Many attrition researchers in higher education suggest that a single circumstance of student non-persistence should not be considered in isolation, but instead thought of as one problem in a chain of many, where each is influenced by the attrition problem that precedes it, and where it in turn, impacts on the attrition problem to follow. This presentation examines an all-encompassing retention plan designed to achieve maximum positive outcomes in student retention. The Theoretical Model of an Institution-Wide Retention Plan (Wylie, 2004) utilises a multiphasic approach that spans the entire student career. The approach consists of a structured process of interventions that are logically interconnected, where each strategy not only meets the requirements of effective intervention at an identified critical point of student attrition, but also metres appropriate intervention activities to span the interval to the next critical attrition point. The success of an alert system is determined almost completely by the speed with which the vulnerable student is identified and the application of the institution’s response. However, earlier dropout alert systems relied heavily on manual processes and an extensive network of staff to transmit the necessary information. As a key piece in the retention puzzle, technological advances now provide the hardware to effect this theoretical model of an institution-wide retention strategy in a more effective and timely fashion.

Introduction

High on the wave of the latest advances in computer technology, together with the access and interactive capabilities now provided by personal and organisational computer hardware and software, the time has never been more appropriate to reignite the debate regarding formal retention programs in higher education institutions. This paper presents a set of recommendations for an institution-wide student retention plan that is based on the postulates of the Theoretical Model of Non-traditional Student Attrition developed by Wylie (2004). The model has been developed for general application at non-residential college institutions of higher education, with the expectation that only minor modifications will be required to fit the model to meet local needs. Discussion begins with an outline of a theoretical design for a student retention model that considers the philosophical and ideological perspectives of major stakeholders, with particular emphasis on the institution’s role, operations and the educational environment that it controls. Because of the significant potential that faculty offer for improved retention rates, the theoretical and ideological perspectives regarding their role and responsibilities are also considered. A second objective of the paper is to outline the framework for the more pragmatic aspects of the institutional retention model, identifying practical, achievable institution-based initiatives that are individually capable of increasing student retention. Finally, the design of a multiphasic set of interventions that are designed to maintain improved retention outcomes is also presented.

Ideological Considerations in the Development of a Theoretical Model of an Institution-Wide Student Retention Plan

Although usually directed to the general student population in order to achieve the greatest potential from a student retention model, student retention plans according to Rendon (1995) should be centred on the problems that characterise each aspect of student involvement. For example, if the problems contributing to attrition are: student related, such as low socio-economic status, poor academic preparation, a lack of clear goals.; institution related, where there exists inappropriate or impractical curriculum, a lack of faculty involvement with students, a campus climate perceived as racist or indifferent.; or according to Seppanen (1995), circumstance related, which for example, would consider the mature-aged student who is enrolled part-time, then this is the particular aspect that the intervention must address rather then attempt to apply a broad, all-encompassing strategy.
However, while every problematic aspect of attrition deserves individual examination, analysis, and where apposite, the application of an appropriate preventative or intervention treatment, it is highly unlikely that a high student attrition rate would be the result of a solitary problem. Many other attrition researchers (e.g. McLendon, 1992; Artman and Gore, 1992; Marinaccio, 1986) suggest that a single circumstance of attrition should not be considered in isolation, but instead thought of as one problem in a chain of many, where each is influenced by the attrition problem that precedes it, and where it inturn impacts on the attrition problem to follow. It is therefore imperative that an all-encompassing retention plan be developed in order to achieve maximum positive outcomes in reducing student attrition. Such a plan should not be constructed in secrecy or in isolation, particularly the ideological and theoretical components of that plan, and should include the input of the many stakeholders likely to be involved in the attrition interventions (e.g. the student, the institution and its staff and affiliates, community organizations, industry, and government etc.).

The Role of the Institution

Strategies designed to improve student and institution interactions, according to Marinaccio (1986), include: establishing an institution-wide retention steering committee; determining an accurate dropout rate; conducting a study to determine why students are leaving; conducting an institutional self-study to determine where improvements are necessary and where the institution is successful; and employing a tangible reward system for good teaching and faculty advising.

In accordance with the ideological perspective identified by McLendon (1992), the following is presented as the basis for the development of a theoretical model for an institution-wide retention plan that will ensure:

a) The development of an effective enrolment management plan that will help to foster an environment for persistence;

b) Institution-wide participation in the plan;

c) The involvement of faculty;

d) Orientation programs for students;

e) An institutional support system designed to increase student competencies;

f) Creative scheduling of courses and social activities;

g) The reduction of bureaucracy in admissions and registration;

h) An increase in student support services;

i) Assistance to financial aid for students;

j) A recruitment effort that emphasises retention;

k) An ongoing institutional research effort;

l) An evaluative system designed to assess the effectiveness of the plan; and

m) An institution-wide delegation of retention responsibilities.

Artman and Gore (1992) offer further ideological insight regarding three of the components identified in the McLendon (1992) model, including: student registration and advising; student services; and student survival skills. These issues are addressed later in the paper.

