

The time-concept of Grade 11 learners and that of their parents

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The need to satisfy the demand for higher scholastic achievement in the senior secondary phase should be a priority for educators. Factors that play a role in scholastic achievement are the self-concept and the time-concept of learners. Previous research by this author has shown that there are differences in the time-concept and self-concept of high achievers and low achievers. The aim of this research was to investigate the time-concept in terms of a high and a low self-concept of Grade 11 learners and that of their parents. The results showed that the time-concept of a person with a high self-concept differs from the time-concept of a person with a low self-concept. Furthermore, with a given self-concept (high or low), it was found that there were minute differences in the time-concept of learners and the time-concept of their parents.

Key words: Self-concept; time-concept; scholastic achievement

Introduction and problem statement

In the current economic and political climate South Africans are subjected to widespread unemployment. More than a decade ago, Van der Merwe and Berkhout (1991:96) were already concerned that a high rate of unemployment would have a great influence on the education system. Today, all major stakeholders: learners, educators, parents, employers and the National Ministry of Education are concerned about the problem of poor learner performance in the Grade 12 examinations in South Africa (Legotlo, Maaga, Sebego, Van der Westhuizen, Mosogo, Niewoudt & Steyn, 2002:113).

In addition, a modern technological society places increasing pressure on the learner for higher scholastic achievement (Grobler & Myburgh, 2001:4). Furthermore, with South Africa's mission of 'affirmative action', learners with a so-called privileged background have to improve their scholastic achievements to increase their chances to obtain bursaries for tertiary education as well as for better career opportunities. This urgent need for higher scholastic achievement makes greater demands on educators (parents and teachers) and the learners (Grobler, Myburgh, & Kok, 1998:49). Indeed, it has become vital for educators to find answers to how their learners can be assisted towards higher scholastic achievement. Therefore, the need to gain a better picture of the various causes and possible solutions to this problem cannot be over-emphasised.

Over many years, research has shown that a significant relationship exists between self-concept and scholastic achievement (Purkey, 1970:150; Burns, 1982:225; Pintrich & Schunk, 1996:87; Gouws, Kruger & Burger, 2000:84; Du Plessis, Bouwer & Grimbeek, 2001:54; Meece, 2002:392) and that a positive self-concept is one of the most important factors in scholastic achievement (Grobler, 2003:158).

It is agreed that a positive self-concept, especially a positive academic self-concept contributes towards scholastic achievements, but that a self-concept, regarding other domains such as family, friends and supporting value system, is also important for scholastic achievement. Furthermore, the statement by Ferreira and Dreckmeyr (1993:78) that more emphasis should be placed — at home and at school — on the development of a sense of self-responsibility for learning in the child is supported. Self-responsibility for learning has a lot to do with aspects such as the timely completion of scholastic assignments by the learner.

It can be argued that the timely completion of assignments determines the attainment of scholastic and cognitive skills and capabilities. In fact, time and the conceptions thereof are '... inseparably associated with achievement and success' (Ben-Baruch, Myburgh, Wiid & Anderssen 1990a:62). By actively planning for future achievement, the child will learn that time is valuable and that time should not pass without planning for the future (*cf.* Ben-Baruch, Wiid, Myburgh & Anderssen, 1990b:48-53). According to Burgers (1993:3) it is the task of the educators (parents and teachers) to teach the child to utilise time effectively and to plan actively for the future.

Children's attitude towards time is based mainly on what they

hear and experience from their educators (Grobler, 1996:51). In fact, children's conceptions of the self and of time are formed on what they hear, see and experience from their educators. Therefore, the example that parents set to their children regarding the concept of the self and the concept of time may be crucial for the child's own self-concept and time-concept formation.

In a previous study, statistically significant relationships were found between the self-concept and time-concept of learners with a high average in scholastic achievement (Grobler, 1996:227-228) and between the self-concept and time-concept of learners with a low average in scholastic achievement (Grobler, 1996:229-230). In this investigation, differential analyses were done on the time-concept in terms of the self-concept of Grade 11 learners and that of their parents. The reason for this was to establish if there was a difference in the time-concept of children and the time-concept of their parents, if a specific self-concept (high or low) was a given.

