Factors distinguishing between achievers and at risk students: a qualitative and quantitative synthesis

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ABSTRACT
The purpose of this article is to identify factors that distinguish between Achievers and At Risk Students in Accounting 1A, and to explore how qualitative and quantitative research methods complement each other. Differences between the two groups were explored from both a quantitative and a qualitative perspective, focusing on study habits, language proficiency, cognitive ability, academic background and perceptions of reasons for failure or success. From both perspectives, the study showed that the groups differ in terms of language proficiency and study habits with Achievers having better communication skills and being more diligent than At Risk Students. Vast differences in perceptions of reasons for success or failure were also identified. The study furthermore showed that Achievers on average have better cognitive abilities and obtained better school marks than At Risk Students. Recommendations focus mainly on the At Risk Students, as well as on enriching research through a synthesis of qualitative and quantitative methodologies.

CONTEXT AND PURPOSE
At risk students and their retention have a substantial impact on both institutions of higher education (HE), and society in general. Attrition/retention affects funding, facilities, planning and programmes offered. At this particular institution, it was estimated that the income that would have been generated if ± 30% of the first year dropouts had stayed in their three year programmes, would be enough to appoint three full time professors. Drop outs also affect the future labour market, because students who do not have the proper training for the workforce, are generally unprepared to meet expected roles and responsibilities associated with particular vocations. In South Africa, the National Plan for Higher Education (Ministry of Education 2001:16) has included, as a strategic objective, graduates with the skills and competences to meet the human resources needs of the country. Increased graduate outputs (10% to 15% for undergraduates over the next five years) are accepted as a national outcome (Ministry of Education 2001:16).

The purpose of this article is to identify factors that distinguish between Achievers and At Risk Students, and to explore how qualitative and quantitative research methods complement each other. Differences between the two groups were explored from both quantitative and qualitative perspectives. Recommendations with regard to possible intervention or support programmes for the At Risk Students are made.

CONCEPT CLARIFICATION
The issue of definition is an important and necessary first step in both understanding at risk students and achievers.

At risk students
In educational settings, “at risk” is most commonly related to dropping out of school (SEDL 2001). In “The Goals 2000: Educate America Act of 1994”, at risk students are described as those who, “because of limited English proficiency, poverty, race, geographic location, or economic disadvantage, face a greater risk of low educational achievement or reduced academic expectations” (SEDL 2001).

Although the characteristics of at risk students are sometimes correlated with those of non traditional students, the two concepts have different denota
tions: Non traditional students refers to the changing profile of students as a result of demographic and sociopolitical change. Some non traditional students are not at risk students, and some traditional students are (Jones & Watson 1990). Kawakami (1994:2) defines an at risk student as one who is in danger of failing to complete his/her education with adequate skills, knowledge, and attitudes to function as a responsible citizen of his/her community.

The focus has shifted from studying student dropouts (with the focus on social issues), to a more recent emphasis on changes and policy that enhances learners’ chances to succeed. The earlier focus on social influences lead educational institutions to rationalize their plight by saying that it is not the institution’s fault that some learners come from poor communities, and lack the motivation and academic skills to succeed. The focus now is on learning, policies and programmes to enhance learning, based on a philosophy that all learners can learn.

For the purpose of this study, At Risk Students refer to first year students who achieved an average of 40% to 47% at the end of the first semester in Accounting 1. This definition and the study, focuses on these students’ lack of academic progress.

Achievers

Unlike an at risk student, an achiever is never defined as one belonging to a specific socio economic or demographic group. Being an achiever usually refers to academic performance, ie

- Having obtained a high mark or average (eg a distinction) in a specific subject or a number of subjects
- Being amongst a specified percentage or number of top performers.

Hong et al (2000) defined (high) achievers as students being in the upper quartile of scores obtained while Caldwell et al (1996) defined them in terms of the top number of performers. In both of these studies, high and low achievers were compared.

For the purposes of this study, first year students who achieved an average of 75% or more at the end of the first semester (in their BCom Accounting programme) are defined as Achievers.