Faculty Role and Initiatives

In the previous discussion, McLendon (1992) and Artman and Gore (1992) made reference to the involvement of faculty in the student retention plan. The literature in attrition research has clearly established that the role played by faculty in the institution’s management of student persistence is crucial to its success. McLendon (1992) suggests that faculty involvement would include:

a) Academic integration, tutoring and advising;

b) The promotion of a caring attitude; and

c) A communications effort that involves faculty, staff and students.
To increase the impact of faculty in the student retention plan, according to Hellmich (1989), requires consideration of the following initiatives:

1. Instigate a thorough demographic analysis of student attrition within faculty courses;
2. Augment the academic advising of targeted student populations;
3. Examine methods of increasing student/instructor out-of-class contact without overburdening instructors;
4. Draw upon the expertise of its instructors to gather pedagogical devices for enhancing student participation within the classroom;
5. Integrate sections of the targeted course(s) with sections from other disciplines;
6. Enforce a strict class attendance policy; and
7. Evaluate quantitatively and qualitatively the effectiveness of the faculty effort at the end of each semester, and formally present these results to the college administration.

Having identified the ideological principles and establish the theoretical model on which to base a retention plan, the next phase would require the development of the processes for its practical application.

**Design, Preparation and Implementation of the Retention Plan**

Longmore (1983) proposed that the first step in the design of a retention plan should be to develop a student profile to determine if and to what extent an attrition problem exists. The author suggests the next step should be to determine students' reasons for attendance and if course completion is the primary goal. Consequently, and assuming that this action has been taken and that an attrition problem is still imminent, subsequent phases of model development that focus on the pragmatic aspects of the institution retention plan should be examined, including: the development of a practical framework for the retention model; determination of student classifications; the identification of appropriate data collection points; the development of instruments to effectively collect data accurately, effectively and expeditiously; the identification of the forms and processes that will aid efficient input; and technological considerations toward an efficient student evaluation and monitoring system.

**Framework**

A comprehensive set of four categories prepared by Beatty-Guenter (1994) provides a set of postulates that may serve as the basis for determining the framework for the retention model. The categories utilised in the development of the current retention plan include:

1. **Sorting** involves those strategies that attempt to place students into (a) college programs most suited to their academic and vocational goals, (b) courses according to their current academic abilities, or (c) programs according to their “at-risk” status;
2. **Supporting** involves assistance to students in meeting their needs with regard to financial, family, or work considerations;
3. **Connecting** includes techniques intended to create an interactive bond between the student and the institution; and
4. **Transforming** involves strategies intended to effect changes in students, such as remedial education or career counselling, or changes in institutional character, such as curricular reform or instructional professional development.

The Institute-Wide Retention Model attempts to meet the requisites of Beatty-Guenter’s categories and begins with the collection and analysis of new student data.

**The Beginning Student and Data Collection Processes**

Wylie (2004) identified that records management should be organised to commence at least at the point where a student first makes application to undertake a course at the institution. Development of the student’s profile is also commenced at this time. Extraordinary effort should be dedicated to generating
instruments that record as much information about the student as possible, using computer technology extensively to store and analyse the information. Instruments might include:

1. An item/coded sheet that fully identifies the student and collects complete contact details;
2. An item/coded sheet of demographic and background detail (e.g. age, gender, ethnicity, family socio-economic status, high school outcomes etc.);
3. A brief questionnaire that generates a rating system of items to identify ‘at-risk’ students (e.g. family encouragement, commitment to course completion etc.), including extra fields for at-risk history and updating of current at-risk status;
4. A ‘self’ instrument (e.g. the short form version of the Self Descriptive Questionnaire III; for further detail see Marsh, 1992; Wylie, 2004); and
5. An academic goals and career expectations instrument.

It is essential that the institution ensures that application, enrolment and data collection forms are standardised and piloted before attempting implementation.

Orientation and Case Manager Liaison

Immediately following registration, the student is assigned a case manager (or student advisor) who is responsible for any follow-up action. The case manager makes use of the student contact details available to him/her, a once colossal task now made possible with the advent of broadcast emails of introduction and notices of availability for consultation. The case manager remains the liaison between the student and the institution until the student commences classes. Prospective students are organised to attend a pre-enrolment orientation addressing expectations, employment potential, course and assessment strategies overview, resource requirements, internal and external services and facilities available, types of assistance available (e.g. financial, counselling etc.), and information regarding what happens next. Students identified as at-risk during this time should be encouraged to attend a further pre-enrolment program (or interview with their case manager) for basic preparedness assessment, further college integration etc. Outcomes determine current at-risk status and subsequent advisor intervention if required.

Late Enrolees

Of special note is the late registrant or enrolee. Various researchers (e.g. see Angelo, 1990; Diekhoff, 1992) have found that late registrants are more likely to complete courses than those who registered in the allocated times and according to the usual process. Other studies however, report that although late enrolment students achieve comparative outcomes in academic achievement as the rest of the student body, the late enrolee return rate is much less encouraging. For example, Stein (1984) identified that just over 23 percent of late enrolees compared to approximately 65% for the normally enrolled students persisted, while Street, Smith and Olivarez (2001) found that 80% of those students who registered during the regular period for enrolment continued to the following semester, compared to only 35% of those who registered late. It is not suggested that late enrolments be refused entry, however the research suggests that they should be identified for appropriate intervention from first contact.

