Advancing Entrepreneurship in An Elementary School: A Case Study

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* *A former version of the paper has been presented at ISBE Conference, Belfast 4 – 7. November, 2008.*

Abstract

The aim of the paper is to introduce an experimental entrepreneurial elementary school in Israel. In addition to describing the organizational process of transformation from a conventional elementary school to an entrepreneurial school, the paper attempts to assess the impact of the process on teachers and pupils. The study investigates organizational culture, innovativeness of the school, the principal's proactivity and the entrepreneurial drive of pupils. The findings reveal that the interface of organizational culture fostering innovation, proactivity of the principal and a well defined project outline enables young pupils to learn about entrepreneurship, to learn to be entrepreneurial and to learn to become an entrepreneur. Since childhood and adolescence are the preferred periods in order to develop positive attitudes towards entrepreneurship and acquire basic knowledge on the issue, the presented case can provide a model for further educational undertakings fostering entrepreneurship in the future.

Keywords: Entrepreneurship education, Organizational culture, School profile, Entrepreneurial drive

1. Introduction

Entrepreneurs are people who formulate new ideas, recognize opportunities, and translate these into added value to society by assuming the risk of starting a business. They are a major source of economic growth and social development (Hatten, 1997; Holt, 1992). A wide research study on the factors that influence the decision to start a new business focused on attitudes and their antecedents to better explain the entrepreneurial process (Boyd & Vozikis, 1994; Shapero, 1975; Shapero & Sokol, 1982). Davidsson (1995) related personal variables including age, gender, education, vicarious experience and experiences of change to a variety of attitudes that influenced entrepreneurial intentions.

In recent years, the promotion of entrepreneurship as a possible source of job creation has attracted increasing policy and scholarly attention. The improving social attitudes towards entrepreneurship are also evident among young people. Recent survey data suggest that more and more young people, in both developed countries and developing countries, increasingly view entrepreneurship as a viable career option (Chigunta, 2002). Llisterri et al. (2007) report according to the Global Entrepreneurial Monitor (GEM) data that entrepreneurs who were between 31 and 45 years old (36-37 years on average) started most of the enterprises studied. However, the idea of going into business appeared much earlier in most cases, around age 26 on average. The three main reasons for going into business are positive: the desire for personal fulfillment, to apply one's knowledge, and to improve personal income. Consequently the importance of fostering entrepreneurial drive among young people is apparent.

During adolescence, entrepreneurial drive develops and the cultivation of the potential of this drive will encourage people to entrepreneurial action in the future. The importance of fostering entrepreneurial drive among young people derives from their contribution to valuable products and services to their local communities in particular and society in general (Chigunta, 2002). Their start-ups increase market competition, thereby support customers, increase innovation and flexibility, developing new ideas and solutions. Innovative economic opportunities and trends appear and technological changes open new job opportunities in the labor market (Chigunta, 2002).

Despite the recognition that education and prior entrepreneurial experiences influence people's attitudes towards starting their own business, the impact of entrepreneurship or enterprise education, as distinct from general education, on attitudes or perceptions of entrepreneurship has remained relatively untested (Donckels, 1991; Krueger & Brazeal, 1994). Career socialization theory proposes that the decision to initiate a career is influenced by many social factors including exposure to educational experiences (Dyer, 1994). Therefore enterprise

education programs can provide social experiences influencing the perceived desirability of starting a business in the future.

In this article I present a unique case of entrepreneurial education in the framework of an experimental elementary school in Israel. It is a rather unique setting, since it encompasses not only an entrepreneurial curriculum, but at the same time demonstrates an example for changing organizational culture and climate in order to enable the implementation of innovative ideas and action at all school levels.

2. Conceptual Framework

Empirical studies conducted in the past indicated that entrepreneurship is teachable, integrative (Hannon, 2006), and needed at all levels of education (Gibb, 2006a). The education of entrepreneurship can augment entrepreneurial attitudes and competencies (Henry, et.al. 2005; Gibb, 2006a; Pfeiffer, et.al. 2008), and the improving social attitudes towards entrepreneurship are evident among young people, perceiving entrepreneurship as a viable career option (Chigunta, 2002).

Most of the prior research on entrepreneurship education has concentrated upon university-based entrepreneurship curricular (Gorman, Hanlon & King, 1997; Young, 1997); nevertheless, entrepreneurship education in primary and secondary schools has also attracted some academic notice (Gasse, 1985; Kourilsky, 1995). For example Filion (1994) and Gasse (1985) maintained that childhood and adolescence are the preferred periods in order to develop positive attitudes towards entrepreneurship and acquire basic knowledge on the issue (Peterman & Kennedy, 2003).

