutions, through their programs and services, prepare students for suitable employment after graduation?

14. Is the employment situation of graduates a better indicator of a postsecondary program's quality for some programs than for others? What other indicators should be kept in mind?

Policy Implications

15. What factors influence students in the choice of programs and pathways, their success in completing programs and their ability to move smoothly to working life?

16. What are relative responsibilities of governments, business, the K-12 education sector, and postsecondary institutions for improving pathways and transitions to, within, and from postsecondary education?

17. What kinds of interventions can make pathways more effective and efficient and ensure better transitions for more students to postsecondary education, work, and adult life?

VARIABLES AFFECTING PATHWAYS AND TRANSITIONS

There are four groups of variables that can be expected to influence the success of transitions and the effectiveness of pathways through postsecondary education:

1. ***Individual variables*** related to the characteristics of the student and to the access the student has to postsecondary education

2. ***Environmental variables*** related to the economic climate, resource allocation to postsecondary education, public attitudes, and links with the community

3. ***System variables*** such as links among levels (especially K-12 and postsecondary education), costs, and information available to candidates

4. ***Institutional variables***, especially admission and assessment policies, programs, instructional services, and learning resources.

In general, educational policy makers have direct influence on system variables and some influence on institutional variables but they have more limited influence on individual and environmental variables. They can provide better information and alter admission policies but they cannot easily change a person's motivation to continue studies or the career opportunities provided by a community, province/territory, or country. These require either more personal interventions (on the part of a teacher, for instance) or more broadly based interventions (for example, encouraging employers to locate in a region). Educators have greatest influence on institutional variables.

It is not easy to say which set of variables is the most important. Postsecondary institutions tend to underline the importance of personal variables (especially ability and prior preparation) and institutional variables (especially admission and assessment policies). Government planners tend to stress the value of environmental variables (for instance variety and competition among providers) and system variables (e.g., links among colleges, universities, private providers, and adult education services).

All sets must function in harmony if transitions are to be smooth and effective. A serious obstacle in one variable (e.g., prior preparation) must be balanced by changes in other variables (e.g., resource allocations, information systems, quality and efficiency of instruction). Changes in one variable (e.g., institutional admission policies and standards) may require changes in other variables (e.g., support services, fee structure, links with community, and motivation).

VARIABLES AFFECTING THE SUCCESS OF TRANSITIONS

1.0 Individual variables

- 1.1 Ability
- 1.2 Expectations and motivation
- 1.3 Prior preparation
- 1.4 Access to learning resources
  - Learning resources available
  - Cost and debt burden
- 1.5 Socioeconomic status
- 1.6 Ethnicity
- 1.7 Gender

2.0 Environmental variables

- 2.1 Perceived and real career opportunities
- 2.2 Resource allocation to PSE
- 2.3 Variety and competition among providers
- 2.4 Links between institution and community
- 2.5 Alternatives to PSE (e.g., jobs)

3.0 System variables

- 3.1 K-12/PSE links (e.g., guidance)
- 3.2 Funding formula and financial aid
- 3.3 Links among types of institutions
- 3.4 Information system
- 3.5 Certification and credit transfer policies
- 3.6 Accreditation policies

4.0 Institutional variables

- 4.1 Admission policies and standards
- 4.2 Institutional costs
- 4.3 Quality, range, and relevance of programs
- 4.4 Quality and efficiency of instruction
- 4.5 Quality and availability of learning resources
- 4.6 Quality of support services
- 4.7 Use of information/communications technologies
- 4.8 Assessment standards and policies

Examples

It is important to identify the variables that seem most directly related to problems of pathways and transitions and the interventions that may alter the effect of the variable. Some possible examples:

Problem 1: ***There is a high failure rate in first-year university programs.***

Major Variables: Prior preparation of students (lack of skill in independent learning)
Resource allocation to PSE
K-12/PSE links
Admission policies and standards
Quality and efficiency of instruction
Quality of support services
Assessment standards and policies