Student Evaluation, Monitoring and Intervention Processes

Wylie (2004) has identified that interventions based on student self-evaluation can increase persistence outcomes by more than 10% in the first semester of the non-traditional mature-age student. The following discussion outlines a model of integrated student evaluation and monitoring systems referred to as the Academic Career Evaluation System. Developed by Wylie (2004), the model attempts to construct a system of structured institution-initiated processes based on a suite of student self-evaluation strategies.

**Academic Career Evaluation System (ACES)**

The Academic Career Evaluation System (ACES) refers to the organisational, structural and operational aspects of a student self-evaluation and monitoring process, and forms the basis of a major
intervention to reduce student withdrawal rates. ACES is a system that collects information concerning issues of student perceptions and expectations regarding educational goals, career planning, course progression, module and teacher evaluations, activity statements, and cognitive-affective self-evaluations.

The system not only contributes to the enhancement of the Educational Career Plan distributed to students, but also provides for several other key outcomes, including: promoting the ongoing awareness of the student regarding their educational career; establishing an organised system of personalised attention for the student; the supplementing of existing avenues for information collection with opportunities for attrition projection from ongoing updates of current student status; the linking of several individual college services (e.g. accessing the computerised student information system etc.) and resources (e.g. new student guide, dropout brochure). The ACES program relies on several operational features, including: an instrument designed to collect initial student information regarding evaluations of their study program, perceptions of self, and educational expectations.; an organised system for the completion of information relevant to the students career and to college planning; and a structured program for its application, assessment and reporting.

Opening Academic Career Evaluation Schedule – Form C1. The Opening Academic Career Evaluation Schedule (OACES) – Form C1, is the first in a series of instruments designed for collecting, among other details, perceptions of the student regarding: course commitment; course expectations; course performance; career aspirations; work situation; and significant other support. The OACES is applied at the initial orientation session occurring in the student registration phase. Together with the details compiled from other data collection schedules, this information becomes the initial phase in the development of the individual student profile and their Educational Career Plan. Form C1 is an identification label and is in reference to the first version of the instrument for application at the first retention crisis point (i.e. student registration).

Academic Career Evaluation for Students – Forms C2 to C5. There are four separate versions of the Academic Career Evaluation for Students (ACES; C2 to C5) and each is specifically designed for application at the remaining retention crisis points in the student career. The instruments, although similar in design, individually account for student perceptions specific to a particular crisis point. Each student receives a personalised version of the instruments, where their name and other personally identifying details are included. Forms C2 to C5 refer to information collected in the previous version of the instrument, where for example, in the OACES-C1 version of the instrument, the student is asked to rate on a Likert Scale (e.g. where 1=No real commitment, 3=Unsure, and 5=Total commitment etc.) their level of commitment to completing their chosen course. In the C2 version of the instrument, the student is again asked:

“Previously you were asked to indicate how committed you were to completing your course, to which you indicated that you were totally committed. Please use the scale below to indicate how you now feel regarding your commitment to completing the course.”

The bolded words (in this case “totally committed”) are automatically inserted into the student specific schedule, generated from the data collected in the previous versions of the instrument. The structure of the instruments allows for persistence projections to be made, and in the case of a non-persistence alert being activated, appropriate steps are taken for the implementation of an advisor intervention. Information gleaned from each of the instruments is used with other student related information to update the student’s profile and Educational Career Plan.

Academic Career Evaluation Research module. The Academic Career Evaluation Research (ACER) module forms part of the core subjects required for completion in order to attain the major qualification, and is undertaken during the first semester of the student’s course program. The module is comprised of research activities that are designed not only to increase students’ understanding and insight regarding their educational career, but also of the student as an individual. Successful completion of the module attracts credits toward the student’s major qualification. Apart from personal interview sessions (either at pre-organised or non-persistence alert times nominated by the advisor, or at the request of the student), and attendance to the various orientation and workshop sessions, the delivery mode for the module will
generally be based on self-directed activities. The module requires the student to complete various reports (e.g. issues of research regarding their career aspirations and objectives, use of college resources such as instructional learning centres), self-assessments (e.g. self-concept assessment ratings, academic performance, self-assessment of their participation in the course etc.), and other forms of assessment (e.g. student ratings according to descriptions of course material covered and its relevance, assessment of teachers etc.), for implementation at specific and pre-determined times that align with attrition crisis points (e.g. completion of various reports and assessments during mid-semester vacation etc.).

The assessment of module tasks is performed by faculty members, and outcomes are combined with other student information to not only generate the next Educational Career Plan reports, but to also update the student’s retention profile. Economic utilisation of the tutorial hours generally attached to course programs should provide adequate funding to cover the costs of the ACER program.

**Academic Career Evaluation Journal.** As an integral part of the ACES system, the Academic Career Evaluation Journal (ACE Journal) includes instructions to students for the completion of tasks and the methods for reporting. Although the most effective use of the ACE Journal would be to distribute it at the orientation session for registering students, the production cost is such that the allocation to the prospective student at this time is unlikely. It is suggested however, that to maintain student and institution interaction during the interval between student registration and their actual enrolment, a condensed version of the ACE Journal (e.g. containing the Opening Academic Career Evaluation Schedule etc.) should be presented to students (either in hard copy or at a website) for later inclusion in the formal ACE Journal following confirmation of the student’s enrolment.

