

Education Managers' Perceptions of Teamwork: A Pilot Case Study in the Nkangala District, South Africa

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ABSTRACT The objectives of the pilot case study carried out in the Nkangala District in South Africa were two-fold: Firstly, to determine whether a quantitative measuring instrument could be designed to measure the perceptions of education managers on teamwork in schools; secondly, to determine teamwork training needs of school managers through the application of the instrument. The questionnaire administered to 23 education managers determined their perceptions and training needs in ten aspects of teamwork identified through a literature study. The results for five aspects are presented in the article, while the rest are shortly summarised. The analysis results on scale reliability proved it was possible to design and test manager perception trends reliably, which could then be used to determine training needs in effective teamwork.

INTRODUCTION

It would seem appropriate to begin this article by indicating that very little research has been done on teamwork (other than on school management teams specifically) in South African schools, more specifically in the Mpumalanga Province. However, as Rush (2002: 2) observes, most management textbooks, university professors and management trainers and consultants define management as getting work done through other people. Reaching the aims of organisations utilising human and other resources (Van Deventer 2003: 65-66) through the management functions of planning, organising, leading and controlling reflects a similar view of management. Leadership as management task refers to influencing followers to achieve organisational aims (Kleon and Rinehart 1998: 2). In organisations such as schools, teamwork should thus be important to managers and leaders because teams are people in action within the organisational context who aspire to achieve the aims of organisations. Furthermore, in recent years the increased focus on participative and distributive leadership as well as the movement

towards school-based management have placed a greater emphasis on teamwork in South African schools (Ramparsad 2001; Botha 2011; Van Der Mescht and Tyala 2008: 222), which adds to the need for managers to be able to facilitate effective team functioning in their schools.

Schools provide ideal opportunities for teamwork; therefore it is not surprising that the literature on teamwork acknowledges the benefits of teamwork for schools (Jones 2005: 24; Sousa 2003: 247; Van der Mescht and Tyala 2008: 223, 229-230). Examples of teams featuring within the South African school context are learning area and subject teams, grade teams, departmental teams, assessment teams, school management teams, school nutrition teams, school beautification teams and co-curricular and extra-curricular teams of various sorts (School Management Portfolios 2010-2011). Teamwork does take place in most schools, irrespective of whether school managers are in favour of this, so the focus should rather be on the quality of teamwork in any given school. This will depend a lot on the perception of the principal, other school managers and team leaders of teamwork. Therefore the perception of education managers of teamwork is the focus of this research.

The research question that guided the research is: What are the perceptions of education managers regarding teamwork in the school environment? To this end, relevant aspects of teamwork needed to be identified and a measuring instrument of perceptions of teamwork needs had to be developed to be able to investigate and evaluate perceptions.

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In literature dealing with teamwork in general and teamwork in education in particular, there are relevant aspects that crop up continuously. It is from these aspects that the authors chose relevant ones to include in the measuring instrument developed for the study. The chosen aspects covered are benefits of teamwork; characteristics of teamwork; team roles; team building; goal achievement; team meetings; team motivation; conflict management; monitoring performance; creativity and risk taking. Although this is not an exhaustive list of relevant aspects of teamwork in schools, the researchers were convinced that these are important aspects. The researchers familiarised themselves with these aspects of teamwork in order to be able to develop a quantitative questionnaire as measuring instrument.

Apart from the older sources extensively focusing on teamwork (Belbin 1981; Arcaro 1995; Chivers 1995; Dunham 1995; Garner 1995; Jay 1995; Donaldson and Sanderson 1996) validating the importance of the chosen topics for the questionnaire, more updated sources (Rush 2002; Van Deventer and Kruger 2003; Eller 2004; Jones 2005; Jude 2006; Maxwell 2007; Adizes 2008; Goleman 2008; Heystek et al. 2008; Lencioni 2008) seem to confirm the importance of the chosen aspects relevant in teamwork that were taken up in the questionnaire.

An added benefit to choosing these aspects is that one of the researchers had written a chapter entitled *Working with Teams* for the book *Human Resource Management in Education* (Steyn and Van Niekerk 2007) which covered these aspects, and this chapter could thus serve as a convenient starting point for the development of the measuring instrument. This book was also used by the respondents in the research study as a prescribed book in their studies during 2010, and they had already completed one assignment on the topic of teamwork at the time when the empirical study was done. Having this group of respondents readily available, it thus seemed ideal to use this chapter as the basis for developing a questionnaire on the topic of the research as one could then assume that the respondents were indeed relatively informed about the topic of the research.

