A comparison of the academic success of mature age and traditional entrants at the Victorian College of Agriculture and Horticulture - Dookie Campus

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Abstract

The academic performance of the mature age students enrolled in the Diploma of Applied Science (Agriculture) course at the Victorian College of Agriculture and Horticulture - Dookie Campus was compared to those of the traditional entrants. The data collected on student's background prior to enrolment and their performance in the course based on the Grade Point Average (GPA) were tabulated and statistically analysed using SPSS^X program. This study also attempted to evaluate the usefulness of some of the student background variables which could be used to help identifying those students who are likely to succeed in the course. The study found that the mature age students performed equally welt in the agricultural course compared to their younger counterparts. The maturity and motivation of students appeared to be the most important criteria for success in the course. Among the student background variables, the interview score (INTS) proved to be the. most useful variable in identifying the potential student population for the course. Some possible implications of these findings for student selection are suggested.

In most parts of the world including Australia, educators are now realising that the future populations of colleges and universities are likely to include higher proportions of older people than ever before because of shifts in the age profile of the population. As the number of mature age students increases, educational institutions may need to know more 'about this cohort particularly in relation to their academic achievements.

During the last decade the Australian universities and colleges have witnessed a large influx of mature age students entering into a number of tertiary courses (Barrett and Power, 1980; Harris, 1989; Hore and West, 1980; West *et al*, 1986). As Hong (1982) points out "... the trend is expected to continue for some time and it seems inevitable that the mature age student body will rapidly become an important part of the tertiary education scene". There are, however, some indications of a slow down of participation by this cohort due to the government policy of economic rationalism and the introduction of the Higher Education Contribution Scheme: HECS (Currie and Baldock, 1989; Desmarchelier, 1989). The Department of Education, Employment and Training (DEET, 1989) maintains the view that this trend if merely temporary and unlikely to sustain once the people have come to grips with the 'user-pays' principle in the education sector as has been the case with other enterprises.

Admitting mature age students into Australian higher education seems to have received wide acclaim, from academics, politicians and the community at large. However, some concern has been expressed at the lack of data on the academic performance of mature age students compared to traditional entrants in many faculties of study.

The work of researchers such as Barrett and Powell, 1980; Boon, 1980; Eaton and West, 1978; Hore and West, 1980; West, 1981; West, *et al*, 1986 on the academic performance of mature aged students is well known in the higher education sector in this country. Based on studies carried out at the University of New South Wales, Barrett and Powell (1980) reported that the academic performance of the mature aged cohort was shown to be consistently superior to that of students entering direct from school. Out of 634 subjects studied by the mature age students over the period 1975-1978, the authors found that there were

55 High Distinctions, 205 Credits and 174 Passes, which in effect represented graded passes in 66 percent of the subjects. Unfortunately, no comparable data from the normal intake (traditional entry) was available from this particular work. However, another study also at the University of New South Wales (see Knights, 1978) showed that only 13 percent of the traditional first year students in Arts faculty achieved better than a pass grade.

From a study of the student records of 1979 Diploma of Teaching graduates at Claremont Teachers College, Western Australia, King and Haynes (1982) reported that mature age students scored significantly higher overall marks than did younger students but there was no significant difference on practice teaching marks. In regard to the latter, the most common suggestion, according to the authors, is that teachers (and Principals to some extent) in schools feel more insecurity with practice students of their own age or older and this tended to downgrade them to some extent.

As indicated the literature on the academic performance of mature age students yielded mainly studies in higher education courses in Arts, Behavioural Science, Humanities, History, Social Science and very few Science faculties. There is a lack of information in the literature available on the academic achievement of mature age students undertaking professional courses such as Agriculture, Engineering or Medicine, although some studies have been carried out with mature age students graduating from Business and Accounting Diploma/Degree courses (see Huggan, 1976). With the decline in the number of school leavers entering courses in Agriculture, it has been argued by some educationalists that mature age students are a means of filling the vacant places. This argument in favour of mature age students can be substantiated only if the academic performance of these students is studied and evaluated.

Predicting students' academic success in post-secondary institutions has been of long-standing interest to institutions for two reasons: (1) to maximise the number of students who will be eligible to persist to graduation, thereby increasing the stability of the institution's economic base; and (2) either to preclude, or to provide special support for those persons who are unlikely to succeed and spare them from the psychological trauma associated with failure and the inability to attain their educational goal. It is, however, questionable whether, in practice, the second reason has been taken very seriously by many educationalists.