The ACE Journal should be formally issued to students at the enrolment orientation, with further explanation regarding its role in the study program, and instruction and demonstration regarding issues of completion. Apart from the reports, assessments and other tasks required of the student, the Journal should have insertion capabilities for the compilation of additional information provided to students (e.g. the ongoing reports of the student’s Educational Career Plan). The ACE Journal should also be multifunctional in design, and include the usual student diary resources and references such as adequate daily entry space, a student activities planner, and a list of special events and vacation periods etc.

There are three models of the ACE Journals, including:

1. A short-term Journal for commercial, specially funded short course programs, or identified short-term study goal statements (i.e., where the student has nominated that only a specific aspect of a course program is to be completed);
2. A one-year Journal for full- or part-time programs of 2 semester duration; and
3. A two-year Journal for full- or part-time programs of 4 semester duration.

Following two years of successfully completed full- or part-time study, and given that the literature suggests student attrition rates have generally stabilised at this point in any case, the retention monitoring process should end. Should the study program continue for the student beyond this point, their achievements should be formally recognised by implementing supporting strategies such as the awarding of ‘College Senior’ status, and updating of their student profiles to reflect their accomplishment. The institution should also provide privileges to accompany the new status, such as increased access and use of college resources (e.g. Library, student project facilities, and their acceptance to the Mentor Program).

With the advent of computer systems that provide for student access to college course information (e.g. the institution’s internet website) and limited access to student records, completion of many tasks comprised in the ACE Journal can be directly entered by the student as part of the assessment procedure. Initial accessing of the system and the data entry of student assessment requirements can be scheduled as part of a basic information technology module that students are generally required to take in first semester. Should student access to a computerised system be unavailable, other methods for processing the information might include: input by administration staff at the time when other student details are entered; utilising a computerised coding system that students complete manually and the data is entered via a code sheet reader etc. Because the ACE Journal services the charter of both the institution and its Student Union (or Association, or Student Services Department etc.), the costs for its production should be distributed between them.
Finally, the information gleaned from the ACE Journal provides the institution a significant contribution in the types of data essential for effective and ongoing research regarding student retention issues.

**Educational Career Planning**

Of particular note is the inclusion of a career planning strategy as part of the ACES system. Career planning in industry is generally viewed by employers as a valuable and necessary tool in an employee’s pursuit of their vocational goals. Further, despite the importance attributed to career planning in student course completions identified in attrition research (Gardner & Broadus, 1990; Hodges, 1982; Slark & Nguyen, 1994), the strategy is generally omitted from formal educational programs and the student typically left to their own devices. Wylie (2004) suggests that if vocational training programs are to adequately prepare the student for the workforce, and provide employers with employees educated according to their design, then it must be considered a significant omission by the institution to exclude career planning from the student study program. Wylie further suggests that the value of career planning to prospective employers should be promoted to students to encourage participation with the quality and content of their plan assessed like any other core module.

As an integral part of the ACES system, the Educational Career Plan (ECP) is provided to every enrolled student within the institution in standard template form with prompters. Details within the ECP are the culmination of information gathered from the student via the Academic Career Evaluation System, the institution’s records, and any other source (e.g. the student’s significant other etc.) that enhances the personalisation and value of the document. Data to update the ECP is collected progressively and according to a structured and automatic process. Its purpose is to provide the student with an accurate set of measures regarding their progress in areas such as their academic performance, their educational plans and career goal achievements, and their perceptions of college participation and integration etc.

Although the ECP program can be implemented manually, use of an integrated system such as the Academic Career Evaluation System (ACES) described previously, will not only substantially reduce workloads in the gathering and compiling of the data, and in the preparation of the individualised student Plans, but also increase the likelihood of meeting crisis point deadlines. The student receives the current version of the ECP prior to an identified attrition crisis point (see the section dealing with Multiphasic interventions) in order to prevent withdrawal as a result of, for example, the student’s disorientation regarding their program of study, or of the college in general etc.

**Student Monitoring and Dropout Alert System**

Evidence gained from retention literature suggests that systems designed to monitor student progress are an essential requirement for effective institutional management of attrition. From the research by Rudmann (1992), Mese and Spano (1989), and Bers (1988), the following strategies and processes should be considered in establishing a student monitoring and dropout alert system:

1. Establish accurate, current and historical measures of attrition;
2. Establish a personal computer-based software package that is designed to identify and assist students experiencing academic difficulty (e.g. similar to the Early Alert Retention System software etc.);
3. Establish structural systems and strategies regarding reporting procedures (e.g. crisis point alerts etc.) and interventions (e.g. issuing of letters to students regarding the institutions concern and support, to contact a named advisor etc.);
4. Pilot and establish systems and methodology for the ongoing research and evaluation of the project as it evolves;
5. Collect crisis point Alerts from teachers;
6. Issue contact letters, monitor activities, and implement follow-up strategies;
7. Regularly report outcomes, making comparisons of intervention participants and non-participants, and relating present achievements to historical outcomes.
Measuring and Reporting Student Retention

Measures of student retention are an important aspect for reporting the effectiveness of the institution and substantially influence outcomes regarding continued or increased funding (e.g. funding according to module completion rates etc.), and for use in the institution’s promotional activities (e.g. achieving a higher percentage of graduates compared to competing colleges). However, with diminishing institutional budgets through reduced government funding, the increase in private provider competition and the general drive toward commercialisation of higher education based on a “user pays” orientation, it is anticipated that managing retention outcomes will become a far more critical function of the future for institutions.