THEORETICAL CONSIDERATIONS

The plethora of studies that have been conducted both nationally and internationally since the 1950’s (Johnson 1996) regarding retention and attrition or drop out from institutions of HE alludes to:

(a) The importance of understanding the underlying dynamics of attrition/retention to the institution
(b) The complexity of the underlying dynamics of attrition or retention

(c) The institutional specific nature of attrition or retention
(d) The need for effective intervention programmes to address the issue of attrition or retention.

Attrition from HE institutions not only has a direct financial impact on both the institution and the student, but also affects the future labour market (Johnes 1990; McGrath et al 1997). Students are more likely to drop out during the first two years of study with the highest percentage being during the first year (Brawer 1996; Seidman 1996; McGrath et al 1997; Tinto 1975). McGrath et al. (1997) note that attrition from the first year of study remains a problem despite the research having been conducted and the intervention programmes implemented.

To retain students implies understanding why students depart before completion of their studies and to address these in an effective way. Seidman (1996) notes that to retain a student, students at risk of failing should be identified at an early stage and early and intensive intervention programmes should be provided. In addition, identifying those factors related to attrition enables the university to advise students, prior to admission, of the characteristics associated with attrition (Johnson 1996).

Factors reported to relate to attrition can be classified into the following broad categories (summarized in Johnson 1996):

- Poor academic results prior to entering the university (Johnes 1990; McGrath et al 1997) most notably matriculation results.
- Biographical variables such as age, race and gender: Whereas some studies have shown these to be related to attrition (Brawer 1996; Johnson 1996), others have not found this to hold true (McGrath et al 1997).
- Not having clear career goals (Dale et al 1996; Johnson 1996).
- Inefficient study skills (Johnson 1996; Caldwell et al 1996; Hong et al 2000).
- Institutional variables such as instructor behaviour, number of students enrolled and student support services (summarized in Johnson 1996) have been shown to impact on attrition.
- Poor social integration (Tinto 1975; Johnson 1996).

Other factors that have been shown to be related to attrition/retention include proximity to the university (Johnes 1990), having had a full time job prior to entering university (Johnes 1990; Brawer 1996, Johnson 1996), students’ impression of other students (McGrath et al 1997), parenthood and the health of the student (Johnson 1996).

The (often) incongruent nature of the results reported
in the literature, especially as far as biographic and demographic factors are concerned, alludes to the fact that understanding the dynamics of attrition/retention is institutional or even faculty specific. It implies that each institution should undertake studies to determine factors related to attrition (Johnson 1996; McGrath et al 1997).

Although school results have consistently been shown to be good predictors of success (ie completion of studies), it is also well documented that first semester results are a far better predictor (Johnes 1990; McGrath et al 1997).

METHODOLOGIES, FINDINGS AND RECOMMENDATIONS

A quantitative approach

Two groups of students taking Accounting 1A (REK1A) in 2001 were identified, namely Achievers and At Risk Students. Students in these groups were invited to participate in this study and 25 Achievers and 20 At Risk Students agreed to take part in the sense that they agreed to undergo psychometric tests at the start of the second semester. In addition to these results, background characteristics (demographic information), additional psychometric test results (obtained in January), academic results (matriculation and first semester results) were also available.

The quantitative study aimed to explore differences between the Achievers and At Risk Students in terms of background characteristics, academic record (first semester and matriculation results), study habits and attitude, language proficiency and cognitive ability and to develop statistical models for distinguishing between the groups.

The following limitations should be taken into consideration when interpreting the results: The students in this study do not constitute a random or representative sample of the REK1A students of 2001. At most, they may be representative of two opposing poles of achievement, ie borderline and excellent. Not all students invited to take part in this study agreed to participate. Those who participated may differ from the others in terms of goals and commitment as well as commitment towards the institution. Complete information was not available for each student due to difficulties in obtaining the information. Since a large number of univariate hypothesis tests were conducted, p values less than 0.05, but larger than 0.005, should be interpreted tentatively.

Differences between achiever and at risk students

Background characteristics

No statistically significant differences were evidenced between the two groups in terms of age, gender of preferred language of instruction (based on Chi square tests).

