Changes in Students' Attributions from Primary to Secondary School

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Abstract
This paper reports the changes in attributions reported by students pre- and post- transition to secondary school. A group of 24 students from four primary schools were interviewed three times in their final year of primary school (Year 7) and three times during their first year of secondary school. Data relating to students' causal attributions for academic success and failure were collected along with explorations of students' reasons for making such attributions and their affective responses to achievement situations.

Changes emerged in the pattern of students' attributions for both success and failure and achievement related beliefs. These findings suggest that as students progress through school they bring with them not only academic skills but a range of beliefs about their competence which affect their academic performance. Aspects of the learning environment that play an important role in the formation of these beliefs and subsequent changes in the nature of achievement related beliefs were identified. It is suggested that there is much that
teachers can do to influence the nature of achievement attributions and beliefs.

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Introduction
This paper will report results which constitute part of a larger study which investigated self regulated learning and achievement motivation in students during the transition from primary to secondary school. The study was concerned with exploring the ways in which students made sense of and developed meanings in the transition between primary and secondary school. Data were collected that related to students' academic performance, and aspects of self-regulated learning and achievement motivation including, attributions, self perceptions of performance, goals and strategy use. This paper will report data relating to changes in students' attributions for success and failure at Year 7 and Year 8 and students' explanations of the reasons for their decisions about their attributions.

Background
It seems that students' academic performance relative to their peers remains stable from one school year to another. It is suggested that this is worsened when students move from primary to secondary school. This deterioration in academic performance possibly results from the intellectual skills and knowledge that students bring with them to the new learning situation. If students are "behind" when they enter a new year it will be more difficult for them to master that year's curriculum leading to a widening gap between curriculum demands and the intellectual skills of the student. However it is not only their "preparation" for academic tasks that affects learners' performance. Other more subtle factors such as the learner's beliefs about their personal competence and the causes of success and failure contribute to the difficulty of halting the pattern of decreasing achievement. Learners who perceive themselves as academically competent do better than those who believe they lack competence (Nicholls, 1978). Learners' causal explanations for success and failure and their academic performance also affect achievement behaviour and learning. Learners who attribute success to high effort and ability and failures to low effort generally perform better than students who attribute their successes to some external cause such as luck and their failures to low ability (Dweck, 1975, Schunk, 1984). Emotional responses may also inhibit or encourage effort and subsequent academic performance. Children who feel "dumb" in achievement settings, not surprisingly avoid working on tasks (Covington & Beery, 1976). These emotional responses are not the same as cognitive judgments about academic
competence but along with beliefs about competence and the causes of achievement are believed to become stable after the first few years of school. If these responses and beliefs become stable then it may help explain why learners' performance patterns become stable over years of school. An understanding of the stability of these factors in situations where learners experience changes in school setting, classmates, teachers and learning environments will have important implications for teaching. Mason and Stipek suggest that such beliefs and emotions are consistent across subject areas and are stable over time and suggest that such beliefs have in effect a life of their own and can transcend students' experiences.

Attributions
Attributions for success and failure in achievement situations are implicated in self regulated learning. Pintrich and de Groot (1992) propose three components of self regulated learning: an expectancy component which includes learners' beliefs about their ability to perform the task, a value component which includes learners' goals and beliefs about the importance and interest of the task and an affective component which includes learners' emotional reactions to the task.

Attribution theory (Weiner, 1979) says that learners explain the causes of their successes and failures in academic situations by ascribing them to the causes task, luck, ability and effort. These are viewed as stable/unstable, internal/external and controllable/uncontrollable. Causal attributions have significant consequences for students' expectations and emotional reactions. Performance expectations usually rise following success and fall following failure when a stable attribution is made for past performance. Outcomes attributed to unstable causes have less clear implications for the future performance of similar tasks.

Subjects
Subjects were 24 Year 7 from four feeder primary schools to a metropolitan government senior high school. They were selected on the basis of their performance at they Year 7 benchmark of the MSE maths and English tests.

Method
Students were interviewed three times each in Year 7 and Year 8 and interviews focussed on exploring students' expectations of secondary school and their experiences once they had arrived. During interviews students rated their perceptions of their academic performance in English, maths, general school work and social performance, explained their perceptions of the causes of successes and failures in real and hypothetical academic situations, their emotional responses to academic successes and failures, and described their achievement goals. Teachers rated students' academic and social performance. Classroom
observations were also conducted to provide contextual information and to support students' responses.