It is proposed that the initial step toward enhanced measures of institutional effectiveness requires change to the basic premise surrounding student retention i.e. an understanding that although no single factor determines effectiveness, retention outcomes however do provide a very strong indication of the institution’s level of achievement. Shelton et al. (1995) suggest that retention should be considered a cooperative effort between the student and the institution, and propose that the focus for this effort should be centred on an effective classification system for student retention.

The classification system for calculating student retention will inevitably form in integral part of the institution’s reporting process, and when considered in regard to measures of effectiveness, it is in the best interests of the institution to develop an effective and flexible classification system design. Theoretically, that system should be based on the premise that “retention” is defined as a series of levels at which the student and the institution persist and work to fulfil goals; “persistence” should refer to the process of retention, and “success” refers to the product outcome (Shelton et al, 1995). In practice, students should be classified according to the following categories in order to determine retention status, including: continuing; reinstated; transfer; new; updating; and graduate students. Although most terms are self-explanatory, some require further clarification. The retention status classification “continuing” is generally in reference to the student who is returning to the college to complete the next stage of the program. The “new” student classification refers to those whose initial college experience is at this particular institution, and is further organised into the following categories: “standard” for the first-time general student; “commercial” for full-fee paying students; “indentured” for traineeship and apprentice students; “late” for late enrolments; and “special” for international and other students. Each student has at least three fields dedicated to these codes in their student profile. The institution is now in a position to calculate both individual program and overall college retention rates for each of the categories of students, as well as by student age, gender, ethnicity etc.

The RESCUE Program – Student Monitoring and Dropout Alert System

The RESCUE label is an abbreviation of the system title Re-establishing Student Contact for Undefined Exits. The RESCUE system is accessed through the ACES system, where action is initiated when a student is identified as at-risk and registers an Alert warning. Correspondence is issued automatically to the student in a personal letter format, and signed by the institution’s Director. Letters sent to the student have details extracted from their ACES generated student profile in an attempt to more personalise the document. It is important to impress upon the student that they are not considered as “just another student”, but someone very special and deserving of the Director’s individual attention. An example of the wording and structure of a RESCUE form letter, and the sentiment generated by the application of specific ACES details, is as follows:

“You have mentioned previously that you were totally committed to completing your course… “

and

“… perhaps an increase in your employment workload has affected your attendance”

therefore
“… if you contact John Smith, your faculty advisor, everything possible will be done to assist you with any problems that you might have, such as help you to organise alternative study arrangements or organise flexible delivery options for you where possible.”

The bolded words (bolded in this example only for the purpose of discussion) in the first statement “totally committed” are actually taken from the ACES profile. The phrase “increase in your employment workload” is a designated alert statement generated by an increased rating occurring in the Work Situation scale. The name of the faculty advisor is taken directly from the ACES profile, and the statement suggesting a potential solution “alternative study arrangements or organise flexible delivery options for you where possible” is the course of action typically assigned by the database to a student problem of this type (e.g. sporadic attendance etc.). The contact details of the advisor are included in the letter, together with the details of counselling support service personnel as a precautionary measure.

There are an extensive number of variations in letter designs, where each is structured according to the particular crisis point and the types of problems identified in the ACES profile. It should be noted however that recent research (see Wylie, 2004 for a detailed account of the literature) has identified that non-traditional students’ typically contrive “last straw” reasons for dropping out (Cullen, 1994) in an attempt to mask the real reasons for withdrawing by reporting more socially redeemable explanations that are significantly less threatening to reveal. For example, the initial crisis points (i.e. from registration to mid-semester) generally have problems associated with the pragmatic (e.g. illness, family demands, financial circumstances, travel difficulties etc.), academic (e.g. course content is considered inappropriate etc.) and psychological (e.g. the student does not ‘fit in’, feelings of isolation, failing motivation etc.) aspects of attending the course. It is not suggested that false reports should be assumed in every case, however, a student’s difficulties with course material and/or module assessments are in reality, not likely to be reported. In any case, the institution should view a student’s indication of non-persistence as “a vote of no confidence in the ability to succeed rather than a statement regarding lack of persistence” (Ryland, Riordan & Brack, 1994, p. 57) and refer to the more socially acceptable reasons to encourage contact so that non-disclosed problems can be elucidated and addressed.