Academic record

- Subjects taken at school: Table 1 shows the number and percentage of Achievers and At Risk Students taking English, Afrikaans, Biology, Science, Mathematics and Accounting at school.

<table>
<thead>
<tr>
<th>Group</th>
<th>Subject</th>
<th>Number of students having taken subject</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Risk Students</td>
<td>Afrikaans</td>
<td>21 of 24</td>
<td>87.50</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>12 of 24</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>English</td>
<td>24 of 24</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>24 of 24</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>14 of 24</td>
<td>58.30</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>21 of 24</td>
<td>87.50</td>
</tr>
<tr>
<td>Achievers</td>
<td>Afrikaans</td>
<td>19 of 19</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Biology</td>
<td>4 of 19</td>
<td>21.05</td>
</tr>
<tr>
<td></td>
<td>English</td>
<td>19 of 19</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>19 of 19</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Science</td>
<td>16 of 19</td>
<td>84.21</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>18 of 19</td>
<td>94.74</td>
</tr>
</tbody>
</table>
Of interest in the present study is that most students, ie 87.5% of At Risk Students and 94.7% of Achievers took Accounting at school. There are no statistically significant differences between Achievers and At Risk Students in terms of the subjects taken at school (based on Chi square tests).

- M score: Matriculation results are converted to m scores by the institution and are used as an admission criterion. Figure 1 displays the distribution of m scores of the two groups. The average m score of At Risk Students is 16.92 (standard deviation (SD) = 4.03) and of Achievers is 29.82 (SD = 2.91). The average m scores of the two groups differ significantly (t = 11.72, df = 41, p value < 0.0005).

- First semester results: All of the 42 students with known first semester results registered for 5 courses. All Achievers passed 100% of their subjects while the At Risk Students on average passed 27.5% of the subjects (SD = 22.7) with a minimum of no subjects passed and a maximum of 3 subjects passed. Hence, in addition to Accounting 1A, all At Risk Students also failed (obtained a mark <50%) in at least one other subject in the first semester. The sample average first semester aggregate for Achievers is 79.21% (SD = 3.79) and for At Risk Students it is 40.93 (SD = 9.63).

**Study habits and attitude**

The Brown Holtzman Survey of Study Habits and Attitudes (SSHA C) consists of 4 primary dimensions. The means of the two groups differ significantly in terms of one dimension, ie Delay Avoidance: the average for At Risk Students (cf Figure 2) is 41.48 (SD = 28.84) while it is 60.2 (SD = 26.75) for Achievers (t = 2.23, df = 43, p value < 0.05) implying that Achievers are on average less likely to postpone doing assignments or wasting time and are more disciplined than At Risk Students (Joubert et al 1981; Rademeyer et al 1998).

Rademeyer et al (1998) showed Delay Avoidance to be a significant predictor for academic success in the first year, with successful students on average showing better study discipline. Dale et al (1996) and Brown (1987) also highlight the importance of healthy study practices for retaining students, while Caldwell et al (1996) and Hong et al (2000) showed that significant differences exist between achievers and at risk learners in terms of motivation, persistence and responsibility.

Identifying students with poor study practices will allow the institution to intervene through appropriate programmes. Rademeyer et al (1998) cite that a student’s learning strategies can be improved through
appropriate training while Stanford (1998) found that SSHA C results helped students in a bridging programme to compare their study habits with those of highly motivated students and to change their study habits accordingly.

**Language proficiency**

A language proficiency test formed part of the psychometric test battery of first year students in 2001. Two dimensions were measured, Vocabulary and Comprehension (2 sub dimensions of the SAT). There is a significant difference between the two groups on both dimensions (cf Figure 3); for Comprehension, the sample average for Achievers is 8.26 (SD = 1.05) and for At Risk Students it is 6.55 (SD =1.77). (t = 3.712, df = 39, p value<0.01.) For Vocabulary, the sample average for Achievers is 8.8 (SD = 0.42) while it is 7.23 (SD = 1.97) for At Risk Students. (t = 3.618, df = 23.17, p value<0.01.)