Against this backdrop, the researchers view teamwork as a cog that drives effectiveness in schools. Working together in teams often is a more effective way to accomplish important

tasks. It involves work performed by a team towards a common goal. Thus, teamwork is central in the efficient and effective leadership and management of schools. Drawing on constructivism as a theoretical framework, the objectives of this exploratory study on teamwork in the school environment discussed in this article were two-fold. Firstly, to investigate whether a quality measuring instrument could be designed to capture school managers' perceptions on teamwork in their schools; and secondly to identify teamwork training needs through the application of the instrument in order to be able to enrich training programmes to promote and improve effective teamwork implementation in schools.

RESEARCH METHODOLOGY

Sampling and the Purpose of the Study

In this exploratory phase of the research, a pilot group of 23 education managers from the Nkangala District who had completed an assignment on teamwork in the school environment, as part of a Certificate Course in School Management during 2010, were selected to partake in the study. It was reasoned that this group of education managers would be more informed about the principles of effective teamwork and the benefits that could be derived from teamwork within the school environment. It was argued that if this group's views on teamwork could be obtained, their perceptions would reflect the views of an informed group of education managers. If their attitude towards teamwork was positive, it would indicate that a teamwork approach undergirded with relevant training could be applied to good effect in the school environment. It would then furthermore be a worthwhile exercise to expand the study to a broader spectrum of education managers (who will not necessarily be informed), obtain their views on teamwork, observe which aspects of teamwork they seem to perceive more negatively (or indifferently) and embark on training programmes on teamwork leadership with specific attention directed towards areas which they seemed to experience negatively, and in this way improve on teamwork and teamwork management in schools in future. As such sampling for the current research was purposive and convenient. The sample properties are reflected in Table 1.

Table 1: Frequency distribution of biographical variables

Variables	f_i	%	Cum f_i	Cum%
<i>Gender</i>				
Male	9	39.13	9	39.13
Female	14	60.87	23	100.00
<i>Age</i>				
36—45 years	6	26.09	6	26.09
46—55 years	15	65.22	21	91.30
55+ years	2	8.70	23	100.00
<i>Position</i>				
HOD	2	8.70	2	8.70
Deputy Principal	9	39.13	11	47.83
Principal	12	52.17	23	100.00
<i>Qualifications</i>				
3-year Diploma	4	17.39	4	17.39
4-year qualification	8	34.78	12	52.17
BEd Hons Degree	10	43.48	22	95.65
Master's Degree	1	4.35	23	100.00
Doctoral Degree	0	0.00	23	100.00
<i>Management Experience</i>				
0—5 Years	7	30.43	7	30.43
6—10 Years	2	8.70	9	39.13
11—15 Years	7	30.43	16	69.57
16—20 Years	2	8.70	18	78.26
21+ Years	5	21.74	23	100.00

Questionnaire Design

The questionnaire developed to address the research objectives consisted of eleven sections of closed-ended questions (109 questions in total). In the first section biographical information on gender, age, post level, qualifications and workload was requested from respondents (reflected in Table 1). In the next ten sections respondents were requested to indicate their viewpoints – as agreement ratings on a five-point agreement Likert rating scale – on ten aspects of teamwork identified in the literature review of this study. Each aspect was described by, and evaluated against a subset of ten questionnaire statements on the particular aspect of teamwork management. The aspects were labeled as follows (these labels were used in the tables included in this article) and included:

- ♦ benefits of teamwork
- ♦ characteristics of teamwork
- ♦ team roles
- ♦ team building
- ♦ goal achievement
- ♦ team meetings
- ♦ team motivation
- ♦ conflict management
- ♦ monitoring performance
- ♦ creativity and risk taking

The subsets of statements on each aspect of teamwork were carefully considered by the team of researchers for content validity. Five of the ten subsets of questionnaire statements that describe the aspects of teamwork are indicated in composite frequency tables, Tables 3-7, of the article. These components are, *benefits of teamwork, goal achievement, conflict management, monitoring performance and creativity and risk taking* as aspects of teamwork in the running of schools. The statements on the other constructs are listed in Table 8.

