

Patrick Brady

and

Philip Allingham

Lakehead University

High School to University in Ontario: How Effective is the New Grade 12 Curriculum?

The dual Ontario graduating class of 2003, commonly referred to as the Double Cohort, was the product of that provincial government's initiative to eliminate the long entrenched practice of requiring a fifth year of secondary school for university-bound students. The new, more "rigorous" four-year curriculum, the Ministry of Education asserted, would be as effective as the previous Ontario Academic Credit (OAC) system in preparing graduating students for further education at the postsecondary level. This study, conducted in a small Ontario university, examines the efficacy of the new curriculum by comparing how effectively the two subgroups, the former grade 12s and the former OAC graduates, had made the transition to postsecondary education both socially and academically. The results suggest that the recently adopted four-year secondary school program has been successful in that there was no significant difference between the two groups in terms of academic achievement or social adjustment.

En 2003, la double classe terminale de l'Ontario, souvent appelée la double cohorte, a été le résultat d'une initiative de la part du gouvernement provincial qui visait l'élimination d'une pratique de longue date imposant une cinquième année de secondaire aux étudiants qui comptaient poursuivre leurs études à l'université. Le Ministère de l'Éducation a affirmé que le nouveau programme d'études de quatre ans, Arigorous®, serait tout aussi efficace que celui qu'il remplaçait (le système Ontario Academic Credit, OAC) dans sa préparation des élèves aux études post-secondaires. Notre étude, effectuée dans une petite université de l'Ontario, analyse l'efficacité du nouveau programme d'études en comparant la mesure dans laquelle les deux sous-groupes, les anciens élèves de la 12^e année et les diplômés de l'ancien système OAC, réussissaient la transition vers les études post-secondaires, tant sur le plan social qu'académique. L'absence de différences significatives entre la performance académique et l'adaptation sociale des deux groupes permet de conclure que le programme d'études récemment adopté réussit bien.

In September 1999 the province of Ontario implemented a new, streamlined curriculum, eliminating the fifth year of high school for university-bound students and bringing its system of secondary education into line with the four-year model predominant in the rest of North America. The result of phasing in this reform initiative incrementally (one grade a year over a four-

Patrick Brady is an associate professor whose research interests are in school and organizational culture, legal issues in education, particularly the application of the Charter of Rights and Freedoms, and equity issues in education.

Philip Allingham is an associate professor whose research interests in education include teachers' responses to critical approaches to literature and teaching and evaluating written composition. A Victorian scholar, he is the Contributing Editor to the Victorian Web and has published in journals such as the *Dickensian* and *Dickens Quarterly*.

year period) was the creation of the phenomenon commonly known as the *Double Cohort*: two distinct groups of students entering university in the same year, one that had been prepared for postsecondary education under the old Ontario Academic Credit (OAC) system, and another, the product of the new four-year curriculum. Logistical issues aside, the introduction of a compressed secondary school curriculum in a province where five years of preparation for postsecondary education had long been the norm raises several critical questions. First and foremost among these is the question as to whether the new, and untested, grade 12 curriculum will adequately equip high school students with the core academic knowledge and skills necessary for them to meet successfully the challenges inherent in the transition to the postsecondary milieu. Second, does entering university at an earlier age affect incoming students' ability to adjust to the new and potentially daunting social environment of the university? The purpose of this study, therefore, is to examine the efficacy of the new curriculum by means of a comparison with its immediate predecessor in terms of their degrees of success in preparing secondary school students for the transition to university.

Making the Transition

For the first-year student, making the transition from secondary school to university represents a multifaceted challenge. Apart from the expected issues about adapting to a larger institution, differential instructional styles, and concerns about academic achievement (Holdaway & Kelloway, 1987), students must also deal simultaneously with the following: (a) their adaptation to an unfamiliar, even alien institutional environment, and (b) the transition from being adolescent to young adult. As Jones and Frydenberg (1998) observed, the former consists in leaving behind the "nurturing environment" of the secondary school with its well-established teacher and peer support mechanisms for the uncertainty of the larger institution. Similarly, the latter consists of the stress and anxiety inherent in separation from family and the institutions with which they had previously formed an emotional bond (Brody, Brody, & King, 1986).

Review of the Literature

Researchers (Chaskes, 1996; Johnson, Staton, & Jorgenson-Earp, 1995; Tinto, 1988) have proposed a number of models examining the first year of university experience. The following represents a summary of their findings.

Chaskes (1996), for example, likened a student's transition from secondary school to university to that of an immigrant entering a new country. As he indicated, "The immigrant analogy is appropriate because it contains so many of the same elements encountered by students when making the transition to college" (p. 81). For example, just as immigrants arrive with a set of beliefs about life in their newly adopted countries, first-year students often arrive at their new institutions with preconceptions about university life. The most significant among these is an overestimation of the extent to which their high school experience has prepared them for the realities of the university. Furthermore, as new arrivals are expected to adapt to the cultural milieu of their adopted homeland, first-year students are expected to acclimatize themselves to nuances of the institution they are attending, a task that may prove daunting

given the bureaucratic complexity of university governance. Finally, first-year students may also experience a form of culture shock similar to that experienced by immigrants as they learn the language of higher education, seek to build an entirely new social support network, and negotiate their relations with their professors among the countless other minutiae of university life.