This paper is conceptually based on the 'entrepreneurial education process' model introduced by Hannan et.al. (2004). Hannan, Hazlett and Leitch (2004) present a "dynamic process of changing the cognitive mechanisms within students" (pg.4) in terms of beliefs, values and attitudes that allow them to better understand their skills and capabilities. The authors combine the framework of Hytti et.al. (2002) with Young and Sexton (1997) and maintain that the entrepreneurship education process includes three stages: learning about entrepreneurship (1), learning to be entrepreneurial (2) and learning to become an entrepreneur (3).

The literature on corporate entrepreneurship concerns the entrepreneurial organization, which is one that is able to internalize the dimensions of innovativeness, risk taking and proactivity among managers at all levels and on a continuous basis (Morris & Trotter 1990). It is a process of organizational vitalization and revitalization with the purpose of increasing organizational success (Hornsby et.al. 2002). Thus organizations – in order to foster entrepreneurship from within, need to undergo processes of transformation, by adapting their structures and cultures so as to encourage entrepreneurial activities of employees (Goshal & Bartlett, 1997; Kanter, 1989; Peters & Waterman, 1982; Tushman & O'Reilly, 1996).

Combining the above, the present study is based upon the premises, that the entrepreneurship education process encompassing all its three stages (learning about entrepreneurship, learning to be entrepreneurial and learning to become an entrepreneur) should ideally take place within an educational organization undergoing processes of transformation towards becoming an entrepreneurial organization in itself. Dealing at the same time with the educational process and the organizational structure and culture can avoid misfit between content and feature. Accordingly, in order for a school (especially an elementary school) to provide children with the opportunity to learn about entrepreneurship, learn to become entrepreneurial and to become an entrepreneur, cultural and structural changes within the school are also necessary.

Following Chandler, Keller & Lyon (2000) three factors have an impact upon organizational innovation. In order to be innovative, employees have to trust management and feel that they receive support; in addition the reward system of the organization has to be perceived by the employees as to be focused on innovativeness. Extensive work load and stress will negatively influence innovativeness of employees. The trust in management is critical, since employees who do not trust their managers will not engage in innovative action involving the risk of failure (Chandler, Keller, and Lyon, 2000). Trust enables the employees to take risk without having to be afraid of failure (Porter, Lawler, and Hackman, 1975). The reward system is a critical factor in fostering or hindering innovative behavior within an organization (Chandler, Keller, and Lyon, 2000). Vroom (1964) states, that for an individual to invest effort he has to believe that once he achieves the goal, he will be rewarded. Work load in terms of lack of resources such as time, material or information will most certainly lead to decrease in commitment (Klein and Kim, 1998) whereas perception of availability of resources will lead employees to perceive the organization as innovative (Chandler, Keller, and Lyon, 2000) Chandler et.al. (2000) also found that company size (Robey, 1991) and formalized human resource practices have a negative impact on employee perceptions of an innovative support culture.

In order to assess the impact of the entrepreneurial process upon the organizational setting, a model of four entrepreneurial profiles of schools was used. These profiles are based on a former research study conducted in Israel (Eyal & Enbar, 2003), distinguishing between 'conservative schools', 'calculated entrepreneurship', 'initiating entrepreneurship' and 'vigorous entrepreneurship'. Each profile is based upon a combination of the school principal's proactivity, or the willingness to initiate actions within the school, and school innovativeness, the perceived amount of innovations implemented in school during a given time. These dimensions were used in order to develop an inventory measuring public school entrepreneurship in Israel. The following school's entrepreneurial profiles emerged: 1. The conservative school profile – moderate on the principal's proavtivity and low on school innovativeness; 2. the calculated profile – moderate and both the principal's proavtivity and school innovativeness; 3. the initiating profile – high on principal's proactivity and moderate on school innovativeness; and 4. vigorous entrepreneurial profile – high on both the principal's proactivity and the school innovativeness (Eyal & Enbar, 2003 pg. 234).

To assess the impact of the entrepreneurial learning process upon the school children in the presented case the concept of entrepreneurial drive was used. Florin, Karri and Rossiter (2007) developed an instrument measuring entrepreneurial drive based upon preference of innovation, nonconformity, proactive disposition, self-efficacy and achievement motivation.