A report of the ACES profile containing similar information is sent automatically to the faculty advisor, either as a result of an Alert being initiated by the ACES system of a student at-risk, or through notification of official withdrawal by the student, or as a teacher initiated report of a potential student exit. Should the student fail to make contact within the nominated period (e.g. a period of seven days), another letter on behalf of Student Administration is sent to the student making reference to the first letter from the College Director. Apart from re-affirming the support of the faculty advisor, the second letter should also make reference to other courses of action that may result from the student’s exit, such as making an official course withdrawal application and including the appropriate form in with the correspondence. The automatic design of the ACES system allows for the preliminary phases of the intervention to be initiated without any action or involvement required of staff, however, the third phase of the strategy does require the faculty advisor to make an attempt at personal contact with the student, or if this is not possible, their significant other.

Staff Development Regarding Attrition Issues

To a large extent, faculty and staff development regarding issues of student retention can be achieved with the introduction of a packaged set that generally comprises information and strategies to enhance the potential for student persistence. Packaged sets are designed to reach specific target groups, most often being the teaching and non-teaching staff classifications. For non-teaching staff (e.g. administration, student services, and counselling staff etc.), the instruction package should address issues such as directions to appropriate facilities and services and the timely dissemination of student related information. The second package in the set, and the subject for detailed discussion here, has by far the greatest potential to affect positive increases in student persistence.

Dropout information and resource package for teachers. Generated from the original design by de-Silva & Freund (1987), and Fink & Carrasquillo (1994), the proposed package would include information and instructions regarding the identification of, and intervention strategies for the general student
population, but more particularly at-risk students. Although the strategy forms an integral part of the Academic Career Evaluation System (ACES), it can also be implemented as a standalone strategy in the absence of such an integrated system. Referred to as "Student Retention Initiatives: An Information and Resource Package for Teachers" (Wylie, 2004), the strategy should serve only as a base design from which institutions can develop their own structure according to local needs. In what follows is an overview of the structure, content, and strategies considered as necessary inclusions in an information and resource package for teachers addressing student retention issues.

The first section of the handbook should discuss general issues, such as:

a) An overview of the dropout syndrome;
b) An overview of the strategies that encourage persistence; and
c) The institution’s policy regarding retention, and the benefits to be gained from reduced attrition rates for the student, the teacher, and the college.

Where an integrated ACES program exists, a description of its systems and processes should also be included in this section of the package.

The second section should consist of strategies to enhance student instruction regarding goal planning, time management practices etc., and a host of other initiatives that are classroom-based, including:

a) General campus-wide strategies focusing on efforts to increase students' awareness of procedures, services, and programs; facilitation of student access to college services; and planning of new events and innovative programs;
b) Strategies to be used by the teacher during the first few days of class to provide information regarding class expectations, college services, and facilities; and to create a supportive classroom environment through successful instructor-student interaction;
c) Strategies for teachers to implement throughout the semester, designed to direct students to appropriate counselling and academic support, to get them involved in campus events through class projects, and student services etc.;
d) Teaching techniques that may help students attain their academic goals;
e) Ideas for improving teachers' interaction with the disabled, ESL students etc., and preparing them and other students for tests etc.;
f) Suggestions for ways in which administrators can support student retention; and
g) A list of college and local area resources and facilities where students can get help.

The third section of the package should include instructions for the application of various checklists and self-test questionnaires for students to complete and self-assess. Where an ACES program exists, the assignments and self-assessments identified in the ACE Journal, and the methods for data entry, should be employed. Wylie (2004) suggests that the package should be designed for initial distribution to heads of teaching faculties, with further instructions for the most effective means of distribution to teachers (e.g. as an agenda item at faculty meeting, identifying a teacher to trial the package and report the outcomes, information regarding program monitoring and reporting processes etc.). Teachers having an in-depth understanding of the principles regarding the institution’s retention policy is an integral aspect of the overall retention plan and policy should include a formal declaration from teachers that they have taken the necessary steps to familiarise themselves with the content of the package and of their commitment to comply with and practice such principles.

Establish Student Support Services, Facilities and Resources

Research suggests that higher education institutions today generally provide adequate on-campus student support services, facilities and resources. These typically include library services, cafeteria, parking provision, student information and administration services, security, recreational facilities, and childcare accommodation etc. However, several other support mechanisms should be considered for inclusion in the retention plan. Only two strategies will be mentioned here due to space limitations.
Significant Others as Referral and Support Agents

In regard to the proposition by Boyd, Caratana, Hunt, Hunt, McDevitt and Magoon (1989), that providing support materials to the students’ significant others may be an effective and cost-efficient way of helping students achieve their academic goals and improve course persistence rates, it is recommended that a similar model be employed as part of the institution retention plan. Information collected at student registration would allow for one of two options to be employed: that an invitation to be sent to the identified significant other to accompany the student to an orientation and information session; or that an information package be sent to the significant other’s contact address. The objective is to utilise college resources and practices to establish the significant other as a support and referral agent for the student. The increasing access of email services may provide the institution a potentially cheaper avenue for regular interaction with the student’s significant others.

Student Dropout Information Brochure

General information brochures that outline the institution’s facilities and services are a resource distributed by most institutions at enrolment. However, a separate brochure should be developed to inform the student contemplating withdrawal that they do not need to make this decision on their own, and provide them with directions to faculty advisors, counselling personnel, administrative and other support services (see Wylie, 2004 to view an example of the brochure). The brochure should also include short anecdotes from students who have dealt with similar issues and set out in table form a list of the most commonly experienced problems, their possible solutions, and relevant contact details for referral to more information and support. A full account of the brochure should be included as part of the battery of forms used in the RESCUE system, however, a condensed and less candid version of the document should be included in the information section of the ACE Journal.