Twelve of the 22 (54.54%) At Risk Students have a Vocabulary score of 7 or below while 16 of them (72.72%) have a Comprehension score of 7 or below. For the Achievers, none of the 19 (0%) has a Vocabulary score of 7 or below and only 3 (15.79%) have a Comprehension score of 7 or below. More than half (59.1%) of At Risk Students obtained a lower score for Comprehension than for Vocabulary while the same applies to only 31.6% of Achievers. The correlation between comprehension and vocabulary is high and positive (r = 0.841), even when the outliers scores are excluded.

Since 29.2% of At Risk Students (7 of 24) come from historically disadvantaged backgrounds in comparison with only 1 of the 18 Achievers, it may in part explain the differences between the language proficiency score of the two groups. Although the link between academic performance and language proficiency needs to be explored further, the institution may consider identifying students with moderate to low comprehension and/or vocabulary at the start of their academic careers and intervene through appropriate language proficiency courses.

**Cognitive ability**

- GSAT (General Scholastic Aptitude Test)

Significant differences between the two groups in terms of both Verbal and Non verbal Intelligence were evidenced with Achievers on average having higher scores on both dimensions (cf Figure 4). The most significant difference being in terms of Verbal Intelligence. The relevant sample statistics and t test results appear in Table 2.
Figure 3
Distribution of Comprehension and Vocabulary for Achievers and At Risk Students

Figure 4
Distribution of Verbal and Non verbal Intelligence (GSAT) scores for Achievers and At Risk Students
In terms of the 6 sub dimensions of the GSAT, there are significant differences between the groups in terms of all 3 Verbal sub dimensions, Word Pairs (p value < 0.0005), Verbal Reasoning (p value < 0.0005) and Word Analogy (p value = 0.001) but only in terms of 2 of the 3 Non verbal sub dimensions, Number Series (p value = 0.009) and Pattern Completion (p value = 0.006). In each case the average for Achievers is higher than that of the At Risk Students. This provides support for an earlier comment that the two groups differ more in terms of Verbal than Non verbal Intelligence.

- The Ability, Processing of Information and Learning Battery (APIL B)

The distributions of the 2 dimensions, Conceptual Reasoning and Memory and Understanding, are shown in Figure 5. The two groups differ significantly in terms of each of these (p values < 0.0005) with Achievers having the higher mean in each case.

Significant differences between achievers and At Risk Students were also evidenced for each of the Learning Potential dimensions, Sessions 1 to 4. Since these dimensions are dependent (the same test that is written repeatedly with only time to learn decreasing between successive sessions), a generalised linear model for repeated measures was applied. No significant difference between the groups in terms of their overall ability to learn was evidenced (p value = 0.706). Furthermore, for both groups there is a significant improvement between sessions 1 and 2 (p value = 0.004) but not between subsequent sessions. There is thus no

**Table 2**

*Results of t tests for Verbal and Non verbal Intelligence (GSAT)*

<table>
<thead>
<tr>
<th>GSAT Dimension</th>
<th>Group</th>
<th>Sample size</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non verbal Intelligence</td>
<td>At risk</td>
<td>22</td>
<td>107.05</td>
<td>12.28</td>
<td>2.981</td>
<td>40</td>
<td>0.005</td>
</tr>
<tr>
<td></td>
<td>Achiever</td>
<td>20</td>
<td>116.95</td>
<td>8.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal</td>
<td>At risk</td>
<td>22</td>
<td>101.14</td>
<td>12.70</td>
<td>5.264</td>
<td>40</td>
<td>&lt;0.0005</td>
</tr>
<tr>
<td></td>
<td>Achiever</td>
<td>20</td>
<td>119.05</td>
<td>8.78</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 5**

*Distribution of Conceptual Reasoning and memory and Understanding (APIL B) scores for Achievers and At Risk Students*
evidence, given the sample results, to believe that Achievers have a better ability to learn than At Risk Students.

In view of the fact that the study has shown that Achievers are intellectually more gifted, the criteria used to select students for the study should be borne in mind. However, it is well established in the literature that cognitive ability is a good predictor of success at university (Organ 2001; Dale 1998; Rademeyer et al 1998; Huysamen 1998; Scalise et al 2000; McGrath et al 1997). Of interest in the present study is the fact that it is in terms of Verbal Intelligence rather than Non verbal Intelligence where Achievers and At Risk Students differ most. Rademeyer et al (1998) also found Verbal Intelligence to be a better predictor for first semester success than Non verbal Intelligence.