The finalised product was administered to the mentioned 23 managers under the supervision of two of the researchers. The questionnaire was administered during a workshop arranged for educational managers as a part of their completion of the Certificate Course in School Management. A 100% response rate was reported as all the managers who were present at the workshop completed the questionnaire. Completion of the questionnaire was voluntary, and privacy of information was respected.

Analysis Strategy

The analysis strategy of the study was designed to address the objectives of the study and to this end included reliability testing; calculation of perception scores for each teamwork aspect defined; calculation of construct score means; and composite frequency tables for each component of teamwork management.

This article reports on the analysis results of all ten investigated teamwork constructs, but detailed discussions on and interpretations of results are limited to five of the constructs. Research was described in this way to illustrate the deductive reasoning followed, but at the same time reduce repetitiveness and save space.

RESULTS

Scale Reliability Testing to Validate Internal Consistency Reliability of Teamwork Constructs and Calculation of Teamwork Construct Scores

Although the sample size was limited, the analysis strategy included scale reliability testing to validate the internal consistency reliability of the teamwork management aspects. Internal consistency reliability acts as indicator of

the questionnaire's ability to measure the concepts of teamwork management which the questionnaire was designed to measure consistently. Consistency reliability tests whether subsets of questionnaire items designed to describe aspects of teamwork truly contribute towards explaining these specific aspects of teamwork (for example the ten questionnaire statements on 'the benefits of teamwork'). In these analyses Cronbach alpha coefficients are calculated and values in the region of 0.7, or greater than 0.7, indicate that all questionnaire items within a subset jointly contribute towards explaining an aspect of teamwork management. Reliability analyses output also indicates which questionnaire items do not contribute towards explaining a construct and should be removed from the subset and/or which questionnaire items should be stated inversely.

The results of the reliability tests conducted on the ten subsets of respondent rating scores on the ten teamwork management constructs are summarised in Table 2. Each row of the table reports on a separate analysis. Column one indicates the teamwork construct investigated, column two the questionnaire items describing the teamwork management construct, column three the questionnaire items which the analysis indicated did not contribute towards describing the construct, column four the questionnaire state-

ments which the analysis indicated had to be stated inversely and column five the calculated Cronbach alpha coefficient.

Deductions

The Cronbach alpha values for all teamwork management constructs varied between 0.71 and 0.95 which indicated that internal consistency reliability was established for all teamwork constructs. This implied that a reliable summative measure of respondents' perceptions on each teamwork management construct could be calculated. These summative measures are referred to as perception scores (10) and are calculated – for each respondent and each construct – as mean agreement ratings of the subsets of questionnaire statements that describe each teamwork aspect. The analysis thus proved that an instrument could be developed that reliably measured respondents' perceptions of various aspects of effective teamwork management in the school environment.

Respondent scores on each teamwork construct were averaged and mean scores presented in the last column of Table 2. These mean scores values are interpreted according to the agreement rating protocol for the questionnaire and represent respondents' general perceptions of the aspects of teamwork management inves-

Table 2: Scale reliability testing results to verify internal consistency reliability

<i>Teamwork construct</i>	<i>Questionnaire statements describing the construct</i>	<i>Statements removed</i>	<i>Statements reversed</i>	<i>Cronbach alpha</i>	<i>Construct score (std dev.)</i>
Benefits of teamwork	a1—a10	-	a7—a9	0.75	1.80 (0.38)
Characteristics of teamwork	b1—b10	b7		0.89	1.74 (0.58)
Team roles	c1—c10	c10	c10	0.73	1.81 (0.37)
Team building	d1—d10	d2 d8	d1 d7	0.72	1.85 (0.40)
Goal achievement	e1—e10	e8	e6 e9	0.75	1.85 (0.41)
Team meetings	f1—f10	f10	f6—f8	0.79	1.59 (0.41)
Team motivation	g1—g10	-	g9	0.85	1.70 (0.48)
Conflict management	h1—h10	-	h5, h8—h10	0.71	2.39 (0.55)
Monitoring performance	i1—i10	-	i6—i7 i10	0.81	1.93 (0.41)
Creativity and risk taking	j1—j10	j9 j4	j6—j8	0.72	2.47 (0.45)

tigated. The agreement rating of the questionnaire was such that '1' indicated 'strong agreement'; '2' indicated 'agreement'; '3' indicated 'indifference'; '4' indicated 'disagreement'; and '5' indicated 'strong disagreement'. A value of 1.8 for example would therefore fall between 'strong agreement' and 'agreement', and approximates 'agreement'.