Educational Multiphasic Intervention Model

In a college that comprises a large proportion of non-traditional students it may be reasonable to start with the assumption that all students are likely to withdraw from their course of study. This may not be the most positive view to take in the design of a model that seeks to improve a particular situation, but the approach is likely to create a reality-based mindset in the principle players i.e. that they should work toward preventing student withdrawal, rather than just acting on it. To achieve this end, and based on the retention initiatives outlined in the previous discussion, the institution must prepare a multiphasic set of interventions for application throughout the student career.

For the multiphasic intervention to be effective, and even under the best of circumstances, its success will be determined by the extent of dedication in time and effort on the part of both the student and the faculty advisor. However, the situation is significantly more difficult for students who attend their courses on a part-time basis, and the demands on both the student and faculty advisor need to be further considered. Because part-time students tend to be older, with families of their own, and working full-time, it might be assumed that they require less in the way of personal attention than a younger, single and full-time student. The research suggests, however, that perhaps the opposite perspective might be applied, where it is not that they require less personal attention, but more the case that they have less time and opportunity for personal attention to be given. The crisis points for part-time students remain the same as that for full-time students, which therefore necessitates a similar scheduling procedure. The inclusion of the ACER subject module is essential to the part-time student’s first semester which may necessitate a reduced program of other core modules typically presented at this time. Whenever the program strategies can be modified to meet the needs of the part-time student, a note advising of this is presented in the overview of the multiphasic intervention design.

Stage 1 of the model comprises multiple phases of intervention for the beginning student. Two interventions are scheduled to take place in each semester, the first occurring during the beginning week of the new semester classes and the second at two weeks prior to the end of that semester’s classes. Stage
II applies to every semester that follows for a period of up to two years regardless of whether the student’s study program is part- or full-time.

*Multiphasic Intervention Model – Stage I*

Stage I of the multiphasic design comprises five separate points of intervention, including: the Registrant orientation; the New Student orientation; the Start-First Semester intervention; the Mid-First Semester intervention; and the End-First Semester intervention.

**Registrant Orientation**

The activities designed for the student at course registration comprises a three-hour session of data collection, course program overview, and college tour of facilities. Institutional activities would include:

1. Initiate Primary Data Collection Program and appropriate phase of Significant Other Network Support system (SONS);
2. Issue condensed ACE Journal, explain and complete ACES-C1;
3. Identify registrant with special needs (e.g. disability support) and initiate interaction between support service and student;
4. Present “Goals: Yours and the College's” (Hoeber, 1981), followed by an open forum discussion.

**Post-orientation activities.** Following student registration, post-orientation activities should include:

1. Initiate follow-up contact with registrant and appropriate phase of SONS;
2. Establish registrant record and initiate provisional Student Profile, Educational Career Plan and preliminary ACER documents for ACE Journal insertion;
3. Identify high-risk registrants and initiate Alert system;
4. Identify registrant advisor.

**New Student Orientation**

The New Student Orientation session is most effective when organised at the time of actual student enrolment. It comprises a three-hour session of data collection, course and resources overview and discussion. Following a lunch break, a further two-hour session for completion of the enrolment process, Student Union and Library registrations etc. Strategies include:

1. Issue ACE Journal, discuss and complete ACES-C2;
2. Initiate missing data collection strategy;
3. Present “Reaching Your Academic Goals” (Hoeber, 1981), followed by open forum discussion;
4. Reinitiate ACE Journal discussion regarding student requirements, and complete course expectations and goal aspirations schedules. Explain and demonstrate data input process.

**Post-orientation activities.** Post-Orientation activities for the enrolled student include:

1. Update student record and enhance Student Profile, Educational Career Plan and secondary ACER documents for ACE Journal insertion;
2. Identify high-risk students (e.g. those who failed to enrol etc.) and initiate Alert system; initiate appropriate phase of SONS;
3. Confirm student advisor and initiate contact program;
4. Student advisor to confirm student participation in developmental workshops and that student support network (e.g. disability etc.) has been activated.

**Beginning First Semester Intervention**

Classes generally start at least one week following student enrolments, and it is imperative that the RESCUE system be utilised with strategies planned in advance to maintain interaction between the
institution and the student during this time. The Start First Semester intervention is to be conducted toward the end of the student’s first week of classes and organised as a two-hour workshop that includes the following strategies:

1. Present “Knowing and Knowing How to Communicate” (Hoeber, 1981), followed by open forum discussion;
2. Re-affirm ACE Journal requirements between the first week and mid-semester; discuss and complete self-concept assessment (SDQ III short form) and ACES-C3;
3. Initiate group meeting with confirmed student advisor to establish relationship and address student issues of concern etc.