Attributions for success and failure were measured by asking students to describe recent academic situations in which they had performed well and poorly. They then selected the most important reason for their performance from pairwise combinations of the four common attributions: effort, task, ability and luck. Each attribution appeared three times so the scores for each attribution ranged from 0 to 3 depending on how many times it was chosen. Students were also encouraged to talk about how they felt when they were successful and unsuccessful in each situation and to describe how they explained this to themselves, the reasons why they thought they achieved the particular result, and any other "personal conversations" they may have had with themselves. This provided explanatory support for their choice. Currin and Harich (1993) support this procedure arguing that it is important to allow respondents to make whatever attribution seems appropriate for them. It is then possible to elicit their perception of the dimension of the attribution. It is the attributor's perception that affects subsequent cognitions and performance not the researcher's perceptions.

Results:
The following data represent the students' choice of reason for their success and failure and their own explanations as to why success or failure occurred. Research into students' attributions for academic success and failure (Stipek 1993) suggests that there are differences in the ways that girls and boys attribute success and failure. For this reason data relating to attributions are reported by group and gender. Table 1 presents students' attributions for success at Years 7 and 8 and Table 2 presents students' attributions for failure at Years 7 and 8.

Attributions For Success

Table 1
Attributions For Success at Years 7 and 8

<table>
<thead>
<tr>
<th></th>
<th>Year 7</th>
<th>Year 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Girls</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Boys</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Luck</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Girls</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Boys</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Task</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Girls</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

N = 24
At Year seven, 12 students (50%) attributed their success to effort and provided explanations such as, "I really put the effort in". Luck was held responsible for success by eight (33%) students who provided reasons such as, "I wasn't really sure but I thought I remembered something similar so I guessed that.". Positive outcomes were seen to be the result of the task by three students (12%), who supported their belief with explanations such as "We didn't really have to do very much in that project to get good marks. I just did what I know what the teacher likes.". Only one student attributed academic success to ability, stating that he believed he was "... pretty good at science because I really like reading about things like animals."

There was a difference in the major factor which boys and girls believed to be responsible for positive academic outcomes. The prime cause to which girls attributed their success was effort (66%), while 20% of the boys held effort to be the cause of their success. Success was attributed to luck by 66% of the boys who gave reasons such as "the teacher marked easy", and "someone showed me how to do that yesterday". Luck was held responsible for success by 12% of the girls. The task was considered to be the reason for success by 20% of the girls and no boys, and no girls attributed positive outcomes to their ability. Only one boy believed that ability was responsible for positive academic outcomes.

At Year eight, success was attributed to effort by 9 (38%) students who supported their decisions with comments such as "I tried hard on that", and "I've been working.". The task was held responsible for success by 7 (29%) of students who offered the following explanations, "the work is easy" and "we've done this work before". Success was attributed to luck by six (25%) students and to ability by two students (8%).

At Year eight positive outcomes were attributed to effort by 33% of the girls and 44% of the boys. Luck was viewed as the cause of success by 33% of the girls and 22% of the boys while 27% of the girls and 22% of the boys considered the task to be the reason for their success. Only one girl (7%) and one boy (11%) held ability to be responsible for their success at Year 8.

Attributions for Failure
Table 2
Students' Attributions for Failure at Year 7 and 8
N = 24
Year 7 Year 8
AttributionNumber % Number %

<table>
<thead>
<tr>
<th></th>
<th>Effort</th>
<th></th>
<th></th>
<th>task</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>42%</td>
<td>5</td>
<td>21%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>6</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2</td>
<td>8%</td>
<td>4</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luck</td>
<td></td>
<td>7</td>
<td>29%</td>
<td>12</td>
<td>50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>4</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td>3</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability</td>
<td></td>
<td>5</td>
<td>21%</td>
<td>3</td>
<td>12%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attributions for failure at Year seven.
At Year 7, failure was attributed to lack of effort by 10 students (42%), and to bad luck by seven students (29%). Lack of ability was held responsible for poor performance by five students (21%) and the task was the reason given by two students (8%) for their lack of success.

Failure was attributed to effort by 40% of the girls and 44% of the boys, and to the task by only one girl (7%) and one boy (11%). Luck was seen as the cause of negative outcomes by 27% of the girls and 33% of the boys while 27% of the girls and one boy (11%) held ability to be the cause of negative achievement outcomes.

Attributions for failure at Year eight
At Year 8, 12 students (50%) attributed failure to bad luck, "I broke my assignment [a model] and had to re-do it the night before", "I was away when the teacher told us about the test". Failure was attributed to lack of effort by five students: "I don't care what I get so I don't try", "I couldn't be bothered", "I had an important competition on that weekend so didn't have time to study" and "I didn't try hard enough.". The task was held responsible for poor performance by four students, "It was hard" and three students attributed poor performance to a lack of ability.