Models for distinguishing between the two groups

Step wise logistic regression was used to develop overall statistical models for distinguishing between the groups. Since both m score and first semester aggregate distinguish excellently between the groups, largely due to the way the students were identified for the study, these variables are not taken into consideration in any of the models. The models developed in this section thus focus on the other variables / dimensions where significant differences were evidenced.

Model I

For the first model the five GSAT, 2 APIL dimensions (Conceptual Reasoning, Memory and Understanding), the 2 language proficiency dimensions and the study habits dimension are considered. Forty of the 45 students in the study (21 At Risk and 19 Achievers) have complete information on all these dimensions. The step wise procedure selects only 2 dimensions, namely Word Pairs (a Verbal Intelligence dimension) the language proficiency dimension, Comprehension. The model coefficients indicate that the higher the score for Word Pairs and/or Comprehension, the higher the probability of being an Achiever. Overall the model classifies 87.5% of students in the correct category (94.7% of Achievers and 81% of At Risk Students). The Nagelkerke $R^2 = 69.5\%$ indicating that the model fits the data well.

Model II

For model II, all measures of intelligence as well as the study habits dimension are excluded leaving only the two language proficiency dimensions for possible selection. The model selects only Comprehension: based only on language Comprehension, the model classifies 78% of students correctly (84.7% of Achievers and 72.7% of At Risk Students). The Nagelkerke $R^2 = 39.7\%$.

Finally the extent to which the language proficiency dimensions are correlated with cognitive ability and academic achievement was explored. All the correlations (Spearman’s $Rho$) are positive and significantly different from 0 but since all the correlations are $< 0.6$, it indicates moderate rather than strong correlations. The significant differences in terms of Verbal Intelligence scores between Achievers and At Risk Students should thus be viewed in conjunction with the differences in language proficiency scores.

A qualitative approach

Four focus group interviews were scheduled by sending invitations to all the students identified as Achievers or At Risk Students. Table 3 summarizes the number of interviews and respondents:

| Table 3 |
|---|---|
| Achievers | At Risk Students |
| Number of interviews | 2 | 2 |
| Total number of respondents | 15 | 19 |

The lecturers involved in teaching Accounting 1, and those involved in the research project on the At Risk Students reached consensus on six questions for the focus group interviews. These questions (in English and Afrikaans) were supplied to the students in written format, and repeated by the interviewer. Additional probing questions were asked.

The data was analyzed by identifying categories of answers for each question, and then a comparison of categories was done. The discussion of the similarities and differences in the responses of the two groups, is integrated with other relevant research reports on related issues. Preliminary recommendations are offered as part of the discussions.
Question 1: Why did you choose BCom Accounting?

Personal interest, their parents’ role in their decision and their perception that a “job is guaranteed”, were identified by both groups as reasons. The At Risk Students added another reason, namely that they did well in Accounting at matric level. A small group of them are indecisive about their future and are doing Accounting until they have made up their minds.

The At Risk Students kept on referring to matric Accounting, also when responding to the other questions, and it seems reasonable to say here that this issue needs to be addressed. These students could have interpreted their positive experiences in matric Accounting as a guarantee that they would do well in Accounting at university. In responses to other questions, they admitted that they were “laid back” because of their matric Accounting, but that the first test served as a “wake up call”.

Question 2: What positive learning experiences have you had in Accounting 1 this year?

The two groups’ responses to this question differ to the extent that one could ask if they attended the same lectures in Accounting. There is no consensus between the two groups on what they perceived to be positive in Accounting 1. The Achievers identified the lecturers’ and the department’s roles to provide positive learning experiences, and also the technological (WebCT) support that was provided. The At Risk Students stated that they “learnt to work hard”.

It should be noted that no At Risk Student referred to WebCT or any other technological learner support available to them. A logical conclusion seems to be that either they did not know about it, or they did know about it, but that they did not go to the trouble of accessing this support programme.