The need for administrators in the educational institutions to be as sure as possible that the students selected for courses are more likely to succeed than those rejected, has resulted in many attributes of the prospective student being examined as what are commonly called "predictors of academic success" in the universities and colleges.

Studies carried out in Australia and overseas (Hong, 1981, 1982; Jewell, 1990; Parkes, 1989; Van Helden, 1975; Watkins, 1979; West, 1985) have included such demographic variables as age, sex, marital status, work experience, students' motivation to study and social backgrounds as determinants to predict their academic performance. Some of these factors varied between students of different academic disciplines.

Hardesty (1980) used a multiple regression analysis of the various commonly used predictors including High School Grades in a study of academic success of degree students at De Pauw University. A sample of 1750 students entering the university over a three year period were considered in the study. Hardesty found much interrelation between variables - reducing their effectiveness when used together. The study showed that the aptitude test gave the best prediction followed by the high school examination results. The advantage of high school examination results as something which are readily available was acknowledged by the study. Similar findings have been reported by others (Jones and Western, 1979; Zeidner *et al*, 1990).

Over the years, there were many studies carried out in Australia to investigate the value of final year secondary school examination (HSC or its equivalent) as a predictor of success at university particularly in the first year The views on this by educationalists vary quite differently (Van Helden, 1975; Watkins, 1979).

In a study at the University of New England, Watkins (1979) found that the HSC is a moderately good predictor of university success, particularly in science based faculties. In a similar study at Wollongong

University, Van Helden (1975) found that there was very little correlation between the final school examination results and university performance for students who started university studies at age 22 or over who had obtained the Leaving Certificate under the age of 20.

Research by Hong (1981) at the Darling Downs Institute of Advanced Education, Toowoomba, which made use of multiple regression analysis, investigated relationships between academic achievement and personality traits, environment and high school performance variables. Correlations between these variables were low, and explained only 24% of GPA in Behavioural Science students, leaving over 75% of GPA variance unexplained. Findings from this work and subsequent study by the author (Hong, 1982) have shown that the Tertiary Entrance Score (TES) as measured by the HSC results, was a less powerful predictor than the age of subject, study methods or environmental variables.

In the independent analysis, the multiple regression of GPA with the predictor variables ranged from 0.191 to 0.449 (Hong, 1982). The age variable was found to be the most powerful predictor, explaining 20.2% (R2 change: 0.202) of the GPA variance followed by environment (15%), study methods (13.6%), TES (6%) and personality (3.7%). Personality was the only factor where contribution was not significant. These findings are in agreement with many Australian and overseas studies and support the view that older age students on the whole are likely to perform as well as or better than younger age students. Many other studies (Astin, 1975; Brockett, 1985, Miller, 1970) however, indicate either negative or in many cases no significant relationship between age and academic success.

Many mature age students had a significant work experience break between school and college. This is considered to be as an “asset” to their subsequent studies. Surprisingly, however, very little information is available in the literature which considers the predictive value of this variable. However, Taylor and McNamara (1983) have shown that “word knowledge” score (measure of language skills) and number of months in the job are the best predictors of the academic success of students in the Civil Engineering Certificate course at Sydney Technical College. Due to the heterogeneity of the nature and duration of work experience of mature students, the difficulty one has in using and explaining the validity of this variable as a reliable predictor of academic success has yet to be established.

The research question

As indicated earlier there is a critical absence of adequate research evidence in relation to the academic performance of mature age students undertaking professional courses such as Agriculture, Engineering or Medicine.

The purpose of this study was to verify how the mature age students performed in the Diploma of Applied Science (Agriculture) course at the Victorian College of Agriculture and Horticulture - Dookie Campus (VCAH - Dookie) compared to their younger counterparts. The following were the aims of the study.

1. to assess the academic performance of mature age students in agricultural courses at VCAH - Dookie compared to their younger counterparts;

2. to explore the relationship between the background variables (age; work experience; interview scores; and credits received for previous studies) and the academic performance of students; and

3. to identify and appraise the usefulness of background or similar variables to predict the academic potential of students admitted to courses in agriculture.

Method

Source and Collection of Data

Accumulated student records covering a ten year period from 1987 to 1985 (years as different strata) were researched in order to extract relevant details about the traditional as well as mature age students. Data extracted from the student records included details on the age (AGEN), exemptions or credits allowed based on previous studies (EXEM), the duration of work experience (WEXP), and the interview score (INTS) each student attained before entry was granted.