The following research questions were formulated:

- Is there a difference in the time-concept of a group (children, mothers, or fathers) with a high self-concept and the time-concept of the same group with a low self-concept?
- Is there a difference in the time-concept of children and the time-concept of mothers, when both groups present a high self-concept?
- Is there a difference in the time-concept of children and the time-concept of fathers when both groups present a high self-concept?
- Is there a difference in the time-concept of children and the time-concept of mothers when both groups present a low self-concept?
- Is there a difference in the time-concept of children and the time-concept of fathers when both groups present a low self-concept?

Research aim and objectives

The overall aim of this investigation was to establish if the time-concept of a person with a high self-concept differs from the time-concept of a person with a low self-concept. In addition to this, the aim was to indicate any differences in the time-concept of children and the time-concept of their parents if the self-concept was kept constant. Therefore, the following were included:

- A literature study to develop a conceptual framework with regard to self-concept and time-concept in relation to education.
- An empirical investigation to determine: possible differences in the time-concept of persons (children, mothers or fathers) with a high self-concept and persons (children, mothers or fathers) with a low self-concept; possible differences in the time-concept of children with a high self-concept and the time-concept of parents (mothers or fathers) with a high self-concept; and possible differences in the time-concept of children with a low self-concept and the time-concept of parents (mothers or fathers) with a low self-concept.
- Recommendations for educators.

Theoretical perspectives

Self-concept in educational perspective

The self-concept may be viewed as a complex and dynamic system of beliefs which an individual holds true about himself and because it is an acquired ability it has an unlimited potential for development and actualisation (Grobler, 2003:149-150). This global self-concept can be divided into an academic and a non-academic self-concept. Santrock (2003:296-297) refers to these as domain-specific evaluations of the self, for example, the academic domain as scholastic competence. For instance, the academic self-concept can be divided into the evaluation of the self as scholastic competence in the specific subject areas. The non-academic self-concept can be divided into a social, an emotional, and a physical self-concept, and from there into specific sub-areas.

Notwithstanding the dynamic character of the self-concept in the sense that it may change from time to time and from situation to situation (Gouws, Kruger & Burger, 2000:82), it is also fairly stable. Therefore, a person who maintains a high positive self-concept will not easily be disturbed by a low test result or unfair criticism and *vice versa*. The cognitive life, which develops strongly especially during adolescence, and the expansion of the mental abilities lead to greater stability of the self-concept of individuals during the secondary school phase (Grobler, 1996:31). Or as Shaffer (2002:426) states: "... one's self-concept becomes more psychological, more abstract, and more of a coherent, integrated self-portrait from childhood throughout adolescence."

Time-concept in educational perspective

Jaques (1982:15) distinguishes two dimensions of time: chronological time and experiential time. Chronological time refers to the sequential characteristic of time, which is measurable by chronometers or watches, in other words 'watch time' or 'calendar time' (Burgers, 1993:29). This refers to the time of events with a definite beginning, middle and end. This measurable characteristic of chronological time is of utmost importance in regulating society and relationships. An inevitable implication of chronological time is that time as such is divided into a past, a present and a future. From the past the human being is planning in the present for the future. Through this planning, sense is given to the future and he/she thus directs him/herself towards the future.

In contrast to chronological time, experiential time relates to the human being's intentions, needs and aims (Jaques, 1982:14-16). Concerning the experiential dimension of time, Ben-Baruch (1985: 25-34) distinguishes three basic ways of viewing time:

- **Time is cyclic** — time is rhythmic and repetitive; thus it is not a scarce resource and there is no reason why there should be any haste because it is plentiful (e.g. in the underdeveloped and rural communities). A productive inclination in this case is absent to a large degree and it is expected that scholastic achievement and the importance thereof will not enjoy high prominence.
- **Time is linear and infinite** (unlimited or endless) — time is experienced as flowing constantly in one direction; the human being must plan in haste to obtain certain results within an irreversible, though prolonged, and extensive period. In this case it is expected that scholastic achievement and striving towards it will enjoy higher prominence, but as time is plentiful, the prominence of it, and a productive inclination, will still be largely absent.
- **Time is linear and limited** — time is measured and restricted, the human being involved is placed under the pressure of time limits to meet the demands set to complete tasks and assignments in the modern technological society. In this case it is expected that scholastic achievement and a productive inclination will enjoy high prominence.