Table 2 for example indicates that respondents had a positive perception ('*in agreement*') of the *characteristics of teamwork*, *team roles*, *team building*, *goal achievement*, *team motivation*, and the contribution of *monitoring performance* towards effective teamwork (respectively indicated in mean construct scores of approximately '2', namely, respectively 1.74; 1.81; 1.85; 1.85; 1.70 and 1.93). In addition respondents were very positive regarding *team meetings* as a component of effective teamwork (a score closer to '1', which indicates '*strong agreement*' at 1.59) and less positive, almost indifferent ('*neutral*' rating response of '3') towards the issues of *conflict management* and *creativity and risk taking* in teamwork. (Mean scores of 2.39 and 2.47 tend towards the value of '3' which signifies a *neutral* perception.)

In summary, the score means thus indicate that the sampled education managers generally

viewed teamwork in a positive light. This deduction can be regarded as an indication that school managers perceive that a teamwork approach in the school environment can contribute towards the smooth running of schools. This corresponds with the first aim of the research.

Composite Frequency Tables on Five Teamwork Aspects to Investigate Perceptions and Training Needs I—in More Detail

A more detailed description of exactly how issues within each component of teamwork aspects were perceived can be gleaned from the composite one-way frequency tables presented in Tables 3-7. These tables present the frequency response pattern of participating managers to each subset of questionnaire statements on each teamwork component. The value of these response patterns lies in the fact that the details of an envisaged teamwork training programme can be guided by directing more attention to those sub-issues (within teamwork aspects) which tended to draw more negative perceptions from respondents – indicating issues/areas that educators need to be informed on to understand how these areas underpin effective teamwork

Table 3: Frequency distributions of questionnaire statements describing the construct: Benefits of teamwork

<i>Benefits of effective teamwork</i>	<i>Agreement rating levels</i>					<i>Total</i>
	<i>Agree⁺⁺</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Disagree—</i>	
<i>Frequency and Row Pct</i>						
a1 Teamwork enriches educators	11 47.83	11 47.83	1 4.35	0 0.00	0 0.00	23
a2 Benefits known	7 30.43	15 65.22	1 4.35	0 0.00	0 0.00	23
a3 Quality of teaching enhanced through teamwork	11 47.83	10 43.48	2 8.70	0 0.00	0 0.00	23
a4 Promote participatory teaching	9 39.13	13 56.52	1 4.35	0 0.00	0 0.00	23
a5 Decision power is increased	8 34.78	13 56.52	2 8.70	0 0.00	0 0.00	23
a6 There are benefits for the school in teamwork	10 43.48	12 52.17	0 0.00	1 4.35	0 0.00	23
a7(-) Teamwork threatens authority in the school	0 0.00	2 8.70	2 8.70	12 52.17	7 30.43	23
a8(-) Teamwork is a waste of time	0 0.00	1 4.35	1 4.35	8 34.78	13 56.52	23
a9(-) Teamwork is only for gossiping sessions	0 0.00	0 0.00	1 4.35	7 30.43	15 65.22	23
a10 Differences slow down decisions	2 8.70	6 26.09	3 13.04	11 47.83	1 4.35	23
Total	58	83	14	39	36	230

and how to deal with these issues in a positive way. The previously mentioned five teamwork management constructs will now be discussed in detail.

(i) *Benefits of Teamwork in the School Context*

Frequency distributions of questionnaire statements describing the construct *Benefits of teamwork* are presented in Table 3.