Tinto (1988) indicated that the transition to university is a process consisting of three distinct stages: separation, transition, and incorporation. Separation requires students to “disassociate themselves, in varying degrees, from membership in the past communities, most typically those associated with the local high school and place of residence” (p. 433). Although this process has the potential to create varying degrees of stress among students, particularly among those living away from home and family for the first time, it is nonetheless necessary for full integration into the intellectual and social life of the receiving institution. The next stage (transition) is, as its name implies, transitory in nature, as newly arrived students find themselves in the process of severing their ties to their previous communities while not quite yet having established bonds with the university community. As Tinto notes, “The stress and sense of loss and bewilderment, if not desolation, that sometimes accompanies the transition to college can pose serious problems for the individual attempting to persist in college” (p. 444). The final stage in the process, incorporation, is characterized by the student becoming fully integrated into the cultural life of the university community, a task that is complicated by the fact that all too often first-year students are left to fend for themselves in learning the social, behavioral, and other norms of their new institutions. Some inevitably fail to incorporate themselves into the academic and social life of their university communities and leave higher education altogether.

Finally, Johnson et al. (1995) examined the transition from secondary school to university from what they referred to as an “ecological perspective,” considering how “students become socialized both in their role as college freshman and to the new university environment” (p. 337). This approach focused on what the authors referred to as the “communication perspective” as they examined how students negotiated their existence in a new environment and how they became socialized to their roles as first-year students, as well to their new institution. As a result, university entrance becomes an “ecological transition,” a process through which adolescents shed their identities as high school seniors in order to take on the role of university freshmen, a metamorphosis that affects not only the students involved, but also their families and peer group networks.

The Role of High Schools

Secondary schools play a crucial yet ambivalent role in the preparation of students for postsecondary education. Although they are critical in the development of the academic and other skills that are prerequisites for success at the university level, secondary schools by their nature nonetheless also create conditions that impede the transition from secondary school to university-level studies. Specifically, research (Allan, Darling, Hughes, & Rosenfeld, 1982; Grayson, 1996; Pike & Saupe, 2002) has pointed to a strong correlation between secondary school academic achievement in terms of grade-point averages and academic success at the university level. This correlation holds particularly

true for the province of Ontario, where OAC marks have proven to be relatively accurate predictors of academic achievement during the first year of university (Grayson).

Conversely, as Daniel (1997) as well as Jones and Frydenberg (1998) indicated, secondary schools also serve to complicate the transition by contributing to the onset of transition anxiety among their graduating students, a condition that often manifests itself through the phenomenon known as the “senior slump” (Brody et al., 1986). A condition that develops in the second semester of a student’s final year, it is evidenced by a variety of behaviors including a marked decline in student motivation, uncharacteristic conduct issues at home and in school, as well as previously unheard of teacher-student and peer-to-peer friction. The mitigating circumstance is the realization on the part of senior secondary school students that they are “being forced to leave a place they loved” (p. 3).

Background to Reform

In order to appreciate fully the significance of the above-mentioned reform initiative, it is necessary to comprehend how deeply ingrained the perceived need for a fifth year of secondary school for university-bound students had become in the Ontario educational psyche. Initiated during the 1920s, grade 13 was to survive its recommended abolition by both the Hope Commission (1950) and the Hall-Denis Report in 1968 (Anisef, Baichman, Northrup, Rhyne, & Tibert, 1986; Fleming, 1971). Even the restructuring engendered by the introduction of the OAC in 1984, which gave university-bound students the option of completing their secondary school educations and their university-entrance requirements in four years instead of five, failed to achieve its initial objective as relatively few students exercised that option (Casas & Meaghan, 1996). In the end it was the need for fiscal restraint that drove what Gidney (1999) described as the “stake through the heart” (p. 101) of the fifth year of secondary school in Ontario. As the Minister of Education announced in the legislature, “When the four-year program is fully implemented in 2001, savings for the taxpayers will amount to some \$350 million annually” (Ontario Ministry of Education and Training [OMET], November, 1995). As such, this conversion to a four-year secondary program represented not only a significant departure from past practice for the province, but also constituted a significant gamble with the educational futures of an entire cohort of students who were prepared for postsecondary studies in a 20% shorter space of time and with a new and untested curriculum.

Contrasting Curricula

Pike and Saupe (2002) in citing Adelman’s (1999) analysis of the High School and Beyond study data noted that “the high school curriculum exerted a more powerful influence on bachelor’s attainment than did test scores, high school class rank, and high school grade point average” (p. 189). Bearing this influence in mind, we may find it useful at this point to contrast the current Ontario curriculum as a vehicle for preparing students for university entrance with its OAC predecessor. This task is undertaken in general terms as well as through a subject specific comparison.