"Entrepreneurial drive (ED) is an individual's perception of the desirability and feasibility to proactively pursue opportunities and creatively respond to challenges, tasks, needs, and obstacles in innovative ways. Individuals with high levels of entrepreneurial drive are generally high achievers, possess high self efficacy, question the status quo, and have a preference for innovative solutions" (Florian, et.al, 2007 pg. 26).

The concept seems adequate to measure outputs in the framework of an elementary school, since it captures in part the first two stages of the "entrepreneurship education process".

In the light of the above, this study presents a preliminary investigation of three interrelated issues concerning the school: the entrepreneurial culture in terms of Chandler, et.al, (2000), the entrepreneurial profile of the school in terms of the school profile introduced by Eyal and Enbar (2003) and the entrepreneurial drive of the children based upon the concept introduced by Florin, et.al. (2007).

3. Introducing the Case

Misgav elementary school was founded in 1975 and is located in Emek Hefer, Israel. In 2007 about 550 pupils from grade 1 to 6 were studying in the school and the staff included 33 teachers. In the year 2004 the school principle started to launch a development process with the aim to transform the formerly regular elementary school into an experimental entrepreneurial school. The school principal, being herself an entrepreneur, used a classical top-down strategy in order to initiate the process. In a typically proactive manner, she accounted for environmental instability. Even though embedded in an institutional environment of a public school system providing schools with pupils from the nearby local environment, competition between schools was steadily increasing. The first step of the process was the establishment of a "leading team" including three teachers, the vice principal and the principal herself. The team developed a pilot program focusing on two "entrepreneurial centers" led by two of the teachers aimed at two groups of pupils from grade five and six. At the same time the principal approached the Experimental Department of the Ministry of Education in order to join the community of experimental schools.

The concept of experimental schools is based upon the idea that alongside the conventional curriculum, the school focuses upon an additional subject matter such as arts, music, or ecology. In order to be accepted as an experimental school, the idea of the focus has to be entirely innovative, and a 5 year plan has to be elaborated upon, encompassing a gradual program for implementing the new content matter into the entire school. Once accepted into the program the school receives additional resources and a mentor from the Ministry of Education. Misgav was accepted as an experimental entrepreneurial school in 2005. At the next stage the mentor of the Experimental Department of the Ministry of Education and academic counselors joined the "leading team" which then started to develop a five year program of implementation. The implementation included lecturers and workshops for all teachers and gradual involvement of the immediate environment such as the local municipality, parents, students from a near-by college and representatives of the industry.

In 2007, the process was in its third year and the following aspects describe in short some of the entrepreneurial activities occurring in the school:

Within the framework of "entrepreneurial centers", all children participated in a weekly two-hour course in entrepreneurship;

1) The children could choose their "entrepreneurial center" which focused around various subjects such as: English, mathematics, sciences, ecology, arts, improving the school environment, community involvement ;

2) All "entrepreneurship centers" talked the same language, using concepts such as brain storming, team building, feasibility of the idea, resources needed to implement the idea;

3) Ideas were often implemented in cooperation with external partners, who had been approached by the children (firms in the environment, companies in which parents are working, etc);

4) Grade 5 and 6 pupils were mentoring younger children in "entrepreneurial centers" together with teachers;

5) Grade 2 pupils had an additional weekly lesson in "innovative and alternative ways of thinking";

6) A R&D center had been established focusing on information gathering and management;

7) Products developed by the pupils included: placemats with mathematical games, TTM (Talk to Me) encouraging English language skills, a cushion with tranquilizing herbs inside helping children to fall asleep, user-friendly garbage cans for paper, herbal ice-cream, a bracelet to avoid harassment between pupils. All products were presented and sold at a yearly fair at the end of the school year.

8) Future plans included incorporating entrepreneurial ways of teaching into the entire core curriculum.

4. The Study

The study was conducted during the year 2007 and included three parts. Investigating the organizational culture at Misgav (1), investigating the entrepreneurial profile of Misgav (2), and assessing the impact of entrepreneurial education process on Misgav pupils, achieved by comparing entrepreneurial drive of Misgav pupils to entrepreneurial drive on pupils of the same age and in the same grade in a conventional elementary school (3).