These three views of time are not necessarily mutually exclusive, although one of these modes may be more prominent at a specific point in time. It should be clear that the dominant way of viewing time in a specific situation will play a role in the way in which the individual experiences and treats the demands of time restrictions.

The learner is 'taught' in the home and especially in the school to

organise time and utilise it purposefully, in other words, to be bound and restricted by time. This can happen intentionally or unintentionally. According to Ben-Baruch (1985:32), the school purposefully acquaints the learner with the linear and limited time mode. Achievement at school and also later in life can be attributed to this time-concept, as it is characteristic of the technological society in that it determines the pace for the economy.

Research instrument

A structured questionnaire in Afrikaans and English was developed on the aforementioned self- and time-concept by adapting and refining items from an existing self-concept instrument (Grobler, 1996: Appendix B) and from an existing time-concept instrument (Grobler, 1996: Appendix B). Apart from the biographical information, the final questionnaire consisted of 84 items, 45 items referring to the self-concept and 39 items referring to the time-concept of an individual. The respondents were requested to judge each item on the questionnaire on a seven point scale from 'large extent' (7) to 'small extent' (1).

Validity and reliability of self- and time-concept instruments

These measuring instruments reflected content validity because they were developed from theoretical frameworks, which were based on literature studies. The construct validity and reliability of each of the measuring instruments were investigated by using various consecutive factor analytical procedures consisting of first and second order factor analyses and by using item analyses.

Each first order factor analytical procedure comprised a principal component and consecutive principal factor analysis, both with orthogonal axes and varimax rotation, whereas a second order factor analytical procedure consisted of a principal factor analysis with orthogonal axes and varimax rotation and a consecutive principal factor analysis with the Doblmin rotation procedure. This procedure was applied respectively to the self-concept and the time-concept instruments. In each case only one factor with respect to self-concept and one factor with respect to time-concept were identified from the second order factor analytical procedure. This indicated that each measuring instrument had a high degree of construct validity and therefore measured only one construct, namely self-concept and time-concept respectively. A Cronbach alpha reliability coefficient of 0.827 was calculated for the self-concept scale that included 45 items. In addition, a Cronbach alpha reliability coefficient of 0.738 was calculated for the time-concept scale that included 34 of the original 39 items after an item analysis.

Respondents

Due to the cognitive advantages in the late adolescent years to form a coherent and integrated self-concept (Meece, 2002:394), it was decided to use Grade 11 learners and their parents as respondents for this investigation. One hundred Grade 11 learners (they will be referred to as 'children') and their parents or care-givers, therefore, a total of 300 respondents were used in this study.

Operationalising time-concept

After careful consideration of various factors, eight variables with respect to time-concept were identified for purposes of the differential analyses. These eight variables were identified by means of a first order factor analytical procedure with orthogonal axes and varimax rotation (Grobler, 1996:116). Because this investigation was of descriptive nature, this strategy would be reconcilable with the aim of the investigation.

A variable of **time-concept** could be regarded as respondents' conception of time, revealing 'something' or which is directed and dominated by 'something'. Therefore, following from the theoretical framework, the eight variables may be explained as follows:

- **Future orientation** (6 items) could be regarded as respondents' conceptions of time directed towards the future. This measure of time-concept reflects the extent to which respondents *inter alia* believe that they work to fulfil their ideals in the future, and that

they are willing to work hard now to benefit at a later stage.