The Achievers, on the other hand, do not emphasize hard work—only one brief reference to “work in advance”, was made. These students have learnt (at school) to work hard, to manage time and to develop a positive attitude towards hard work. Accounting 1 held no surprises for these students as far as hard work is concerned.

In a survey on previously identified problem areas in first year subjects in B Com Accounting, data collected by means of questionnaires to all the students in Accounting 1, include positive comments such as, the “lecturer is very helpful ... has a positive attitude” and the subject is “very well organized”. The “exercises are very helpful”, the “presentations to the point” and “good notes are provided”. Negative comments included “it is too much work” (RAU 2001:14).

Question 3: What negative learning experiences have you had in Accounting 1 this year?

Again, the two groups’ responses differ so much that it is hard to believe that they attended the same lectures. There are no similarities as far as negative experiences are concerned.

The Achievers’ short list of negative experiences (ie “classes too big and noisy” and “not enough examples”) can be attributed to their sense of self efficacy and their confidence in their ability to perform course related tasks. Self efficacy is related to the willingness to undertake challenging tasks, persistence at tasks and successful performance. Achievers believe that they can organize cognitive, behavioral and social skills to achieve desired outcomes (Saenz 1999).

The At Risk Students identified a much longer list of negative experiences, namely high stress levels, the first semester test as an unpleasant “wake up call”, managing their time and studies, humiliation in class, not enough assignments and accounting at school as not relevant. They did identify smaller classes (in response to question 6) as one of the things that the Department can do to support them. It is therefore important to take note of the complaints about large classes by the Achievers and the requests for smaller classes by the At Risk Students. This should be read in conjunction with other requests for tutorials and technology based support mechanisms.

The first three negative experiences, identified by the At Risk Students, (stress, first test and managing their studies) seem to be closely related, and could together be seen as the reason for their request for more assignments and a more relaxed test schedule to improve their semester marks. The whole class (RAU 2001:15) had the following requests to improve the course: longer lecture time is required, solutions are printed in too small a font, and they want the answers ahead of time to prepare. There was also a special request to help those students who did not take Accounting at school. As far as the tests are concerned, they complained that the “test papers are too long” and that more questions on theoretical issues should be included. Test anxiety and the constraints of time have been identified as the source of stress for low achieving students. These students also find it stressful to adapt to the culture of the university (Saenz 1999).

Achievers saw matric Accounting as useful in contrast to At Risk Students. They emphasized the value of matric Accounting by saying, “They are doing bad because they do not have the basic of it”, “What they learn in six months, we have learnt in five years” and “It is a very high standard for someone who hasn’t done Accounts.”
On the other hand, those At Risk Students who did take matric Accounting relied on their matric Accounting to see them through Accounting 1. It then seems that the At Risk Students initially overestimated the value of Accounting at school and then later discarded it as totally useless and a waste of time.

Only the At Risk Students complained about humiliation. The impression is created that they are targeted for talking during lectures, and that they are then embarrassed in front of the whole class by being asked what they got in the class test. The Achievers did not include this aspect in their list of negative experiences. This could give rise to the following interpretation: The At Risk Students are responsible for the talking and disruptions in class, and this is the lecturer’s way of controlling them.

**Question 4: What do your friends, who do well in Accounting, do to be successful?**

The two groups agreed that “they work harder”, they have a positive attitude and that they set high goals for themselves. The At Risk Students added another reason, namely that “their natural talent” contributed to their friends’ success. This perception that success is predetermined proves that these learners do not understand factors such as time, stress and study management.

**Question 5: What do your friends, who do NOT do well in Accounting, do wrong?**

The two groups agreed on the following reasons: they do not attend lectures and they do not do their homework, they have no study methods (or apply the wrong study methods) and they chose the wrong subjects. The At Risk Students added the following reasons to this list: wrong friends, they do not know how to write tests or exams and they have the wrong attitude.

How to write a test in Accounting is a good example of a topic that could be addressed by a tutor (3rd or 4th year student in Accounting) as part of academic development integrated with the academic content. The respondents seem to attach quite a lot of value to these senior students’ advice.