Deductions

The total *agreement* (agree⁺⁺ and agree) rating of 58 + 83 = 141 responses, namely 61.30%, in the totals row of table 3 affirms the positive benefits construct score mean of 1.8 indicated in Table 2. This signifies that respondents were aware of, and positive about the benefits associated with teamwork. Investigation of the individual benefit issues reveals that an overwhelming majority of respondents agreed that educators are enriched by working together in teams (95.66%); that the quality of teaching is en-

hanced through teamwork (96.31%); that participative teaching is promoted through teamwork (95.75%); that decisionmaking power is increased through teamwork (91.30%); that education managers believe that there are benefits to be derived from teamwork in schools (95.65%); and that respondents as education managers know the benefits of teamwork in their schools (95.65%). The educational managers hardly supported any of the items in the questionnaire that indicated negativity towards teamwork. Only two managers (8.7%) felt that teamwork threatens the position of authority of the school principal, while two (8.7%) were undecided on the matter; one manager (4.35%) felt that teamwork is a waste of time, while another was undecided; and nobody perceived teamwork to be a gossiping session about the principal. Eight managers (34.79%) indicated that personality differences within teams slow down the decisionmaking process, which shows that managers are aware of negative factors associated with teamwork (something that should be elaborated on in teamwork training.) In general educational managers were overwhelmingly positive about the bene-

Table 4: Frequency distributions of questionnaire statements describing the construct: Goal achievement in teamwork

(-):	The inverse response ratings of these questionnaire statements were used to calculate the goal achievement construct scores of respondents.						
#:	The response rating of this statement was not included in the calculation of the goal achievement construct score of respondents.						
<i>Issues of goal achievement</i>		<i>Agreement rating levels</i>					
<i>Frequency and Row Pct</i>		<i>Agree⁺⁺</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Disagree—</i>	<i>Total</i>
b1 Measurable	14 60.87	7 30.43	0 0.00	2 8.70	0 0.00		23
b2 Achievable	17 73.91	6 26.09	0 0.00	0 0.00	0 0.00		23
b3 Set d-dates	13 56.52	9 39.13	0 0.00	1 4.35	0 0.00		23
b4 Clear on goals	12 52.17	11 47.83	0 0.00	0 0.00	0 0.00		23
b5 Clear on vision, SMT	16 69.57	7 30.43	0 0.00	0 0.00	0 0.00		23
b6 Over emphasis on objectives	4 17.39	9 39.13	4 17.39	6 26.09	0 0.00		23
b7# Clear vision, members	8 34.78	14 60.87	1 4.35	0 0.00	0 0.00		23
b8 Pressure and goals	1 4.35	16 69.57	1 4.35	4 17.39	1 4.35		23
b9 Goal formulation not important	2 8.70	8 34.78	1 4.35	10 43.48	2 8.70		23
b10 Monitoring essential	13 56.52	10 43.48	0 0.00	0 0.00	0 0.00		23
Total	100	97	7	23	3		230

Table 5: Frequency distributions of questionnaire statements describing the construct: Conflict management in teamwork

(-): The inverse agreement rating responses of these questionnaire statements were used to calculate the conflict management construct scores of respondents.

<i>Conflict management issues</i> <i>Frequency and Row Pct</i>	<i>Agreement rating response levels</i>					<i>Total</i>
	<i>Agree⁺⁺</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Disagree—</i>	
h1 Empathy essential	4 17.39	14 60.87	4 17.39	0 0.00	1 4.35	23
h2 Manage emotions	4 17.39	11 47.83	2 8.70	2 8.70	4 17.39	23
h3 Act assertively, resolve	5 21.74	16 69.57	0 0.00	1 4.35	1 4.35	23
h4 Must resolve conflict	8 34.78	13 56.52	1 4.35	1 4.35	0 0.00	23
h5(-) Conflict and innovative thought	1 4.35	12 52.17	3 13.04	4 17.39	3 13.0	23
h6 Humour resolves conflict	5 22.73	9 40.91	3 13.64	2 9.09	3 13.64	22
h7 Do not have to agree	5 21.74	14 60.87	2 8.70	2 8.70	0 0.00	23
h8(-) Authoritative approach	4 17.39	4 17.39	4 17.39	7 30.43	4 17.39	23
h9(-) Conflict stimulates	0 0.00	6 26.09	5 21.74	9 39.13	3 13.04	23
h10(-) Avoid to manage conflict	1 4.35	1 4.35	3 13.04	15 65.22	3 13.04	23
Total	37	100	27	43	22	229

Frequency Missing = 1

fits for school management to be derived from a teamwork approach.