Comparing Curricula

Over its existence the Ontario Academic Credit (OAC) program as outlined in the OMET (1989) document *Ontario Schools Intermediate and Senior Divisions (grades 7-12/OACs): Program and Diploma Requirements 1989* stipulated that OACs were to be offered only at the “advanced level” (p. 17) and were geared strictly to those senior students intending “to go on to university” (p. 17). The regulations permitted no regular or remedial courses, no fractional credits, and no cooperative education variants. Furthermore, regulations required that “every student taking an OAC shall take at least one formal exam in that OAC” (p. 17). Each course was to consist of at least 110 hours of instruction and was to have been developed in strict adherence to the relevant Ministry of Education guideline or with Ministry approval. Thus the design and implementation of OACs were centrally controlled for a select body of students and involved highly formalized assessment and evaluation.

In contrast, the New Ontario curriculum, enshrined in the *Ontario Secondary Schools Grades 9 to 12: Program and Diploma Requirements 1999* (OMET, 1999b) document, included the recognition of the social context of learning and of the necessity to prepare students not merely for university entrance, but also for a variety of other postgraduation outcomes. Grade 11 and 12 courses were developed to “allow all students to choose courses that are clearly and directly linked to their intended postsecondary destinations” (p. 6). Courses at the senior secondary level were to be offered for four streams (university preparation, university/college preparation, college preparation, and workplace preparation) each of which was intended to lead to an alternative outcome on graduation. The New Ontario Curriculum, as enshrined in the above-mentioned document, then, signals a shift in official thinking about the nature and purposes of curriculum and places far less emphasis on the preparation of an academic elite for university. Thus the students who took 13 (and frequently 14) years to complete their secondary education in Ontario public and separate schools tended to regard themselves as a group specifically trained to meet the rigors of postsecondary—and in particular university—studies. This same exclusivity and elitism is notably absent from the documents that constitute theoretical aspect of the New Ontario Curriculum, which (at least in its official documents) values as equal to university preparation both workplace preparation on the one hand and skills and training acquisition in the province’s colleges on the other. A more detailed analysis of the two curricula using the OAC and grade 12 English documents as exemplars follows.

A Subject-Specific Analysis

To what extent does the new grade 12 English university preparatory curriculum differ from the old OAC program that it replaced as the terminal course for Ontario’s university-bound students? In contrast to the former Basic and General stream courses for those not intending to attend university, the focus of the old senior division academic courses was the inculcation of “skills that prepare students for tertiary education” (OMET, 1987, p. 15). Despite the inclusion of language and media studies, the emphasis was on the “study of literature drawn from various time periods” (p. 15). The OACs were designed specifically for university-bound students. The OMET (1987) document *English Curriculum Guideline Intermediate and Senior Divisions (grades 7-12)* stipulated

that in order to earn an Ontario Secondary School Diploma (OSSD), a student would have to acquire five compulsory credits from among three categories (language, literature, and media) and that in “at least four of the five compulsory credits (poetry, prose, fiction, prose non-fiction, and drama) approximately one-third of the classroom time must be devoted to writing” (p. 9). Thus the old university preparatory curriculum emphasized academic writing and the study of literature as preparation for university, particularly for the “independent reading required for university” (OMET, 1984, p. 4) and the writing of both short and long expository essays. In addition, among the chief goals of the former OAC English program was the development of an “appreciation of literature, analytical thought and effective writing” (p. 4). Each of the three OAC English courses had four components: Literature, Language, Writing Folder, and Independent Study. Suggested teaching strategies merited half a page in the OAC document and student evaluation a little more.

We briefly compare these and other features of the OAC English curriculum with their counterparts in the new English 12 university preparation course. Whereas the old curriculum did not prescribe specific texts, but merely required “literary quality” and “variety in style, genre, and theme” (OMET, 1984, p. 5), the new curriculum offers both “Overall Expectations” and “Specific Expectations,” which provide suggestions for critical activities and technical vocabulary that students should master. The new curriculum includes three grade 11 and three grade 12 destination courses (University, College, and Workplace) and nine optional courses (OMET, 1999a).

Whereas the 1987 document describing all secondary English courses from grade 7 through OAC is a mere 34 pages long, the new *Ontario Curriculum Grades 11 and 12: English* (OMET, 2000) curriculum guide is a full 115 pages in length, despite the fact that it describes a course for just the last two years of secondary school. A unique feature of the 2000 curriculum document is the “Achievement Chart for English” developed to parallel achievement charts in all other new *Ontario Curriculum* documents. All such charts set the provincial standard for student achievement as level 3 (70%-79%), a level that corresponds to a letter grade of *B* under the previous curriculum’s grading schema.