Post-intervention activities. For the beginning student, post-intervention activities may include:

1. Update student record and enhance Student Profile, Educational Career Plan and secondary ACER documents for ACE Journal insertion.
2. Determine students at-risk (e.g. enrolled with poor attendance, teacher identified etc.) and notify faculty advisor for action.
3. Determine student exits (e.g. enrolled but not attending etc.) and initiate RESCUE system and the appropriate phase of SONS.

Mid-First Semester Intervention

The intervention is scheduled one week before mid-semester vacation, and is organised as a two-hour workshop. Strategies include:

1. Present “Roadblocks to Reaching Academic Goals” (Hoeber, 1981), followed by open forum discussion.
2. Discuss student issues regarding the ACE Journal requirements occurring between mid and end-semester intervention. Discuss and complete ACES-C4.

Post-intervention activities. At the mid-semester crisis point, intervention activities should include:

1. Update student record and enhance Student Profile, Educational Career Plan and secondary ACER documents for ACE Journal insertion;
2. Determine at-risk and withdrawn students and initiate RESCUE system activity.

End-First Semester Intervention

The intervention occurs one week before the end of semester, and is organised as a two-hour workshop that includes the following strategies:

1. Discuss assignments and assessment completions during mid-year break and subsequent weeks to end-semester intervention;
2. Issue and review Student Career Plan report;
4. Discuss and complete ACES-C5 and second self-concept measure.

Post-intervention activities. End of semester post-intervention activities would include:

1. Update student record and enhance Student Profile, Educational Career Plan and secondary ACER documents for ACE Journal insertion.
2. Determine at-risk (e.g. failing module assessments etc.) and withdrawn students and initiate RESCUE system activity.
Multiphasic Intervention Model – Stage II

Stage II of the multiphasic intervention plan continues for as many as three semesters beyond the student’s first semester, comprising only two crisis point interventions in each semester. Although the major portion of participation in the ACER module is completed in the first semester by the student, the subject is not resolved until: the completion of the fourth semester has been successfully achieved for the continuing student; the qualification has been awarded; or the student’s identified goal has been reached. Each intervention (a total of six for the continuing student) should be organised according to the following format:

a) The first intervention occurs during the beginning week of the new semester classes, and the second implemented at the two-week point prior to the end of that semester.
b) Each intervention is organised as a two-hour workshop.
c) The first intervention of the semester centres discussion on ACE Journal assignments and assessment completions following the student vacation break, while the second intervention for the semester examines the ACE Journal assessments required to be completed during the ensuing vacation break.
d) The first intervention for the semester requires the issuing and review of the updated Student Career Plan report. Discussion is then left to student issues raised in open forum, or the conducting of individual student interviews requested by the student or required by the faculty advisor.
e) Discuss ACE Journal requirements occurring between the first intervention for the semester and the second intervention scheduled toward the end of the semester.

Post-intervention activities. Steps for post-intervention activities should include:

1. Update student record and enhance Student Profile, Educational Career Plan and secondary ACER documents for ACE Journal insertion.
2. Determine at-risk and withdrawn students and initiate RESCUE system activity.

Application of the Student Retention Plan

Various aspects of the Institution-Wide Retention Plan have already been piloted in a number of minor, short-term interventions of basic vocational studies student programs, with an official and independent audit of retention outcomes undertaken.

The first study considered the application of the ACES instruments and the RESCUE intervention strategy. Although the study was structured more to test the design of the instruments and the intervention, encouraging results were never the less achieved in the trial program. For example, the treatment group ($N=37$) achieved an increased retention rate of approximately 16% over that of the control group ($N=28$), and around 18% over that of the student attrition rates established in past programs spanning approximately two years prior to the trial study ($N=174$). In the second trial, a number of modifications were made to the ACES instruments and the RESCUE intervention, and an abbreviated version of the ACE Journal was included in the treatment program. Although outcomes that approximated the previous trial study were achieved (using similar group sizes and an almost identical methodology), the second trial program provided even more significant outcomes regarding insights for the design of the full version of the ACE Journal and the ACER module.

Summary

The design of the Institution-Wide Retention Plan is presented not as a model for direct application for all institutions of higher education, but only as a theoretical guide that will inevitably require modification and development for local application. Trial studies of the Retention model were undertaken and results were encouraging. The writer does not suggest that these trial studies are conclusive evidence of the effectiveness of the ACES instruments or of the RESCUE intervention. What the trials do suggest however is that although establishing an appropriate ideology is essential, and that the theoretical aspects
of the Institution-Wide Retention Model be determined and subsequently sanctioned, the establishment and testing of individual initiatives and interventions should be undertaken via a step-by-step approach and according to an appropriate research-based application of method, measurement and reporting. The Retention Plan requires extensive commitment in regard to time and effort on the part of stakeholders, and the writer suggests that achieving ongoing, positive outcomes encourages all concerned to continue to strive in reaching and maintaining the major objective—an effective student retention system.

About the Author

Dr John Wylie is presently the Faculty Manager of Organisational Sciences at the Western Sydney Institute of TAFE, Blacktown College, Sydney, Australia. Over two decades of exposure to the extremely high attrition rates in higher education formed the basis for his development and implementation of retention programs for mature-age students. John has participated in various higher education conferences presenting on issues such as attrition, self-concept, teacher evaluation, and mature-age learning styles.

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