More than 60 percent of the students in the composite sample belonged to the 17-20 year old category (Traditional Entry: TE) and the rest were distributed among the mature age groups (21 and over - Mature Age Entry: MAE). Among the MAE, 6 percent of the students were aged 26 plus. It must be pointed out that 3 students in this group were in their late 30's. As with similar studies, there was the difficulty in obtaining an equal sample of students for the two age cohorts in any particular year due to the limited, entry under the mature age category.

Of all the students sampled, about 37 percent of the TE group had passed HSC and the corresponding figure for MAE was 15 percent. A large proportion of the latter students had either unsuccessfully attempted HSC or they appear to have left school at the completion of Year 11.

With respect to the interview score,. each student was interviewed at the College on a specified date by one of the members of staff. The score for the interview was based on detailed interview scoring criteria developed at the College. During the interview, the following aspects were considered: student's interest in the area of study, reasons for selecting a course in agriculture, reasons for selecting VCAH Dookie as the institution for his/her studies, work experience, and past educational history. All these relevant variables were also taken into consideration in calculating the interview score.

The students' academic performance was recorded in the form of a grade attained in a selected group of units or subjects. The subjects were chosen to cover the different levels of study (less advanced to more advanced) spread through the whole duration of the course.

The grades obtained by students were transposed into a single numerical score, namely the Grade Point Average (GPA) according to Hong, 1982; West, 1985 using the following scale:

Failed and work incomplete (F)=1;[1] Fail (E)=2; Pass (D)=3; Credit (C)=4; Distinction (B)=5; High Distinction (A)=6.[2]

Statistical Analysis of the Data

The SPSS^X program was used for the analysis and tabulation of the data. Both t-Test and Chi-square Test were applied to assess the statistical significance of student variables and achievement scores between the two groups.

The relationships between GPA and other predictor variables (namely: the age of students on entry, work experience, interview score, exemptions or credits allowed for past studies) were quantified using Pearson correlations and a multiple regression was used to estimate the variance in GPA accounted for by variable(s) which showed significant relations with GPA (see Hong, 1982; Watkins, 1979).

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[1] Student failed in all work submitted for assessment including failure to submit work or part thereof. Students in this category are now graded NN.

[2] Grading changed to Fail (N), Pass (P), Credit (CR), Distinction (D), High Distinction (HD).

Results

The Academic Achievement of Students

Table 1 shows the overall GPA values scored by the different age groups. Although the mean for MAE tends to be slightly higher, the difference between the two age cohorts was not found to be statistically significant ($p<0.05$).

Table 1. Student performance (GPA) by category of entry

Entry	Mean	Standard Error	t- probability	TOTAL (N)
TE	3.37	0.06	0.222	66
MAE	3.49	0.09		47

TE: Traditional Entry; MAE: Mature Age Entry. Data on nine TE and one MAE students were unavailable

In addition, there was also evidence to suggest that the performance of the two groups was not significantly different with respect to the distribution of grades (Table 2). In both groups more than 85 percent of students attained GPA greater than 3. It is worth mentioning that 23 percent of MAE group attained GPA between 4.0 - 4.9 compared to 14 percent by their younger traditional entry counterparts.

Table 2. Distribution of GPA by Category of Entry

Entry	GPA Range						Total (N)
	2.0-2.9		3.0-3.9		4.0-4.9		
	n	%	n	%	n	%	
TE	9	14	48	72	9	14	66
MAE	6	12	30	65	11	23	47

(Chi-square = 1.80) Not significant

Another aspect of this study was an attempt to look at whether the two age cohorts differed in their performance within a selected number of subjects studied. Subjects selected include core units (GRS_1); preliminary units (GRS_2); advanced units (GRS_3) and more advanced units (GRS_4). Table 3 summarises the student performance in the various groups of subjects. It is evident that the performance differential between the two age groups is negligible in most cases indicating that the MAE performed as well in preliminary as in advanced subjects compared to their younger counterparts.