In short, the OAC English courses are indicative of the OAC curriculum as a whole in that they existed for one reason: to prepare high school students for the rigorous reading and writing assignments of postsecondary education. The OAC development team included representatives from 16 postsecondary institutions, the overwhelming majority of which were universities. In essence, then, the OAC system was intended to be the Ontario equivalent of first-year university elsewhere in Canada. The OAC documents expressed curricular goals in general terms and left instructors considerable latitude in what to teach and how to teach as if they were tertiary instructors rather than secondary schoolteachers. The new *Ontario Curriculum*, on the other hand, outlines curricular expectations and teaching approaches in far more detail, mandating “overall” and “specific expectations” for courses to be taken by students with three distinct “destinations” in mind. No longer were postsecondary institutions in control of the senior academic curriculum, and the public could hold teachers accountable for providing instruction consistent with a provincially

mandated, centralized curriculum, including a standardized method of evaluating student work, an aspect of education the old curriculum had addressed only in the most general terms.

Preliminary Research Findings

Although little research on the topic is available, some interesting preliminary data are available about the effect of the new four-year secondary program, particularly regarding its efficacy in preparing students for postsecondary education. First, it would appear, according to King, Warren, Boyer, and Chin (2005), that the previously longstanding Ontario practice of taking a fifth year of high school is not completely dead. According to the above-mentioned researchers, approximately one third of grade 12 students, many of whom have already met their formal graduation requirements, return for an additional year. Rationales cited include raising marks for admission to postsecondary education and taking additional courses (King et al., 2005). Second, it would appear that at least some secondary school teachers adjusted their grades in order to level the playing field between the two groups that were competing for postsecondary admission. As King (2004) observed,

evident in teacher and administrator interviews during visits to schools was the tendency to adjust marks in OAC and 4U courses in order to make opportunities for both groups of students to attend university as fair as possible, if not equivalent. (p. 23)

Third, as King discovered, and as noted below, there was a considerable degree of variance among schools in their delivery of the curriculum. As a consequence of staffing and scheduling restrictions, many schools were unable to provide discrete sections of OAC and grade 12 university preparation courses. As a result, many students in their final year were exposed to a program that consisted of some combination of the old and new curriculum documents. Finally, Joong and Ricci (2005), in a study of 880 first-year students attending an Ontario university, found that there was no significant difference between the two groups in terms of their academic achievement and social adjustment to university life. Conversely, the university faculty participating in the study, although not knowing to which group individual students belonged, found that the younger students in their classes were less well prepared academically, had experienced difficulties in expressing themselves in essays, and were less mature in their behavior than previous years' students.

Method

Research Design

This study was based on the use of a mixed-method research design as advocated by Phelan (1987) as well as Johnson and Onwuegbuzie (2004) in that qualitative methods were used to generate research questions that were later confirmed by quantitative means. Qualitative methods were then employed to produce "a coherent and understandable picture of the phenomenon under study" (Phelan, p. 35). For example, a review of the relevant literature revealed the existence of a positive correlation between the grade-point averages of graduating high school students and the academic results they achieved during their first year of university. As a result an item was included in the survey instrument requesting participants to report both of these results. Re-

sponses were then subjected to quantitative analysis to determine if: (a) the mentioned correlation existed; and (b) whether there was a significant difference between the results reported by both groups. Participants' replies to the open-ended response item were then analyzed in order to provide a more detailed explanation for the results generated by the previous statistical analysis. Such an approach is supported by Johnson and Onwuegbuzie, who contend that mixed-methods research designs build on the strengths and minimize the weaknesses inherent in both the dominant research design paradigms.

Participants

Participants were 250 concurrent teacher-education students enrolled in a compulsory second-year education course in a small Ontario university. Because the course was compulsory, participants represented potential teachers in both the elementary and secondary divisions and were pursuing a variety of academic majors. Participation in the study was both anonymous and voluntary. There were, however, no refusals. The survey was conducted early in the first semester of the 2004-2005 academic year.

Instrument

The principal instrument of inquiry was a survey questionnaire adapted from Shepard's (1993) *History Preparation Survey*, developed to assess the extent to which university students believed that their secondary school educations had prepared them for studies at the postsecondary level. The questionnaire was made up of three parts, the first being designed to solicit specific demographic information about the following: (a) the sex of the participants; (b) their age; (c) their route to university entrance; (d) how the curriculum they were taught during the final year of high school was delivered; (e) the size of the institution they attended during their final year of high school; (f) their overall grade-point average at the end of the final year of high school; and (g) their grade-point average at the end of the first year of university.

The second section consisted of 20 five-point Likert format (1 = *strongly disagree* through 5 = *strongly agree*) items designed to elicit participants' perceptions of the degree to which they believed that their final year of secondary school had prepared them for the challenges inherent in the transition to postsecondary education. These items covered such areas as subject content knowledge, the acquisition of academic and study skills, and adjustment to the university social milieu.