(ii) Goal Achievement in Teamwork

Frequency distributions of questionnaire statements describing the construct *Goal achievement in teamwork* are presented in Table 4.

Deductions

The total *agreement* rating of $100 + 97 = 197$ (85.65%) responses in the totals row of Table 4 affirms the positive goal achievement construct mean score of 1.85 indicated in Table 2. On individual questions percentage agreement ranged from 73.92% to 100%; for example respondents agreed that team goals should be measurable (91.30%); team goals should be achievable and realistic (100%); d-dates should be set for the attainment of goals (95.65%); there should be clarity about goal expectations (100%); everyone in their teams should have a clear vision of team objectives (100%); and monitoring of progress toward goal achievement is essential (100%). However, 56.52% of the managers felt that an overemphasis on objectives stunts team

performance and 21.74% did not like pressure as a goal achievement motivator. Forty-four percent indicated that team goals need not be formulated that precisely and specifically. Since the latter three aspects are important in teamwork and teamwork management, it is worrying that managers held these perceptions, which definitely indicate areas for improvement through applicable teamwork training. Goals need to be achieved in successful teamwork; therefore they need to be precisely and specifically formulated and can never be overemphasised, and very often some form of pressure needs to be exercised to achieve them. Although manager respondents were positive about setting d-dates and monitoring of progress towards goal achievement, their extent of agreement indicates that some managers seem to lack the urgency needed for the achievement of team goals. As a result these respondents might well find teamwork to be less successful in their schools, and that raising the bar for achieving team goals is required.

(iii) Conflict Management in Teamwork

Frequency distributions of questionnaire statements describing the construct *Conflict*

management in teamwork are presented in Table 5.

Deductions

The total agreement rating of 137 (59.83%) responses in the totals row of Table 5 as opposed to the total disagreement rating frequency of 65 (28.38%) responses substantiates the somewhat less positive conflict management construct mean score of 2.39 indicated in Table 2. The majority of managers agreed that empathy for other members' opinions is essential in conflict management (78.28 %); that a team leader should act assertively to resolve conflicting arguments in team meetings (91.31 %); that the goals of a team cannot be achieved if conflict is not resolved (91.30 %); and that team members do not have to agree on all issues (82.61 %). But managers disagreed with the statement that they avoid managing conflict (78.26%). Two respondents did indicate that this was the case at their schools and three managers were undecided on the matter. Respondents were divided on the issue of whether conflict should be resolved with an authoritative approach as 37.78% agreed with this approach, while 47.82% were against it and 17.39% were undecided. While most managers

(63.64%) agree that they resolve conflict by bringing humour into the discussion, 22.73% indicated that they do not do this, which is understandable as not all managers have the personality profile to act in such a way. Most managers disagreed (52.17%) that creative, imaginative projects can be stimulated by conflict, while 26.09% agreed that conflict leads to innovative thought and 21.74% disagreed. This is an interesting finding since an element of truth underlies the assumption that creative, imaginative projects can be stimulated by conflict, and that conflict in turn can lead to innovative thought.

The deductions on this teamwork component indicate a number of issues that need to be addressed in teamwork training courses, such as the authoritative approach to conflict resolution, the effect of conflict on innovative thought, avoidance of conflict management, and the question of whether conflict stimulates creative projects.

(iv) Monitoring Performance in Teamwork

Frequency distributions of questionnaire statements describing the construct *Monitoring performance in teamwork* are presented in Table 6.

Table 6: Frequency distributions of questionnaire statements describing the construct: Monitoring performance in teamwork

(-): The inverse response ratings of these questionnaire statements were used to calculate performance monitoring construct scores of respondents.						
<i>Issue regarding performance mentoring</i> <i>Frequency and Row Pct</i>	<i>Agreement rating reveals</i>					<i>Total</i>
	<i>Agree⁺⁺</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Disagree—</i>	
i1 Effective teams, monitored	8 34.78	14 60.87	0 0.00	1 4.35	0 0.00	23
i2 Follow-up essential	6 26.09	16 69.57	1 4.35	0 0.00	0 0.00	23
i3 Progress reports essential	9 39.13	13 56.52	1 4.35	0 0.00	0 0.00	23
i4 Monitor time use	8 34.78	15 65.22	0 0.00	0 0.00	0 0.00	23
i5 Missed deadlines, monitoring	8 34.78	12 52.17	2 8.70	1 4.35	0 0.00	23
i6(-) Hate checking	1 4.35	2 8.70	2 8.70	13 56.52	5 21.74	23
i7(-) Unnecessary burden	1 4.35	2 8.70	2 8.70	14 60.87	4 17.39	23
i8 Maintain performance	7 30.43	16 69.57	0 0.00	0 0.00	0 0.00	23
i9 Realising potential	6 26.09	17 73.91	0 0.00	0 0.00	0 0.00	23
i10(-) Effective, no monitoring	2 8.70	8 34.78	1 4.35	8 34.78	4 17.39	23
Total	56	115	9	37	13	230