**Question 6: What additional support do you need to be more successful in Accounting 1?**

The two groups agreed on technology based support as important. The Achievers are of the opinion that the University and the Department are already doing “vrek baie”, and have only one additional request, namely that tests are scheduled to suit them better. The At Risk Students have a longer list of requests, namely smaller classes, tutorials, friendly consultations, that lecturers do not cancel lectures, a short break during double lectures, and active student participation in class.

It is obvious from the At Risk Students’ requests that they require personal support that should include improved learning experiences in class, small group interactions, and one on one consultations. The literature suggests that the single most important factor in advising learners who are at risk, is helping them to feel that they are cared for by the institution (Heisserer & Parette 2002).

**Researcher’s observations**

Although systematic observation by the researcher was not chosen as a method of data collection, the researcher’s informal observations are recorded here:

- **Language proficiency**
  
  Some of the students are unable to verbalize their thoughts coherently. They mainly the At Risk Students do not have the knowledge of and communication skills in English to communicate effectively. This can be seen in their incomplete sentences, lack of vocabulary and the repetition of meaningless stoppers, eg words such as “like ...”, “stuff”. They do not articulate clearly, and some of them lack the confidence to speak their minds.

- **Reflection on their own progress**
  
  It seems as if many of these learners have never reflected on their own progress or lack thereof. This could be seen in the way some of them gave answers, tried to explain and motivate them and then changed their point of view halfway through the discussion. This could be because they have never been asked to reflect on their own learning experiences.

**QUALITATIVE AND QUANTITATIVE SYNTHESIS**

Both qualitative and quantitative studies, the results of which were discussed in the previous section, were initiated by the Accounting Department at this institution and were independently conducted by different researchers. Even though both researchers aimed to explore differences between the same groups of Achievers and At Risk Students, the aim was not to triangulate.

Whereas the researchers realize the importance and need for intervention strategies to assist gifted students (ie Achievers) to be challenged and to reach their full potential, the emphasis of the following comparison (graphically depicted in Figure 6) is on At Risk Students with the aim to show the extent to
which the two approaches supplemented and complemented one another.

**Complementary results**

In both studies, the following issues were highlighted:

- Study methods and time management: At Risk Students are more likely to procrastinate and to study in a less disciplined way (quantitative); the perception of the At Risk Students is that unsuccessful students have the wrong study methods and that they (At Risk Students) experience problems managing their time and studies (qualitative).

- Intelligence: At Risk Students on average obtained lower m scores, passed fewer subjects in the first semester and are less intelligent than Achievers on most of the intelligence measures (quantitative); At Risk Students believe that successful students have a natural talent (qualitative).

- Language proficiency: At Risk Students have lower scores on Vocabulary than Achievers (quantitative); At Risk Students find it more difficult to verbally express themselves than Achievers (qualitative).

**Unique contribution of the quantitative approach**

- The demographic profile of At Risk Students and Achievers are similar, except in terms of home language where more At Risk Students come from historically disadvantaged backgrounds.

- At Risk Students have lower Verbal, and to a lesser extent Non verbal, Intelligence than Achievers.

- It is in terms of language Comprehension, rather than Vocabulary that At Risk Students are more challenged than Achievers.

- At Risk Students and Achievers have similar learning potentials.

**Unique contribution of the qualitative approach**

- At Risk students feel more insecure, ie they have a greater need for personal attention, assistance and guidance.

- At Risk Students experience HE more negatively than Achievers, ie they find it more difficult to integrate socially in the sense that they feel humiliated in class and experience high stress levels.

- At Risk Students are more likely to blame outside sources as reasons why they and other students like them are unsuccessful, eg parental interference.

*Figure 6*

*Complementary and supplementary contribution of quantitative and qualitative approaches*
in choice of study direction, the fact that they took Accounting at school, the negative attitude of lecturers, the length and nature of the classes, the lack of assignments and the friends they have chosen.

**CONCLUSION**

Following two conceptually different approaches to investigate the same problem, ie exploring differences between At Risk Students and Achievers, and conducting these investigations independently, yielded surprising similarities but more importantly provided deeper insight in terms of perceptions, on the one hand, and observation on the other of At Risk Students.

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