The instrument also included an open-ended response item that invited participants to answer the following: "Which aspects of the transition from high school to university did you find the most difficult? Which aspects did you find to be the least difficult?" A total of 163 participants (65.2%) provided some form of response to this item.

Data Analysis

As indicated above, both quantitative and qualitative techniques were employed in the analysis of the data generated by this study. Quantitative analysis consisted primarily of using a one-way analysis of variance (ANOVA) to determine whether there was a significant difference in the degree to which members of either sample group perceived that their final year of high school

had adequately prepared them for university-level educational pursuits. The sample groups were those participants whose teachers had used the new grade 12 curriculum during their final year of secondary school and those whose teachers had continued to use the old OAC curriculum.

Qualitative data were derived from the open-item response item. Participants' remarks were transcribed, and as themes emerged, they were coded with what Miles and Huberman (1994) referred to as *descriptive codes*. Emergent themes included participants' concerns about the following issues: (a) the amount of independent reading required in university compared with high school; (b) work load and time management issues; (c) the extent to which their high school education had provided or failed to provide them with specific academic and study skills; (d) monetary issues; and (e) issues related to respondents' adjustment to the social aspects of university life.

Limitations and Results

Limitations

1. The sample is restricted to Faculty of Education students, and responses, therefore, may not be indicative of the perceptions of students in other faculties.
2. Results represent the perceptions of students attending a single specific institution and may not be generalizable to other institutions.
3. The limited sample size impinges on the viability of extrapolating the results to larger populations.
4. The disproportionate number of female respondents (72%) may produce a gender bias in the results.

Sample Demographics

Participants were 250 students (181 female, 68 male, 1 declined to answer) enrolled in a compulsory second-year concurrent education course in a small Ontario university. Of these students, 150 (60.0%) were admitted to the program on the basis of their OAC results, 88 (35.2%) directly from grade 12; the remaining 12 (4.8%) gained entrance as mature students or on some other basis. Respondents reported receiving instruction from a variety of curricula during their final year of secondary school. Of the 249 students responding to the survey item, 121 (48.6%) reported that their teachers were still basing their instruction on the old OAC curriculum documents compared with 93 (37.2%) who indicated that their teachers were using the new grade 12 guidelines. The remaining 36 (14.2%) indicated that their instructors had used a combination of documents or did not respond to the item.

Effect of Curriculum Employed on Self-Reported Grade-Point Average

As the data in the Table 1 indicate, there was little substantive difference in academic achievement between participants who had studied from the old OAC and the those who had studied from new grade 12 curriculum. In terms of self-reported grade-point averages, 18.2% of respondents who had studied from the OAC curriculum reported having A averages (100%-80%) at the end of their first year of university. A further 55.4% and 22.3% reported GPAs of B (79%-70%) and C (69%-60%) respectively. Results for students who had followed the new grade 12 curriculum during the last year of high school were remarkably similar, with self-reported GPAs of 14.0% receiving A, 65.6% B,

Table 1
Summary of Analysis of Variance for Academic Achievement (Self-Reported GPA) for OAC and Grade 12 Cohorts

<i>Source of Variance</i>	<i>SS</i>	<i>DF</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between groups	.217	2	.109	.197	.822
Within groups	133.807	242	.533		
Total	134.024	244			

Note. Self-reported GPA refers to a participant's self-reported grade-point average at the end of the first year of university.

and 17.2% C. Quantitative analysis employing one-way ANOVA revealed no statistically significant difference between the two groups. The mean for the OAC group was 4.619 (*SD* .581), for grade 12s 4.666 (*SD* .595), $F=.197$, *NS*. The Likert scale equivalents were as follows: A=5, B=4, C=3, D=2, less than D=1.

Perceptions of High School Preparation

Participants were also asked to reflect on their perceptions of the degree to which they believed that their secondary school educations had adequately prepared them for the challenges inherent in the transition to university-level studies. Overall, most respondents in both groups expressed a strong degree of satisfaction with how their former high schools had prepared them for postsecondary education. When asked to respond to the statement "Overall, the education I received in high school prepared me well for the academic studies in which I engaged during my first year of university," 64.9% (78) of the OAC stream participants indicated some degree of agreement, whereas 22.5% (27) either disagreed or strongly disagreed. The parallel percentages for the grade 12 cohort were 62.4% (58) and 24.8% (23) respectively. As the data presented in the Table 2 demonstrate, there was no statistically significant difference between the two groups.