Table 3. Student Performance (GPA) in Various Subject Combinations

	Mean	Standard Error	2-t Probability	No of cases	Subjects
GRS_1					
TE	3.41	0.07	0.131	45	MAS
MAE	3.61	0.11	n.s.	32	AET, AEC
GRS_2					
TE	3.71	0.10	0.722	44	CR-A
MAE	3.78	0.17	n.s.	27	PA-A, FA-A
GRS_3					
TE	3.73	0.14	0.328	56	FA-B
MAE	3.50	0.20	n.s.	36	
GRS_4					
TE	3.47	0.13	0.838	14	FA-C
MAE	3.94	0.23	n.s.	6	GM, ANH

Notes: MAS: Man and Society; AET Agriculture and the Environment; AEC: Agricultural Economics; CR-A: Crops A; PA-A: Pastures A; FA-A: Farm Management A; FA-B: Farm Management B; FA-C: Farm Management C; GM: Grazing Management; ANH: Animal Health; n.s.: not significant.

Prediction of Academic Performance of Students

As outlined elsewhere one of the aims of this study was to identify student background variables which could be used to identify their potential to succeed in a professional course such as Agriculture. In this study the predictive value of student's background variables such as age on entry (AGEN); work experience (WEXP); interview score (INTS); and past studies credit or exemption (EXEM) were assessed. Table 4 shows Pearson correlations between GPA and the four predictor variables.

Table 4. Correlations among GPA and Predictor Variables

Predictors	**GPA**	**INTS**	**WEXP**
AGEN	0.23	0.07	0.21
WEXP	-0.10	0.22	1.00
INTS	0.48 **	1.00	0.22
EXEM	0.04	0.25	-0.06

** $p<0.01$; Study unit (N) = 37

Of all the subscale variables used, the GPA was found to be significantly related to INTS alone which is rather surprising. On intuitive grounds, it is reasonable for one to expect some significant relationship between variables such as work experience or exemptions granted and the GPA due to their likely positive contributions to students' academic achievement. It is widely believed that work experience in agriculture or a related area would be of great benefit in professional studies such as Agriculture.

The data clearly indicate that the age of students on entry has little significance in relation to their academic performance.

It is noteworthy to mention the lack of relationship between INTS and the other predictor variables, thus suggesting a direct relationship exists between this variable and the GPA. The possible reasons for such relationships were discussed.

Multiple regression was used to analyse the relative powers of the interview score (Table 5) on the student GPA for the different subject groups studied.

Table 5. Percent variance of GPA of different subject groups and overall GPA accounted for by INTS

	GRS_1	**GRS_2**	**GRS_3**	**GRS_4**	**Overall GPA**
	n=36	**n=25**	**n=36**	**n=12**	**n=37**
INTS	16.73	28.77	18.96	0.89	22.65
F	6.82	9.29	7.96	0.09	10.29
Significance	$p<0.05$	$p<0.01$	$p<0.01$	n.s.	$p<0.01$

Notes: GRS_1: core units; GRS_2: preliminary units; GRS_3: advanced units; GRS_4: more advanced units.

The results show that the independent variable INTS accounts for about 23 percent of the variance in GPA for the total sample ($p<0.01$), the prediction was best for the student performance in preliminary units of the course ($p<0.01$) followed by advanced units ($p<0.01$) and core units ($p<0.05$).

Discussion

The statistical evidence on students' entry reported in this study reveals that there has been a growing interest among mature age students to enter into professional courses such as Agriculture, a trend similar to what has been observed within man higher education faculties in Australia as well as overseas (Hore and West, 1980; Maeroff, 1975; West *et al*, 1986).

The findings of this study show that the mature age students admitted to Diploma course in Agriculture performed as well as, and in some instances better than, their more traditional counterparts. These results are in line with many Australian and overseas studies reporting that older age students are not in anyway

lower on the academic scale of performance (Barrett and Powell, 1980; Eaton and West, 1980; Hong, 1982; Mason, 1989).

There was no significant difference between the academic achievement of the two age cohorts as indicated by the overall GPA figures. Also there was no significant difference between the two groups in relation to their performance either in core, preliminary, advanced or more advanced units. However, the distribution of GPA tends to suggest that the mature age students obtained better grades than their traditional counterparts although the difference between the two groups failed to attain any level of statistical significance (see Table 2).

As outlined earlier, a large proportion of the mature age cohort admitted to the course at VCAH - Dookie did not have a formal HSC qualification. However, the academic performance of these students in the Diploma course seems little affected by such deficiencies. These findings are in line with many studies reported in the literature (Anderson, 1973; Eaton and West, 1980; Reed and Murphy, 1975; Wilson and Lapinski, 1978). This would suggest there are factors other than HSC achievement which could decide the student performance at the universities or colleges. The variables such as motivation and maturity (Barrett and Powell, 1980; King and Haynes, 1982); study methods (Hong, 1982; Watkins, 1979); attitudes to university (Hong, 1982; Morgan, 1980) have been reported to have a more obvious direct link with academic performance.