4.1 Investigating the organizational culture at Misgav

Participants

Sixteen teachers at Misgav consisting of 15 women, 1 man, the project organizer for the Ministry of Education and the school principal participated in the first part of the study. The average age of the participants was 43 years. Thirteen of them had been teaching at the school for more than 10 years and 3 of the teachers had joined the staff since 2003. A structured interview, based on Chandler, et.al (2000), encompassing three main issues of trusting the management (4 questions), a reward system (4 questions), and work load (3 questions) was used. The teachers were interviewed by a research assistant and the interviews took about one hour each.

4.2 Investigating the entrepreneurial profile of Misgav

Participants

The questionnaire was administered to all 33 teachers with a response rate of 79%.The questionnaire of Eyal (2000) was used in order to investigate the school climate in terms of principal's proactivity and school innovation. The questionnaire was composed of 32 items on a 7 point Likert scale ranging from 1 (disagree very strongly) to 7 (agree very strongly).

4.3 Assessing the impact of entrepreneurial education on Misgav pupils.

Participants

Ninety grade 6 pupils in Misgav and 86 grade 6 pupils from a conventional elementary school in Haifa participated in the study. Of the participants, 57% were girls and 43% were boys with no significant differences as to gender distribution between the two schools. Since all children were sixth graders the average age was 11.

The entrepreneurial drive questionnaire (Florin, et.al. 2007, appendix 1) was translated into Hebrew and adapted for school children. The questionnaire was composed of 42 questions encompassing the five dimensions of 'Entrepreneurial Drive' including proactive disposition, preference for innovation, self-efficacy, achievement motivation and non-conformity.

5. Findings

5.1 Investigating the organizational culture at Misgav

Table 1 (p.16) depicts the summary of the interviews on trust in management, reward system fostering innovative action and work load. It is apparent that teachers felt that they can trust the principal and that the reward system encouraged them to act innovatively. The teachers reported that they can address the principal in a non-formal manner at any time and felt that she assisted and encouraged them with their work. They also reported that they felt highly rewarded for their work in general and for their participation in the entrepreneurial

centers in particular, stressing intangible rewards such as appraisal and feelings of belongingness to the school. Ten of the teachers stated specifically that they were proud to be part of the entrepreneurial undertaking. Nevertheless, nearly half of the teachers felt that the work load is unacceptable. Follow up questions of the interviewers revealed that the double load of having to teach the regular curriculum and at the same time preparing the contents for the entrepreneurial centers was a major problem for the teachers. In addition, a number of teachers reported that they felt uncomfortable with a high degree of uncertainty as how to lead their entrepreneurial centers in terms of curricular content and pedagogical form.

5.2 Investigating the entrepreneurial profile of Misgav

In order to determine the entrepreneurial profile of Misgav the results of the study of Eyal and Inbar (2003) was used as a benchmark. The authors reduced the entrepreneurial dimensions (via Factor Analysis) to 10 out of 32 items for school innovativeness and 4 items out of 32 for principal's proactivity. The results were then condensed to one of three categories described as low, moderate and high. Teachers' average scores on principal's proactivity and school innovativeness was determined as low, when the index of the dimension was lower than 4, disagreement with the relevant notions of the questionnaire. Teachers scored moderate on a given factor if the index was higher than 4 and lower than 5.5, moderate agreement with the relevant notions. Index scores above 5.5 presented high agreement with the relevant notions.

For Misgav teachers the reliability coefficient of the 10 items representing innovativeness in terms of Eyal and Inbar's (2003) questionnaire showed an internal consistency of .80 using Cronbach's Alpha. As a result, they could be integrated into an index calculated as the mean value of variables, indicating school innovativeness. The four items representing the principal's proactivity in terms of Eyal and Inbar's (2003) questionnaire also showed internal consistency of .81 using Cronbach's Alpha. Consequently they could be integrated into an index calculated as the mean value of the variables, namely principal's proactitity (Table 2, p.17). The data reveal that when using Eyal and Inbar's results as a benchmark for Misgav (Table 3, p.18), teachers evaluated the principal's proactivity as high and school innovativeness as moderate. Thus, the entrepreneurial profile of Misgav is 'calculated entrepreneurship' due to the high scores of principal's proactivity.