The data generated by the open-ended response item revealed that OAC and grade 12 entrants shared similar concerns. Most participants reported being satisfied with the degree to which their final year of high school had prepared them for university entrance, with many respondents commenting

Table 2
Summary of Analysis of Variance for Perceptions of the Efficacy of University Preparation by Secondary School, OAC and Grade 12 Cohorts

<i>Source of Variance</i>	<i>SS</i>	<i>DF</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between groups	1.474	2	.737	.599	.550
Within groups	297.767	242	1.230		
Total	299.241	244			

Note. Variable measures the extent to which respondents perceived that their secondary school experience adequately prepared them for the transition to university.

positively on the nurturing environment of their former institutions. As one participant remarked, “I can’t really say the transition was difficult or not difficult. It was smooth, as I expected, and to the point where I barely noticed a transition outside of a change in surroundings, and time schedules” (Male, OAC). Similarly, another student commented:

I would have to say that I found in my first year of university that I had to learn to keep up on my own, unlike in high school where teachers are always keeping track of your progress. I wouldn’t necessarily say that I had difficulty adjusting to working on my own. It was just different and something I had to adjust to. (Female, OAC)

Conversely, others pointed to specific aspects of university level studies for which they felt less than adequately prepared. These included “Having all the responsibility of completing tasks placed on myself” (Male, OAC), “Aspects of the transition from high school to university I found most difficult was mainly that high school for me did not prepare me at all for half of the work we had to do in university” (Female, OAC), and “I didn’t know there would be so much reading and notetaking as there was. High school did not prepare me for this transition” (Female, OAC). As a result, at least one participant reported that she had been “used to getting high marks and now only being average. Plus the long, long study time I had to do to get the marks I did” (Female, OAC).

Furthermore, the data presented in Table 3 suggest that there was no statistically significant difference between the OAC and grade 12 entrants in terms of their grounding in specific subject knowledge during secondary school as a preparation for university entrance. Fully 64.9% (78) of the former OAC students participating in the study indicated that they felt that they had acquired sufficient subject content knowledge to feel comfortable in their first-year classes, whereas 26.7% (32) stated some degree of dissent. Results were similar for the grade 12s in that 65.6% (61) indicated agreement or strong agreement, whereas 24.8% (23) expressed some form of disagreement.

Although this matter was not widely discussed in participants’ open-ended responses, one student did lament the passing of the OAC regime on pedagogical grounds. As he stated, “I thought that the informal nature of OAC courses was very similar to university. Taking away OAC’s was a mistake because it takes away students’ ability to become critical thinkers” (Male, OAC).

Table 3
Summary of Analysis of Variance for Subject Knowledge Base Acquisition
Between OAC and Grade 12 Cohorts

<i>Source of Variance</i>	<i>SS</i>	<i>DF</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
Between groups	.959	2	.480	.387	.680
Within groups	299.996	242	1.240		
Total	300.955	244			

Note. Variable measures the degree to which participants felt that they had acquired a sufficient subject knowledge base in high school to feel comfortable in their first year university classes.

Table 4
Summary of Analysis of Variance for Acquisition of Specific Academic Skills,
OAC and Grade 12 Cohorts

<i>Source of Variance</i>	<i>SS</i>	<i>DF</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
<i>Notetaking Skills</i>					
Between groups	.694	2	.347	.201	.818
Within groups	418.147	242	1.728		
Total	418.841	244			
<i>Research Skills</i>					
Between groups	.401	2	.201	.155	.857
Within groups	312.795	242	1.298		
Total	313.197	244			
<i>Independent Study Skills</i>					
Between groups	.844	2	.422	.281	.755
Within groups	381.197	242	1.575		
Total	382.082	244			

Note. The above variables measure the degree to which participants perceived that they had acquired a sufficient mastery of specific academic skills in high school to be successful in their studies at the university level.

Acquisition of Specific Academic Skills

In terms of the acquisition of specific academic skills during high school such as notetaking, research, and independent study skills, again there was no statistically significant difference between the two groups.

The above results are also reflected in the following participants' reflections. As one of the respondents remarked, "I did not feel prepared for most aspects. Basically my study skills were atrocious and needed much improvement. I also had no idea of how hard it would be for notetaking and reading" (Male, OAC); another commented, "I didn't know that there would be so much reading and notetaking as there was. High school did not prepare me for this transition" (Female, OAC); a third remarked, "Most difficult would be the lack of research skills I had. I wasn't very good at using library resources" (Female, grade 12); another respondent felt that university meant "The only things I really felt unprepared for was the notetaking and the amount of reading. The self discipline to get your [work] done without someone looking over your shoulder was hard to adjust to also" (Female, OAC); another reported that "Exams are very different and there is a lot more reading. High school should prepare students to learn better on their own, like in university" (Female, grade 12). Finally, one respondent seemed to resent "Having all the responsibility of completing tasks placed on myself" (Male, OAC) by the university, suggesting the more supportive nature of the secondary institution he had attended.

Adjustment to University Social Milieu

The survey instrument also inquired into participants' adjustment to the social environment of their new institutions in three areas: (a) participation in the various social activities offered by the university community; (b) the ease with which participants found it possible to meet and become acquainted with new

people; and (c) respondents' sense of isolation in the campus community. As the data presented in Table 5 suggest, there was no statistically significant difference between the two groups with regard to these areas of inquiry.