It has often been suggested that students who are highly motivated are likely to fare better in the course than poorly motivated groups (Barrett and Powell, 1980; Boon, 1980). Walker (1975) reports:

> *Undergraduates coming directly from school are given little opportunity to consider whether higher education is, for them, a suitable goal, and there is no doubt, that some unwilling or uncommitted students are pressured into higher education by parents or teachers. On the other hand, mature students will probably have spent a period in employment during which weak motivation may not have survived. Taking up full-time study as a mature student can also involve considerable sacrifice and personal difficulties. (Walker, 1975, p. 10).*

Compared to traditional entry (to a great extent affected by parent, teacher or peer group pressure) students, the mature age group entered the course in Agriculture of their own accord. It can be argued that these students will be conscientious and hard working in their approaches to their self-selected courses which, normally, would help them along towards their academic success.

One of the most valuable aids many mature age students have is their greater experience of life and the non-academic world. This would allow them to develop a better perception of their study and work which would be beneficial for understanding courses like Agriculture. On an average the mature age students enrolled for the course at Dookie had over three years work experience compared to less than one year for their younger counterparts (Table 6). There is considerable evidence of the benefits of work experience on future studies undertaken by students in many fields of higher education (Barrett and Powell, 1980; King and Haynes, 1982; Knights and McDonald, 1978; Walker, 1975).

Table 6. Work experience (years) by category of entry

Entry	Mean	Standard Error	t- Probability	TOTAL (N)
Traditional entry	0.51	0.09	0.000 ($p<0.001$)	75
Mature age entry	3.10	0.48		48

Knowledge and skills and more importantly the maturity acquired during the work period are the main assets the mature age students have and the impact of these on education should be that it helps one to do a better job. The mature age students have already something to relate the ideas to while the school leavers have to relate their ideas to future.

People tend to accumulate knowledge and experience, often referred to as “crystallised intelligence” (Cattell, cited by Knox, 1977), due to maturity which would enhance one’s ability to perform better in their

studies. The maturity of older age students may have been one of the key factors of their success in the study of Agricultural Science reported here. It is suggested that mature age students will devote more time to academic work than younger age students because of greater motivation and perhaps a mature approach to free time outside teaching hours (Walker, 1975). From the data presented here it is evident that mature age students in the Agricultural course can perform as well as, or slightly better in some cases than the younger ones, it is possible that maturity due to age (not the age per se) is a keen factor of their success. This finding is somewhat contradictory to those studies (Astin, 1975; Kapur, 1972) which indicated that younger students tended to obtain higher and better grades. Miller (1970) suggested that any superior academic performance of younger students is not so much a function of age as of intelligence and according to him students who enter university earlier than their peers are most likely of superior ability.

Of the independent variables; age on entry (AGEN), work experience (WEXP), interview score (INTS) and exemptions (EXEM), the interview score (INTS) was found to be the best predictor of academic success in Agricultural Science students. The lack of relationship between INTS and other predictor variables emphasises the value of the interview score as an independent and unique predictor of academic success of these students.

As outlined elsewhere, the INTS was comprised of the students' background information and evaluation of the students' ability for undertaking a particular course. The interview for which the student was required to be present at the College was not conducted as a simple few minutes face-to-face talk between a student and one of the members of staff; rather, it was conducted as an in-depth evaluation of students' interest in the particular area of study (Agricultural Science in this case), the reasons for choosing both this particular college and for these studies, secondary school achievement and work experience. Besides this, the interview was meant to record an appreciation of the prospective students' abilities or weaknesses, maturity, personality and social skills. In addition to the interview the students were also required to sit for an elementary Mathematics test to demonstrate their numeracy skills and write a short essay on some specific topic to show some indication of their communication skills.

Evidently, students who score highly at the interview will be more likely to succeed in the course. A student who has attained a higher score may have higher "attributes" to success compared to those who scored only low scores.

As pointed out earlier, the academic achievement depends greatly on the student's effort and motivation. Although motivation of a student to pursue a course of studies is a rather difficult thing to measure, the students' score for the interview can be taken as indicative of this variable and this may explain partly its power in predicting academic success.

The multiple regression analysis has shown that 23 percent of the variance in overall GPA was accounted for by INTS and it appears that the predictive power of this variable was enhanced significantly ($p<0.0l$) when measured on student's performance in groups of subjects (see Table 5). The reasons for the differential predictive power of INTS on different subject groups warrants further investigation.