- **Conscientious time management** (6 items) could be regarded as respondents' conceptions of time revealing the way in which they handle their time. This measure of time-concept refers to the extent to which they *inter alia* believe that they can organise their work programme with success and that they know how to utilise their time.
- **Time consciousness** (4 items) could be regarded as respondents' conceptions of time revealing their awareness of time. This measure of time-concept is related to the extent to which they *inter alia* experience that time passes quickly and that they work fast.
- **Anxiety towards the future** (6 items) could be regarded as respondents' conceptions of time dominated by their fear for the future. This measure of time-concept describes the extent to which learners *inter alia* believe that they become afraid when they think about the future and that the future looks dark even if they work hard to achieve success.
- **Present orientation** (4 items) could be regarded as respondents' conceptions of time directing towards the enjoyment of the moment. This measure of time-concept refers to the extent to which they believe *inter alia* that they prefer immediate pleasure to working hard for future success, that they want immediate reaction to their achievements, and that they ignore the consequences of what they do.
- **Unconcerned about time** (3 items) could be regarded as respondents' conceptions of time revealing a disregard of future consequences. This measure of time-concept is related to the extent to which respondents *inter alia* believe that they enjoy relaxing and forgetting about time, and that they like enjoying life now irrespective of the consequences.
- **Independent utilisation of time** (2 items) could be regarded as respondent's conceptions of time revealing a responsibility towards time. This measure of time-concept refers to the extent to which they *inter alia* believe that they act independently and that they do important things without being asked or ordered by someone.
- **Contentment with present and past** (3 items) could be regarded as respondent's conceptions of time reflecting the extent to which they *inter alia* believe that they wish the present will stay just as it is and that they find it pleasant to think about the past.

Groups with a high and low self-concept

A total self-concept score for each respondent was calculated as follows: the encircled number for each item on the seven-point scale was added. The self-concept score could vary from 45 (minimum scale value of '1' multiplied by the total number of self-concept items '45') and 315 (maximum scale value of '7' multiplied by the total self-concept items '45').

A frequency analysis showed that the majority of respondents obtained a total self-concept score of 226 (the mode). The value of 226 was also the median. Furthermore, 52.3% of the respondents had a self-concept score of 226 or less. Therefore, a self-concept score of 226 was used as the cut-off point for respondents with a high self-concept and respondents with a low self-concept.

Hypotheses and statistical analyses

The following univariate hypotheses were stated:

- H_{0t}** There are no significant differences between the mean/average scores of two groups of respondents when compared in terms of each separate variable constituting time-concept.
- H_{a1t}** The mean score of the first group of respondents is significantly higher than the mean score of the second group when compared in terms of each separate variable constituting time-concept.
- H_{a2t}** The mean score of the first group of respondents is significantly lower than the mean score of the second group when compared in terms of each separate variable constituting time-concept.

Differences in the time-concept of two groups

The statistical analyses of the data presented the following:

Univariate differences regarding the time-concept of children with a high self-concept versus the time-concept of children with a low self-concept:

The data in Table 1 show that H_{0t} was rejected in favour of H_{a1t} and therefore children with a high self-concept were significantly more conscientious in their time management ($P = 0.000$), more future oriented ($P = 0.000$), more independent in their utilisation of time ($P = 0.030$), more time conscious ($P = 0.005$) and more unconcerned about time ($P = 0.001$) than children with a low self-concept. This is in line with the findings of Grobler (1996:188) that high achievers with a positive self-concept are conscientious in their time management, future oriented, independent in their utilisation of time and time conscious. Therefore, it seemed that these aspects of time-concept are typical of high achievers and of children with a high self-concept.

Univariate differences regarding the time-concept of mothers with a high self-concept versus the time-concept of mothers with a low self-concept:

The data in Table 1 show that H_{0t} was rejected in favour of H_{a1t} and therefore mothers with a high self-concept were significantly more conscientious in their time management ($P = 0.000$), more content with the present and the past ($P = 0.000$), more future oriented ($P = 0.000$), more independent in their time utilisation ($P = 0.011$), more time conscious ($P = 0.000$) as well as more unconcerned about time ($P = 0.003$) than mothers with a low self-concept. Therefore, mothers with a high self-concept showed a more nuanced future perspective than mothers with a low self-concept. It is expected that these mothers with a more nuanced future perspective will manage their time more effectively and will handle their stress better than mothers with a low self-concept.