5.3 Assessing the impact of entrepreneurial education on Misgav pupils.

Table 4 (p.18) reveals the results of the entrepreneurial drive questionnaire submitted to sixth graders at Misgav and at a conventional elementary school in Haifa. Using Cronbach's Alpha, the reliability coefficients of each dimension of the entrepreneurial drive showed internal consistencies. The proactive disposition subscale consisting of 9 items had an internal consistency of .85; preference for innovation comprised of 13 items was .79, the self-efficacy subscale of 8 items was .81; achievement motivation consisting of 7 items was .78, and the nonconformity subscale with 5 items showed internal consistency of .78. Accordingly these were integrated into indexes calculated as the mean value of items, indicating mean proactive disposition, mean preference for innovation, mean self efficacy, mean achievement motivation and mean nonconformity.

The data reveal that Misgav pupils rated significantly higher on proactive disposition, preference for innovation and achievement motivation. No differences were found for self efficacy, whereas on the dimension of non-conformity Haifa pupils rated significantly higher. The latter can be explained when having a closer look at the questions investigating non-conformity (Appendix 1 p.19/20). Misgav pupils were very much involved in extra-curricular and curricular entrepreneurial activities, therefore they identified with school regulations and procedures. Their average score on non-conformity was therefore extremely low.

6. Discussion and conclusions

Summing up the findings of this study, it seems that Misgav is an example for a rather unique educational setting fostering entrepreneurship education. The school appears to provide a "dynamic process of changing cognition mechanisms within students" (Hannan et.al., 2004, p. 4) in terms of beliefs, values and attitudes focusing upon achievement motivation, preference for innovation and proactive disposition, and attitudes that are crucial preconditions for entrepreneurial intentions and actions. In the above described entrepreneurial centers Misgav pupils are learning about entrepreneurship. They are learning to be entrepreneurial and are learning to become an entrepreneur. The implementation of these processes is possible only due to the fact that the organization – the school in itself – is undergoing processes of organizational change from a conventional school towards an entrepreneurial school. This process expresses itself via the emerging organizational culture. Staff members feel trust in management and rewarded for innovative actions, thus perceiving Misgav as a 'calculated entrepreneurial profile" after only three years of the organizational process.

The regulations of the Ministry of Education for "experimental schools" in Israel demand that the experiment is communicated to additional schools after 4 years. Therefore Misgav is now 'adopting' an elementary school whose principal decided to copy the concept of Misgav. This mentoring process involving the principal, the project organizer, and the teachers and pupils of Misgav will certainly further reinforce the ongoing experiment. Future research should focus on reinvestigating the organizational culture, the entrepreneurial process and the entrepreneurial drive of Misgav five years after the experimental process was launched.

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Table 1. Summary of results of interviews

	Trust in management (Q. 1,2,3,4)	Reward system encouraging innovative actions (Q. 5,6,7,8)	Acceptable work load (Q. 9,10,11)
Teacher 1	Yes	Yes	Yes
Teacher 2	Yes	Yes	No
Teacher 3	Yes	Yes	No
Teacher 4	Yes	No	Yes
Teacher 5	Yes	Yes	No
Teacher 6	Yes	Yes	Yes
Teacher 7	Yes	Yes	Yes
Teacher 8	No	No	No
Teacher 9	Yes	Yes	Yes
Teacher 10	Yes	Yes	No
Teacher 11	Yes	Yes	Yes
Teacher 12	Yes	Yes	Yes
Teacher 13	Yes	Yes	Yes
Teacher 14	Yes	Yes	No
Teacher 15	Yes	Yes	Yes
Teacher 16	Yes	Yes	No
Project-organizer	Yes	Yes	No
School principle	Yes	Yes	No
Percentage of positive answers	17/18 (94.44%)	17/18 (94.44%)	9/18 (50%)

Yes = all the questions were answered positively; no = at least one of the questions was answered negatively.

Table 2. Means of items indicating innovativeness and proactivity of school principal (Eyal & Enbar, 2002:243-244)