At Year 8 negative outcomes were seen to be the result of (lack of) effort by 13% of the girls and 33% of the boys. Failure was attributed to the task by 27% of the girls and no boys and to luck by 40% of the girls and 66% of the boys. Ability was believed to be the cause of negative outcomes by 20% of the girls and no boys.
Stability of Attributions
Correlation coefficients for attributions for success and failure from Year 7 to Year 8 are presented in Table 3. Attributing success to luck in Year 7 was associated with attributing success to luck in Year 8. Attributing success to an easy task was also somewhat stable from one year to the next. Attributing failure to luck in Year 7 was correlated with attributing failure to luck in Year 8.

Table 3
Stability of Attributions From Year 7 to Year 8

<table>
<thead>
<tr>
<th>Attribution</th>
<th>Success (N = 24)</th>
<th>Failure (N = 24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability</td>
<td>0.22</td>
<td>0.24</td>
</tr>
<tr>
<td>Effort</td>
<td>0.31</td>
<td>0.32</td>
</tr>
<tr>
<td>Task</td>
<td>0.396**</td>
<td>0.324</td>
</tr>
<tr>
<td>Luck</td>
<td>0.458*</td>
<td>0.433*</td>
</tr>
</tbody>
</table>

*p<.05
**p<.10

Changes in Individual's Attributions for Success and Failure
Each student's attributions for success and failure were plotted to create a "picture" of their attributions. Figures 1 and 2 represent each student's attributions for success at Year 7 and 8, and Figures 3 and 4 represent each student's attributions for failure at Year 7 and 8. Students' scores for each attribution (that is, ability, effort, task and luck) were plotted to develop a "picture" of the pattern of their attributions. The overlay of attributions at Year 7 and Year 8 allow for comparison of the ways in which students' patterns of attributions changed from primary to secondary school.

Three students maintained a consistent pattern of attributions from Year 7 to Year 8. A number of students demonstrated slight changes in the patterns of their attributions for success and there were cases where dramatic changes occurred. Examples of this include NC whose attribution pattern for success changed from effort, luck, task, (3, 2, 1) to effort, ability, luck (3, 2, 1). Her main attribution remained the same (effort) but her secondary attributions changed to become more internal. Another example of changed patterns of attributions for success is HJ whose attributions became more internal changing from luck, task, ability (3, 2, 1) to ability, task, effort (3, 2, 1). One student (JC) demonstrated a distinct change in attribution patterns from attributing failure to ability, effort and luck, to effort, luck and task.

No student maintained a consistent pattern of attributions for failure from Year 7 to Year 8. There were cases (SR, LH, KT) where students identified the same three causes for failure but in different ratios.
Discussion

Poor performance in the early grades leads to negative beliefs which in turn cause maladaptive task behaviour, continued poor performance, and stronger perceptions of incompetence. Dweck (1985) and Schunk (1983, 1984) suggest that children who learn to attribute their successes to high effort and ability and their failures to lack of effort generally perform better than children who attribute their successes to some external cause such as luck, and their failure to low ability. This relationship between beliefs and achievements is probably bi-directional.

Effort was the main source to which students attributed academic success in Year 7, and girls attributed their success to effort more often than did boys who attributed success to luck. This matches the general pattern of attributions described in the literature with boys attributing success to external factors and girls attributing success to internal factors (Stipek, 1993). Classroom observations and student comments suggest that Year 7 students received frequent and strong messages from their teachers about the importance of trying hard at their work. Effort was expected and rewarded, and written and verbal feedback supported the notion that effort was an important factor involved in completing learning tasks.

Changes in the patterns of attribution emerged in Year 8. While students considered the major source of success to be effort, the number of students who selected this decreased and the role of external factors such as task and luck took on a greater salience in the eyes of the students. In both Year 7 and 8 ability was seldom identified by students as the reason for their academic success. In contrast to this Nicholls (1985) suggests that ability is more frequently viewed as the reason for academic success than any other factor.

At Year 8, students' explanations of their successes often related to their perception that the work at high school was of the same level of difficulty or easier than the work that they had been doing the previous year. Students frequently commented on the fact that they believed they had done the work before or that it was an easy tasks. Hence their explanation for success often focused on the perceived ease of the task, an their affective responses to success were sometimes diminished because they did not perceive the task to hold much value. Some students expressed frustration at this and interpreted the level of difficulty to mean that teachers held low expectations for their academic performance. Students also reported that they were often unaware of the standard of work that their teachers expected and they did not know the criteria against which their work would be assessed. This lack of information made it difficult for some students to understand why they had been successful and they attributed their
success to chance.