Univariate differences regarding the time-concept of fathers with a high self-concept versus the time-concept of fathers with a low self-concept:

The data in Table 1 show that H_{0t} was rejected in favour of H_{a1t} and therefore that fathers with a high self-concept experienced significantly more anxiety towards the future ($P = 0.002$), were more conscientious in their time management ($P = 0.000$), more future oriented ($P = 0.000$), more independent in their time utilisation ($P = 0.002$), more present oriented ($P = 0.013$) and more time conscious ($P = 0.004$) than fathers with a low self-concept.

Univariate differences regarding the time-concept of children with a high self-concept and the time-concept of mothers with a high self-concept:

The data in Table 2 show that H_{0t} was rejected in favour of H_{a1t} and that children with a high self-concept were significantly more present oriented ($P = 0.000$), more unconcerned about time ($P = 0.000$) than mothers with a high self-concept. Furthermore, H_{0t} was rejected in favour of H_{a2t} regarding conscientious time management ($P = 0.000$), independent utilisation of time ($P = 0.001$) and time consciousness ($P = 0.000$). Therefore, children with a high self-concept were significantly more present oriented and more unconcerned about time, but less conscientious in their time management, less independent in their time utilisation and less time conscious than mothers with a high self-concept. The reason for this may be that these children are still on their way to establishing an appropriate time-concept, whereby they will acknowledge the importance of planning and working for future success.

Univariate differences regarding the time-concept of children with a high self-concept and the time-concept of fathers with a high self-concept:

The data in Table 2 show that H_{0t} was rejected in favour of H_{a1t}.

Table 1 Differences between the time-concept of the two groups (persons with a high self-concept and persons with a low self-concept)

Time-concept variable	Groups		Children			Mothers			Fathers			<i>t</i> test <i>P</i>	
	Self-contact	N	Mean	SD	<i>t</i> test <i>P</i>	N	Mean	SD	<i>t</i> test <i>P</i>	N	Mean		SD
Anxiety towards the future	High	44	21.93	5.68	0.083	49	23.06	6.70	0.326	44	24.30	4.71	0.002**
	Low	51	23.43	4.78		47	23.64	5.71		52	21.29	4.94	
Conscientious time management	High	44	31.77	3.27	0.000**	49	34.82	2.54	0.000**	44	34.52	3.20	0.000**
	Low	51	25.74	4.65		47	30.55	4.41		52	30.69	4.53	
Contentment with present and past	High	44	14.18	3.28	0.051	49	14.63	3.26	0.000**	44	13.23	3.08	0.085
	Low	51	13.22	2.19		47	12.53	2.43		52	12.31	3.39	
Future orientation	High	44	36.11	4.66	0.000**	49	38.08	3.48	0.000**	44	37.70	3.74	0.000**
	Low	51	30.08	5.82		47	33.32	5.63		52	33.29	5.62	
Independent utilisation of time	High	44	10.20	2.48	0.030*	49	11.76	2.06	0.011*	44	12.34	2.30	0.002**
	Low	51	9.22	2.53		47	10.72	2.27		52	10.96	2.31	
Present orientation	High	44	17.18	3.59	0.100	49	13.31	4.22	0.272	44	14.80	4.78	0.013*
	Low	51	16.12	4.35		47	12.83	3.39		52	12.77	3.80	
Time consciousness	High	44	21.36	3.95	0.005**	49	24.28	3.40	0.000**	44	23.70	3.46	0.004**
	Low	51	19.25	3.81		47	21.70	3.72		52	21.65	3.90	
Unconcerned about time	High	44	16.59	2.97	0.001**	49	14.26	3.00	0.003**	44	14.59	3.51	0.051
	Low	51	14.82	2.26		47	12.42	3.40		52	13.56	2.38	