Qualitative data generated by the open-ended response item suggested that differences in participants' social adjustment were individualistic in nature and partly a result of whether the individual lived on or off campus as opposed to the mode of admission. A number of themes emerged, the first being the challenges encountered by young adults living away from home for the first time. As they observed, "Having to deal with the social aspects of university was the hardest to cope with. For example, there are tons of girls living with you and all your friends are getting drunk. This makes it hard to stay on task when the distractions are overwhelming" (Male, OAC); and "I think the most difficult aspects of university transition were simply adjusting to living away from home. Academics seemed just as easy if not easier in some cases than High School" (Male, grade 12). In addition, there appeared to be at least some dichotomy between the experiences of resident and nonresident students. For example, "The least difficult was meeting new people and finding things to do. There was always something in Res. going on and the people were really friendly" (Female, OAC), as opposed to "Most difficult was meeting ppl socially, especially b/c I am an off-campus student. Academically, it was a seamless transition" (Female, OAC). As noted above, the grade from which a participant entered the university does appear to be a determining factor in a student's social experience. One participant, however, did make the following observation: "The social aspects of the transition were not very difficult, however, I could see many of my peers would have benefited from an extra year" (Male, grade 12).

Table 5
Summary of Analysis of Variance for Social Adjustment to University by OAC and Grade 12 Cohorts

<i>Source of Variance</i>	<i>SS</i>	<i>DF</i>	<i>MS</i>	<i>F</i>	<i>Sig.</i>
<i>Ease of participation in social activities</i>					
Between groups	7.558	2	3.779	2.741	.067
Within groups	333.642	242	1.379		
Total	314.200	244			
<i>Ease in meeting new people</i>					
Between groups	2.865	2	1.432	1.044	.354
Within groups	331.935	242	1.372		
Total	334.800	244			
<i>Sense of isolation in the university community</i>					
Between groups	.971	2	.486	.256	.774
Within groups	458.767	242	1.896		
Total	459.739	244			

Note. The above variables measure participants' perceptions of their adjustment to their universities' social milieu.

Overall, both the quantitative and qualitative data generated by this study suggest that little in the way of significant difference exists between the two sample groups in terms of their preparation for the transition from high school to university. In terms of grades, both groups appear to have attained roughly the same levels of academic achievement in terms of self-reported grade-point average by the end of the first year of university studies. Similarly, there were no significant differences in either their perceptions of the degree to which they believed that their high schools had adequately prepared them for postsecondary education or the degree to which they felt that they had acquired specific academic skills. Finally, both groups appear to have had similar experiences in terms of their adjustment to the university social environment.

Conclusion

The transition from secondary school to university is a complex, multifaceted experience that has been likened to that of an immigrant entering a newly adopted country (Chaskes, 1996). Not only are incoming first-year students required to deal with the wide range of developmental issues associated with late adolescence-early adulthood, but they must simultaneously learn to accommodate a new set of academic expectations, adapt to an unfamiliar social milieu, and negotiate the terms of their existence in an unfamiliar and often seemingly impersonal institution. Central to this transition is the role played by high schools in that these institutions play a key, though ambivalent, role in preparing their students for the realities of postsecondary studies.

Research (Allan et al., 1982; Grayson, 1996) has pointed to a strong correlation between academic success at the secondary school level and at university. Similarly, Pike and Saupe (2002) noted that the secondary school curriculum exerted more influence on academic achievement at the university level than factors such as test scores, class rank, or grade point average. Given the significance of the high school curriculum to success at the postsecondary level, it is important to determine how recent systemic changes to the secondary school curriculum in Ontario have affected the transition to university among first-year students in that province.

The Ministry of Education's restructuring initiative that started in September 1999 did more than compress the secondary school curriculum for university-bound student into four years; it also marked a pronounced change in educational philosophy. Gone were the old Ontario academic credit courses that had served as a fifth year of high school, the flexible guidelines of which had allowed teachers a considerable degree of latitude in their teaching methods and assessment techniques. Implemented in its place was a far more restrictive regimen that emphasized specific learning expectations and imposed a prescriptive evaluation format. By implementing the new curriculum through a one-grade-at-a-time strategy, the Ministry ensured that the 2003 first-year intake for the province's universities would be made up of two distinct groups, thus giving birth to the so-called Double Cohort.

The qualitative and quantitative data generated by the research instrument revealed that apart from age, there was little in the way of difference between the two groups. Both demonstrated a considerable degree of academic competence during their secondary school years and expressed general satisfaction with the degree to which they perceived that their high school education had

adequately prepared them for university level studies. Moreover, there was no statistically significant difference between the two groups in terms of academic achievement as measured by grade-point average. Similar findings were revealed in terms of the degree to which both OAC and grade 12 entrants felt that their high school preparation had provided them with the subject knowledge and academic skills necessary for success at the university level.