Regarding the effect of AGEN on GPA, this finding is somewhat contrary to that of another Australian study (Hong, 1982) which showed that of different variables studied (namely study methods, TES (Tertiary Entrance Score), personal problems, satisfaction with the college, self-concept, locus of control, flexibility of thinking and age of students) age was found to be the best predictor of academic performance in Behavioural Science students. Compared to the findings in the literature showing the positive attributes of WEXP and EXEM on student's academic performance (Barrett and Powell, 1980; King and Haynes, 1982; Knights and McDonald, 1978) the nonsignificant relations of these variables with the GPA, as observed in this study, could partly be attributed to the heterogeneity involved in assessing the nature and duration of work experience and the types of exemptions or credits granted, not to mention the unevenness of the sample size.

Conclusions

The findings from this study reinforce the conclusions drawn by similar studies on the academic performance of mature age students both in Australia (Barrett and Powell, 1980; Boon, 1980; Hore and West, 1980 and West *et al*, 1986) as well as overseas countries (Mason, 1989; Reed and Murphy, 1975) that the mature age students do at least as well in higher education courses compared to their more traditional counterparts. The results of the study reported here confirm the same general view and more specifically their satisfactory performance in a professional course such as Agriculture. Material presented here does indicate that there are good reasons for encouraging mature age entry to other professional courses.

The academic performance of the students in the Diploma Course in Agriculture seems little affected by the students' age or their past academic achievement (e.g., pass in HSC). Knowledge and skills and more importantly the maturity acquired during work or otherwise before the commencement of the Course appeared to be the main catalysts of student success. It must be stressed, however, the study did not show any significant direct relationship between work experience (WEXP) and student achievement.

This study has identified some of the student variables which seem to be related to student success in colleges and universities. Among the variables studied, the interview scores of the students appeared to be a strong predictor of academic success of students enrolled in Agricultural course which compare favourably with the ACER-AI/AQ Tests employed, for example, in students admitted to Teacher Education Courses (see Childs, 1974).

Recommendations

In Australia, the need for expansion of the higher education sector has been emphasised by the Governments' *Higher Education Policy Statement.* The Governments' commitments to increase student numbers in higher education has placed enormous pressure on tertiary institutions to find ways and means of increasing enrolments. Presently this has become an issue for survival for institutions whose enrolments by school leavers are declining particularly in faculties like Agriculture, Arts, Humanities and Social Sciences.

In view of the results of the present study, one way of achieving the increase in student numbers, particularly in agriculture courses may be by capitalizing on the increased demand for these courses by mature age students. Such an approach is also in line with the recognition by the Governments' educational policy of the importance of lifelong education, and in particular, the need for further education and training during people's working life. The Government believes:

> *Apart from the projected strong growth in the size of the population aged 25 years and over, the proportion of this age group who have completed Year 12 and experienced some form of post-secondary education will increase. There will, therefore, be a larger pool of people who appreciate the benefits of higher education, many of whom will seek to re-enter the system during their working lives. (Dawkins, 1988, p. 16).*

The success of any college or university course depends upon the academic achievement of students completing these courses. The findings of this study show that the mature age students perform very well, if not better than students straight from school in agriculture courses despite their very varied schooling or work backgrounds. The college administrators could approach the issue of mature age entry as a means of combating the falling student numbers in these courses without the fear of any compromise being made with respect to the academic standard of courses.

This study has identified the need to investigate and analyse the mature age students' "recipe" for success in higher education with the intention of developing some of these aspects for inclusion in all student selections.

The contribution the mature age students make both inside and outside classrooms while they are present at any institution needs to be recognised. The institutions must recognize the need for developing ways and means by which the institutions and younger students could make use of the mature age students'

"crystallised intelligence" (Cattell, cited by Knox, 1977) for the betterment of higher education in this country.

Finally and more importantly, this study has identified the interview score of the students as a potential variable to identify students who are likely to succeed in professional courses like Agriculture and further research on this aspect may prove beneficial not only in agricultural studies but in other professional course areas. It would be worth studying the factors which determine the vocational success of graduates and examining whether these are detectable at the time of entry to higher education. The desirability of developing the interview scores in line with other tests, for example, the ACER AI/AQ Test, as a means of identifying potential students for professional courses is once again highlighted by this study. The predictive factors may prove useful on practical grounds, even if these factors have no causal significance.

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Notes

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