** $P \leq 0.001$; * $P \leq 0.005$

Table 2 The time-concept of groups with a high self-concept

Time-concept variable	High self-concept: children versus mothers					High self-concept: children versus fathers				
	Groups	N	Mean	SD	<i>t</i> test <i>P</i>	Groups	N	Mean	SD	<i>t</i> test <i>P</i>
Anxiety towards the future	Children	44	21.93	5.68	0.386	Children	44	21.93	5.68	0.037*
	Mothers	49	23.06	6.70		Fathers	44	24.30	4.71	
Conscientious time management	Children	44	31.77	3.27	0.000**	Children	44	31.77	3.27	0.000**
	Mothers	49	34.82	2.54		Fathers	44	34.52	3.20	
Contentment with present and past	Children	44	14.18	3.28	0.508	Children	44	14.18	3.28	0.163
	Mothers	49	14.63	3.26		Fathers	44	13.23	3.08	
Future orientation	Children	44	36.11	4.66	0.022	Children	44	36.11	4.66	0.081
	Mothers	49	38.08	3.48		Fathers	44	37.70	3.74	
Independent utilisation of time	Children	44	10.20	2.48	0.001*	Children	44	10.20	2.48	0.000**
	Mothers	49	11.76	2.06		Fathers	44	12.34	2.30	
Present orientation	Children	44	17.18	3.59	0.000**	Children	44	17.18	3.59	0.010**
	Mothers	49	13.31	4.22		Fathers	44	14.80	4.78	
Time consciousness	Children	44	21.36	3.95	0.000**	Children	44	21.36	3.95	0.004**
	Mothers	49	24.28	3.40		Fathers	44	23.70	3.46	
Unconcerned about time	Children	44	16.59	2.97	0.000**	Children	49	16.59	2.97	0.005**
	Mothers	50	14.26	3.00		Fathers	47	14.59	3.51	

** $P \leq 0.001$; * $P \leq 0.005$

Therefore, children with a high self-concept were significantly more present oriented ($P = 0.010$) and more unconcerned about time ($P = 0.005$) than fathers with a high self-concept. Furthermore, H_0t was rejected in favour of $H_{a1}t_2$ regarding anxiety about the future ($P = 0.037$), conscientious time management ($P = 0.000$), independent utilisation of time ($P = 0.000$) and time consciousness ($P = 0.004$). Children with a high self-concept were significantly more present oriented and more unconcerned about time but less conscientious in their time management, less independent in their time utilisation and less time conscious than fathers with a high self-concept. Again, the reason for this may be that these children are still on their way to establishing an appropriate time-concept whereby they will acknowledge the importance of planning and working for future success.

Univariate differences regarding the time-concept of children with a low self-concept and the time-concept of mothers with a low self-concept:

The data in Table 3 show that H_0t was rejected in favour of $H_{a1}t_1$ and that children with a low self-concept are significantly more present oriented ($P = 0.000$) and more unconcerned about time ($P = 0.000$) than mothers with a low self-concept. Furthermore, H_0t was rejected in favour of $H_{a2}t_2$ regarding conscientious time management ($P = 0.000$), future orientation ($P = 0.006$), independent utilisation of time ($P = 0.003$) and time consciousness ($P = 0.002$). Children with a low self-concept were significantly more present oriented and more unconcerned about time but less conscientious in their time management, less future oriented, less independent in their time utilisation and less

Table 3 The time-concept of groups with a low self-concept

Time-concept variable	Low self-concept: children versus mothers					Low self-concept: children versus fathers				
	Groups	N	Mean	SD	<i>t</i> test <i>P</i>	Groups	N	Mean	SD	<i>t</i> test <i>P</i>
Anxiety towards the future	Children	51	23.43	4.78	0.846	Children	51	23.43	4.78	0.028*
	Mothers	47	23.64	5.71		Fathers	52	21.29	4.94	
Conscientious time management	Children	51	23.74	4.65	0.000**	Children	51	25.74	4.65	0.000**
	Mothers	47	30.55	4.41		Fathers	52	30.69	4.53	
Contentment with present and past	Children	51	13.22	2.19	0.147	Children	51	13.22	2.19	0.109
	Mothers	47	12.53	2.43		Fathers	52	12.31	3.39	
Future orientation	Children	51	30.08	5.82	0.006**	Children	51	30.08	5.82	0.005**
	Mothers	47	33.32	5.63		Fathers	52	33.29	5.62	
Independent utilisation of time	Children	51	9.22	2.53	0.003**	Children	51	9.22	2.53	0.000**
	Mothers	47	10.72	2.27		Fathers	52	10.96	2.31	
Present orientation	Children	51	16.12	4.35	0.000**	Children	51	16.12	4.35	0.000**
	Mothers	47	12.83	3.39		Fathers	52	12.77	3.80	
Time consciousness	Children	51	19.25	3.81	0.002**	Children	51	19.25	3.81	0.002**
	Mothers	47	21.70	3.72		Fathers	52	21.65	3.90	
Unconcerned about time	Children	51	14.82	2.26	0.000**	Children	51	14.82	2.26	0.007**
	Mothers	47	12.42	3.40		Fathers	52	13.56	2.38	