Interventions: Improved K-12/PSE links (stress on learning skills)
Better information system for secondary school students (functional course requirements, expectations)
More precise admission standards in literacy and mathematics (essays, projects, admission tests)
Quality and effectiveness of instruction in first-year university courses (tutoring, discussion groups, feedback, resources)
Closer ties among course goals, content, instruction, and evaluation procedures

Problem 2: ***PSE students are taking longer than anticipated to complete programs.***

Major Variables: Motivation
Cost and debt burden
Variety and competition among providers
Fees and fee structure
Alternatives to postsecondary education (part-time jobs)
Quality, range, and relevance of programs

Interventions: Improved guidance and student support systems
Financial assistance, bursaries, lower tuition
Wider choice among institutions, more institutional flexibility
Penalties for part-time study or prolonged duration
Availability of key courses, improved program sequence

Problem 3: ***Graduates of postsecondary programs have difficulty finding appropriate employment after completion.***

Major Variables: Expectations and motivation
Career opportunities
Links between institutions and community
Information system
Quality, range, and relevance of programs

Interventions: Better career information for students at all levels
Job creation programs
More work-study and internship programs
Links between professional/career programs and employment

Problem 4: ***Aboriginal students are underrepresented in postsecondary programs.***

Major Variables: Expectations and motivation
Prior preparation
Access to learning resources
Career opportunities
Quality of support services

Interventions: Models of successful graduates, career guidance
Stress on study skills and cooperative learning
Stay-in-school programs in high school
Use of communication technology to reach remote areas
Job placement programs for students and graduates
First Nations' centres on campus, special support programs

This process involves

1. defining the problem
2. identifying the key variables related to the problem and its possible solution
3. selecting interventions that should lead to a solution
4. locating responsibility for leadership in these interventions
5. trying the intervention and evaluating the results

WHAT DO WE KNOW (AND NEED TO KNOW) ABOUT PATHWAYS AND TRANSITIONS?

Need for a Knowledge Base

To consider and to monitor the effect of interventions to improve the state of pathways and transitions in postsecondary education, we need good quantitative data on the present situation, especially the transition process between secondary and postsecondary education, the different pathways within and among postsecondary institutions, and the transition from postsecondary education to working life.

Some questions that need to be studied:

Secondary-Postsecondary Transitions

1. What percentage of high school graduates go on to full-time or part-time postsecondary studies, and does this percentage differ according to region, gender, socioeconomic status, or ethnic origin?

2. Are there differences between the characteristics of those who continue to postsecondary education and those who do not (e.g., academic record, attitude toward education, information about PSE)?

3. What are the motivations and expectations of secondary school graduates who continue their studies, and how do these influence their choice of institution and program?

4. What are the relationships among applications to PSE institutions and programs, patterns of acceptance by institutions, and final decision by applicant?

5. What information and information sources on PSE are available to senior secondary school students, and how is this information used?

6. What are the recruitment, information, public relations and outreach policies and practices of PSE institutions?

7. Are there significant trends in application and acceptance patterns in recent years?

8. Are there institutional policies related to the number of candidates accepted in different PSE programs?

9. What is the relationship between the achievement of students at the end of the first year of a PSE program and their achievement at the end of secondary school?

10. What are students' perceptions of the difficulty of the transition to PSE and their views on changes in secondary or postsecondary practices that would facilitate the transition?

Pathways within Postsecondary Education

11. What are the major enrolment patterns and trends in postsecondary education, by type of institution, type of program, duration, and completion rates?

12. What are the patterns of duration, attrition, and completion for different programs and options?

13. Do some student groups have a higher success rate than others, and are there certain variables related to success (gender, ethnicity, socioeconomic status, location, secondary school achievement, type of program, instructional and support program, institutional characteristics)?

14. Why do some students fail programs, abandon programs, or take longer than average to complete programs?

15. Are there certain "high risk" institutions and programs that have high failure and attrition rates?

16. What are the views of recent graduates of universities and colleges on the quality and relevance of their programs?

Transitions from Postsecondary Education to Work

17. How well are PSE graduates and nongraduates making the transition from PSE to work, and are there program or institutional variables associated with a successful transition?

18. Are there differences in work experience between graduates and nongraduates (employment rates, type of job, income)?

19. What are the views of graduates and nongraduates on their PSE experience five years after leaving?

What Do We Know?