The entrepreneurial aspect	The item in the questionnaire	The average score in Misgav
Innovativeness	A great number of innovations were implemented in our school in the last two years.	5.84
	The innovations implemented in the last two years have caused a turnaround in our school's courses of action.	5.61
	In the last two years, our school implemented many activities that had not been tried previously.	5.57
	The innovations that have been implemented during the last two years have led to an overall, system-wide change in our school.	5.46
	I the last two years our school has implemented a great number of activities that did not exist previously.	5.42
	Innovations are a central factor in the life of our school.	5.30
	The innovations implemented in the last two years have led to a significant and substantial change in the guiding assumptions of our school.	5.11
	In the last two years a great many innovations have been implemented in our school.	4.88
	In our school there is a tendency to implement new courses of action.	4.61
	The innovations implemented in the last two years have radically changed the school.	4.34
	Mean innovativeness	5.21
Principal's proactivity	The school principal has shown great initiative in the development of ideas and activities in our school.	6.42
	Our school principal exhibits great initiative qualities.	6.34
	Many of the activities that characterize our school are the direct result of the principal's initiative.	5.76
	The school principal exhibits no initiative quality in her action*.	6.46
	Mean principal's proactivity	6.25
	Mean innovativeness and principal's proactivity	5.73
**Note: This question is stated negatively to prevent interviewers responding in a socially desirable manner. Therefore for statistical analysis the scores were reversed.*		
A 7 point Lijkert scale was used, with 1 =very strongly disagree; 2 =strongly disagree, 3 = disagree; 4 sometimes agree and sometimes disagree; 5 = agree; 6 = strongly agree; 7 = very strongly agree.		

Table 3. Comparing Misgav's scores with the benchmark

	Misgav's Average	Benchmark (Eyal & Enbar, 2002)	Misgav's Score
Principal's proactivity	6.25	> 4 = low 4-5.5 = moderate < 5.5 = high	high
School innovativeness	5.219	> 4 = low 4-5.5 = moderate < 5.5 = high	moderate
Total average	5.734		

Table 4. Comparing pupils' entrepreneurial drive: Misgav versus Haifa

	Misgav Pupils (N = 90)		Haifa Pupils (N = 84)		T-test Results	
	Mean	*SD*	Mean	*SD*	t	sig.
Proactive disposition	3.91	.582	3.09	.705	8.303	.000
Preference for innovation	3.71	.636	3.22	.465	5.771	.000
Self efficacy	3.44	.787	3.32	.548	1.2224	.223 (NS)
Achievement motivation	4.12	.627	3.40	.578	7.914	.000
Non-conformity	1.98	.704	3.19	.658	-11.65	.000

Appendix 1. The questionnaire of Florian, J., Karri, R. and Rossiter N. (2007)

Description
Proactive disposition (A)
I am always looking for better ways to do things.
I excel at identifying opportunities.
No matter what it odds, if I believe in something I will make it happen.
I can spot a good opportunity long before other can.
I love being champion for my ideas, even against others' opposition.
I see something I don't like, I fix it.
Nothing is more exciting than seeing my ideas turns into reality.
I am constantly on the lookout for new ways to improve my life.
I get a thrill out of doing new, unusual things at school or work.
Preference for Innovation (B)
I believe it is important to approach opportunities in unique ways.
I enjoy being the catalyst for change in school or work affairs.
I usually seek out colleges who are excited about exploring new ways of doing things.
I get real excited when I think of new ideas to stimulate my group performance in school assignment.
I believe it is important to continually look for new ways to do things at schools or work.
I get excited when I am able to approach tasks in unusual ways.
I enjoy being able to do things in new ways.
I often approach school tasks in unique ways.
I believe that to be successful one must sometimes do things in ways that could seem unusual at first glance.
I usually control in unstructured situations.
I enjoy finding good solutions to problems that nobody has looked at yet.
I believe that to arrive at a good solution to a problem, it is important to question assumption made in defining the problem.
I believe that when pursuing goals or objectives, the final result is far more important than following the accepted procedure.
Self-efficacy (C)
I feel inferior to most people I work with.
I often feel badly about quality of work I do.
I never persist very long on difficult job before giving up.
I often put on a show to impress the people I work with.
I feel self-conscious when I am with very successful people.
I feel uncomfortable when I am unsure of what my team members thinks of me.
I seem to spend a lot of time looking for someone who can tell me how to solve all my school problems.
I feel very self-conscious when making school presentation.
Achievement Motivation (D)
To be successful, I believe it is important to use your time wisely.
I feel proud when I look at the results I have achieved in my school activities.
I do every job as thoroughly as possible.
I believe it is important to analyze your own weaknesses.
I make a conscientious effort to get the most out of my available resources.
I feel good when I have worked hard to improve my assignments.
I believe that to be successful a person must spend time planning the future.
Non-conformity (E)
I always follow accepted practices in the dealings I have with others.
I rarely question the value of established procedure.
I believe that currently accepted regulations at school were established for a good reason.
I feel best about my work when I know I have followed accepted procedure.
I believe that in order to succeed, one must conform to accepted practice.
The questionnaire uses a 5 point Likert scale with SA = strongly agree, A = agree, U = undecided, D = disagree, SD = strongly disagree.