Finally, in terms of their adjustment to the university's social environment, although no quantitatively significant differences were reported, qualitative data suggested that some variations existed between the experiences of the two groups. These variations, however, appear to be the result of the age difference between the OACs and grade 12 graduates and are not as a result of the curriculum they studied from during high school. Overall, given the above-mentioned results, it would appear that the new Ontario secondary school curriculum, or at least those aspects of it that are designed to meet the needs of university-bound students, is as successful in fulfilling its mandate as was its OAC predecessor.

References

- Allan, L.G., Darling, A.L., Hughes, R.C. & Rosenfeld, J.M. (1982). An examination of performance of first year university students at an Ontario university: An admission perspective. *Canadian Journal of Higher Education*, 12(3), 37-54.
- Anisef, P., Baichman, E., Northrop, D., Rhyne, D., & Tilbert, J. (1986). *Models and methodologies appropriate to the study of outcomes of schooling in Ontario's multicultural society*. Toronto, ON: Queen's Printer.
- Brody, M., Brody, S., & King, L. (1986). *Separation: High school to college*. Paper presented at the annual meeting of the National Association of College Admission Counselors, Washington, DC.
- Casas, F.R., & Meaghan, D.E. (1996). A study of repeated courses among secondary students in Ontario. *Journal of Educational Research*, 90(2), 116-127.
- Chaskes, J. (1996). The first-year student as immigrant. *Journal of the Freshman Year Experience and Students in Transition*, 8(1), 79-91.
- Daniel, E. (1997). *High school to university: What skills do students need? Is Information rich but knowledge poor? Emerging issues for schools and libraries worldwide*. Papers presented at the annual conference of the International Association of School Librarianship held in conjunction with the Association for Teacher-Librarianship in Canada, Vancouver.
- Fleming, W.G. (1971). *Ontario's educative society. Vol. III: Schools, pupils, and teachers*. Toronto, ON: University of Toronto Press.
- Gidney, R.D. (1999). *From Hope to Harris: The reshaping of Ontario's schools*. Toronto, ON: University of Toronto Press.
- Grayson, P.J. (1996). *Under and over-achievement in first year*. Toronto, ON: Institute for Social Research, York University. (ERIC Document Reproduction Service No. ED404904)
- Holdaway, E.A., & Kelloway, K.R. (1987). First year at university: Perceptions and experiences of students. *Canadian Journal of Higher Education*, 17(1), 47-65.
- Johnson, R.B., & Onwuegbuzie, A.J. (2004). Mixed-methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14-27.
- Johnson, G.M., Staton, A.Q., & Jorgensen-Earp, C.R. (1995). An ecological perspective on the transition of new university freshmen. *Communication Education*, 44(4), 336-352.
- Jones, B., & Frydenberg, E. (1998). *Who needs help and when: Coping with the transition from school to university*. Paper presented at the annual conference of the American Educational Research Association, Montreal.
- Joong, P., & Ricci, C. (2005). *The punished (double) cohort: Lessons learned*. Unpublished manuscript.
- King, A.J.C. (2004). *Double cohort study: Phase 3 report*. Toronto, ON: Ontario Ministry of Education and Training.
- King, A.J.C., Warren, W.K., Boyer, J.C., & Chin, P. (2005). *Double cohort study: Phase 4 report*. Toronto, ON: Ontario Ministry of Education and Training.
- Miles, M.B., & Huberman, M.A. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.

- Ontario Ministry of Education and Training. (1984). *Ontario academic courses senior division: English*. Toronto, ON: Queen's Printer.
- Ontario Ministry of Education and Training. (1987). *English curriculum guideline: Intermediate and senior divisions (grades 7-12)*. Toronto, ON: Queen's Printer.
- Ontario Ministry of Education and Training. (1989). *Ontario schools intermediate and senior divisions (grades 7-12/OACs): Program and diploma requirements 1989 Revised Edition*. Toronto, ON: Queen's Printer.
- Ontario Ministry of Education and Training. (1995). *Statement for Minister of Education and Training John C. Snobelen on secondary school reforms*. Press release, November 2.
- Ontario Ministry of Education and Training. (1999a). *The Ontario curriculum grades 9 and 10: English*. Toronto, ON: Queen's Printer.
- Ontario Ministry of Education and Training. (1999b). *Ontario secondary schools grades 9 to 12: Program and diploma requirements 1999*. Toronto, ON: Queen's Printer.
- Ontario Ministry of Education and Training. (2000). *The Ontario curriculum grades 11 and 12: English*. Toronto, ON: Queen's Printer.
- Phelan, P. (1987). Compatibility of qualitative and quantitative methods: Studying child sexual abuse in America. *Education and Urban Society*, 20(1), 35-41.
- Pike, G.R., & Saupe, J.L. (2002). Does high school matter? An analysis of three methods of predicting first-year grades. *Research in Higher Education*, 43(2), 187-207.
- Shepard, G. (1993). The sense of preparation: History students and high school-university. *Canadian Social Studies*, 27(3), 107-110.
- Tinto, V. (1988). Stages of student departure: Reflections on the longitudinal character of student leaving. *Journal of Higher Education*, 59(4), 438-455.