At both Year 7 and Year 8, students attributed failure to the factors lack of effort and luck. Attributing failure to effort is a healthy attributional pattern as it means that students will be willing to attempt similar tasks in the future expecting success if they try harder.

The order of importance of these factors changed from Year 7 to Year 8. At Year 7 failure was attributed to lack of effort by 42% of the group and to luck by 29% of the group. At Year 8, failure was attributed to lack of effort by 21% of the group and to luck by 50% of the group. Luck took on greater importance in relation to their explanations of the causes of their poor performance. This finding is in direct contrast to Mason and Stipek (1989, p. 62) who chose not to analyse luck in their study of stability of attributions because "students do not perceive it as an important cause of academic outcomes."

This change in relative importance represents an undesirable change in the way in which students explained their academic performance as they accepted less responsibility for outcomes at secondary school. Attributing failure to luck is not very adaptive as it suggests that students do not believe that they have the power to affect their performance. This perception of a lack of control over their performance is highlighted by the frequency with which students expressed confusion over the type of work that their teachers expected of them and the features that constituted "quality" work. They commented that at primary school they believed they had a clear sense of what was expected of them but that this was clear at high school. This did not appear to be a function of different teacher or subject work expectations. Classroom observations and examination of school documents support students' claims that they were given little explicit information about the nature of work that was expected. The most consistent work-related message that students received related to the importance of submitting work by the due date and of submitting all necessary pieces of work. To some extent these messages are the result of teachers' interpretations of the demands of the secondary curriculum and lack of understanding of the criteria and standards involved.

In general the literature relating to attributions states that girls are more likely than boys to attribute failure to lack of ability. The small numbers of students who attributed failure to lack of ability in this study does not allow a clear judgment to be made in this area. However, it would seem that the findings of this study support this aspect of the literature.

At Year 7, effort appeared to play a particularly salient role in students' interpretations of academic performance situations. This may
be related to the primary school system where much value is placed on participation, and the strength of messages received from teachers about the importance of "trying hard" and "giving it a go". In contrast to this Harter Whitesell and Kowalski (1992) suggest that increased competition in secondary school places greater emphasis on achievement and hence ability. In this situation this was not the case as these students placed greater emphasis on the role of luck, specifying a range of factors outside their control.

Mason and Stipek (1989) found that students' academic performance, task behaviour and a number of achievement related cognitions were stable over one year. In their investigation of students' attributions they found that attributing success to ability was stable from one year to another and attributing success to an easy task was somewhat stable. Attributing failure to low ability was stable from one year to another as was attributing failure to the task. This study found that students viewed luck as an important cause of achievement outcomes and that attributing success to luck was stable from one year to the next and that attributing success to an easy task was somewhat stable. Attributing failure to luck was also stable from one year to another.

Implications
This study found that some aspects of students' attributions for academic success and failure did not match the findings for previous research literature. There are several possible explanations which emerge for this phenomenon. The first, in relation to the factors to which students attribute their success and failure suggests that there are perhaps sociocultural differences which impact on the ways in which Australian students make attributions. There is some support for this in the existing literature (Chan, 1992; Henderson & Dweck, 1990; Stevenson, Lee & Stigler, 1986; Stipek, 1993). The students in this study came from middle class predominantly white, first generation Australian families. Their background was generally one of immigrant families for whom the move to Australia meant the opportunity for success with hard work. It is likely that this cultural belief about the value of effort in achieving success has been internalised by the students.

Alternatively, the sample used in this study was of students performing at an average academic level. These students may view their success and failures differently to students previously surveyed. The existing literature tends to focus on the attributions of high and low performing students showing that differences exist between those two groups of students. Therefore, it is reasonable to expect that differences would also emerge when the group is comprised of "average" performers. These findings suggest that there is a need for a larger scale investigation of Australian students' attributions in academic situations. Additional support for the need for further investigation is provided by situations which emerged when students described their attributions. In many cases while students selected a particular
attributional factor to explain their success or failure, the verbal explanation which they provided did not seem to match the meaning which the researcher ascribed to the factor.

These findings suggest that students carry a certain amount of affective baggage with them from one educational context to another. However, for the students in this study the new educational context elicited a variety of new (and somewhat negative) responses. This highlights the importance of the current learning environment in promoting positive achievement related beliefs. It seems that students' perceptions of aspects of the educational environment such as level of difficulty of work, the type of learning that is seen to be valued, availability of information about performance standards and workload play a major role in their interpretation of the reasons for their academic successes. Secondary school teachers need to consider the features of the school learning environment that encourage students to deny responsibility for their academic achievement and make changes so that students are encouraged to accept responsibility for their achievement related outcomes.

References