We do not seem to have detailed and comprehensive answers to many of these questions at the present time, though many institutions have information on their own programs and students.

These are some general indications:

Duration

PSE graduates indicate that, on average, they took 2.3 years to complete a career/technical program, 4.0 years for a bachelor's degree, 2.8 years for a master's and 5.4 years for a doctorate. These compare to normal program duration of 3 years or less for a career/technical program, 3 - 4 years for an undergraduate degree, 2 years for a master's and 4 years or more for a doctorate. (Human Resources Development Canada and Statistics Canada 1996)

Success Rates

In Quebec universities, the success rate was 63.6% for undergraduates, 58% for master's, and 50% for doctorates. Rates varied from 80% in health sciences and law to about 65% in pure and applied sciences, management, and education, to 59% in humanities, 54% in letters, and under 50% in interdisciplinary programs and arts. (Quebec 1998)

Transition from Postsecondary Education to Work

Our best data on transitions deal with postsecondary graduates and their transition to work. (Human Resources Development Canada and Statistics Canada 1997)

Some highlights:

- Women graduates outnumbered men 59% - 41% at the college level and 56% - 44% at the university level (exceptions were at the master's and doctorate levels).
- Aboriginal people constituted 1% of university graduates and 2% of college graduates; comparable figures were 3% and 5% for disabled persons and 9% and 9% for visible minorities.
- 58% of university graduates and 46% of college graduates pursued additional education after graduation.
- 80% of university graduates and 78% of college graduates were working full-time five years after graduation.
- Over 90% of PSE graduates were working in a job directly or partly related to their education.
- The 1995 unemployment rate for 1990 college graduates was 7% (compared to 10% in 1992) and for university graduates was 6% (compared to 11% in 1992).
- University unemployment rates ranged from 3% in education and health professions to 12% in fine and applied arts.
- Education and health science graduates were the top earners among both college and university graduates of 1990.

CONCLUSION

There are a number of different initiatives under way to deal with the issue of transitions. Jurisdictions agree that more information is needed to discover the proper methods of helping learners flow from one element to another, and that a list of best practices would be helpful in addressing needs at a national, provincial, and regional level. With costs to learners and governments rising, and with significant changes in the needs of the labour market and our communities, it is more important than ever to facilitate learner pathways and transitions, and to try to ensure the most efficient and productive use of financial and human resources.

There is some information on the flow of students from secondary to postsecondary levels but little information on transition rates of different groups, on the process of institution and program selection, on the variables that influence secondary school graduates to go on to further studies, or on the specific attitudes, knowledge, and skills that distinguish those who make a successful transition from those who do not.

We have some Canada-wide data on graduates of postsecondary programs, especially the duration of their studies and their integration into the labour market after graduation, but we have very little information on those who do not complete postsecondary programs and what happens to them.

Some of the factors that affect passages and transitions are outside the control of the education system and educational institutions, notably job opportunities, level of funding for education, remuneration for different kinds of work, and public attitudes towards postsecondary education.

Some groups are clearly underrepresented in postsecondary education, and there is a substantial gap between the numbers of men and women graduates.

More complete and precise information is needed if rational and effective policy interventions in transitions, passages, and cost effectiveness are to be contemplated.

Some Possible Next Steps

1. Define major challenges and problems in pathways and transitions and the perceptions of different stakeholders about the nature of these challenges.

2. Collect more complete quantitative data on pathways and transitions.

3. Collect examples of best practices.

4. Sponsor studies of the differences in attitude and skill sets between those who are successful and those who are unsuccessful in making the secondary-postsecondary transition and in completing postsecondary programs.

5. Establish a system for determining the effectiveness of different interventions to improve pathways and transitions.

6. Encourage pilot projects.

7. Explore ways of improving the links between postsecondary and secondary institutions, among postsecondary institutions, between PSE institutions and governments, and between PSE and the world of work.

8. Explore ways of using information and communications technologies to provide better information to students, increase the flexibility and richness of teaching services, and extend the range of the research and teaching functions of postsecondary institutions.

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