** $P \leq 0.001$; * $P \leq 0.005$

time conscious than mothers with a low self-concept. These children need special input from their teachers to develop and establish a future orientation (see Table 1).

Univariate differences regarding the time-concept of children with a low self-concept and the time-concept of fathers with a low self-concept:

The data in Table 3 show that H_0t was rejected in favour of $H_{a1}t_1$. Therefore, children with a low self-concept experienced significantly more anxiety towards the future ($P = 0.028$), were more present oriented ($P = 0.000$) and more unconcerned about time ($P = 0.007$) than fathers with a low self-concept. Furthermore, H_0t was rejected in favour of $H_{a2}t_2$ regarding conscientious time management ($P = 0.000$), future orientation ($P = 0.005$), independent utilisation of time ($P = 0.000$) and time consciousness ($P = 0.002$). Children with a low self-concept experienced significantly more anxiety towards the future, were more present oriented and more unconcerned about time, but were less conscientious in their time management, less future oriented, less dependent in their utilisation of time and less time conscious than fathers with a low self-concept. Again, these children need special input from their teachers to develop and establish a future orientation (see Table 1).

Summary of the most important findings

- The time-concept of children with a high self-concept versus children with a low self-concept. Children with a high self-concept were more conscientious in their time management, more future oriented, more independent in their utilisation of time and more time conscious than children with a low self-concept.
- The time-concept of children with a high self-concept versus parents with a high self-concept. These children were less conscientious in their time management, less independent in their utilisation of time, more present oriented, less time conscious and more unconcerned about time than their mothers and fathers.
- The time-concept of children with a low self-concept versus parents with a low self-concept. These children were less conscientious in their time management, less future oriented, less independent in their utilisation of time, more present oriented, less time conscientious and more unconcerned about time than their mothers and fathers.

Recommendations for educators

- Although children with a high self-concept seem to have the necessary characteristics of a time-concept which are conducive to

scholastic achievement at their disposal, these characteristics can still be upgraded. Children should be guided by their educators to become more conscientious about time and their management of it, more independent in their utilisation of time, and more future oriented. Educators can assist children to set short and long term goals and plan a work programme to achieve these goals.

- The children of parents with a low self-concept need special attention and should be guided by their educators (read teachers) to develop and establish a future orientation.
- Educators should assist children to organise their homework programme with success and also give them guidance on how to utilise their time more productively. Children should have opportunities to act independently and to take the responsibility of doing important things without being asked or ordered by someone.
- Children need to be reminded that time passes quickly and that they have to plan and work hard for future success. In addition to this, they always have to take the consequences of what they do, or don't do, into consideration.
- Children with a low self-concept should be identified and they should be guided to change their low self-concept into a high self-concept. By doing this they may develop the necessary time-concept which will be conducive to scholastic achievement.
- Because educators serve as role models for children, they should reflect a high positive self-concept and attitude towards time that are both conducive to the children's well-being and achievement.

Conclusion

The time-concept of children, mothers and fathers with a high self-concept differs from the time-concept of those with a low self-concept, especially in the following aspects: conscientious time management; future orientation; independent utilisation of time; and time consciousness. It must be emphasised that it is the responsibility of educators (parents and teachers) to support and guide children to develop and establish a high self-concept and an active future oriented time-concept which will contribute to their future success.

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