Deductions

The total *agreement* rating of 171 responses (74.35%) in the totals row of Table 6 substantiates the positive performance monitoring construct mean score of 1.93 indicated in Table 2. In general education managers perceive monitoring of teamwork as important since they agreed that monitored teams are effective teams (95.65%); follow-up of progress on actions decided on is essential (95.66%); presenting progress reports at team meetings assists in monitoring (95.65%); team leaders need to monitor effective use of time (100%); missed deadlines are an indication of poor monitoring techniques (86.95%); monitoring teams assists them to maintain performance (100%); and monitoring teams assists teams in realising their potential (100%). This is illustrated in the 78.26% who disagreed with the statement: "I hate checking on people"; and the 78.26% who indicated that they disagreed with the statement: "Monitoring teamwork places an unnecessary burden on team leaders."

These results indicate that the issue of the necessity of monitoring team members as an essential element in teamwork management is well understood by the managers.

(v) Creativity and Risk Taking in Teamwork

Frequency distributions of questionnaire statements describing the construct *Creativity and risk taking in teamwork* are presented in Table 7.

Deductions

The total *agreement* rating of 157 (85.65%) and the total disagreement rating of 54 (23.48%) in the totals row of Table 7 confirm the somewhat indifferent general perception expressed in the mean *creativity and risk taking* construct score of 2.47 indicated in Table 2. The vast majority of managers agreed with the following statements on creativity and risk taking in teamwork: educational change allows team members to be creative (91.31%); change requires a willingness to take calculated risks (91.31%); being able to do what is exciting is being creative (78.26%); the leader needs to be aware of the risks taken to promote teamwork in schools (82.61%); a creative team is an effective team (95.68%); creativity should be encouraged in teams (89.13%). The managers were, however,

Table 7: Frequency distributions of questionnaire statements describing the construct: Creativity and risk taking in teamwork

(-): The inverse of the rating scores of these questionnaire statements were used to calculate the creativity construct scores of respondents.*: The response rating of this statement was not included in the calculation of the goal achievement construct score of respondents.						
<i>Issues of creativity and risk</i>		<i>Agreement rating levels</i>				
<i>Frequency and Row Pct</i>	<i>Agree**</i>	<i>Agree</i>	<i>Undecided</i>	<i>Disagree</i>	<i>Disagree—</i>	<i>Total</i>
j1 Allow creativity	6	15	1	0	1	23
	26.09	65.22	4.35	0.00	4.35	
j2 Be willing to risk	5	16	2	0	0	23
	21.74	69.57	8.70	0.00	0.00	
j3 Being able to do what's exciting, creative	3	15	3	1	1	23
	13.04	65.22	13.04	4.35	4.35	
j4# Leader must be aware of risks in promoting teamwork at school	5	14	2	1	1	23
	21.74	60.87	8.70	4.35	4.35	
j5 A creative team is an effective team	7	15	0	0	1	23
	30.43	65.22	0.00	0.00	4.35	
j6(-) Creativity in teams is overambitious	0	10	2	9	2	23
	0.00	43.48	8.70	39.13	8.70	
j7 (-) Encouraging teamwork, risk to be avoided	0	1	2	13	7	23
	0.00	4.35	8.70	56.52	30.43	
j8(-) Creativity not realistic	1	3	4	10	5	23
	4.35	13.04	17.39	43.48	21.74	
j9# Encourage creativity in teamwork	12	29	3	2	0	46
	26.09	63.04	6.52	4.35	0.00	
Total	39	118	19	36	18	230

divided on whether creativity leads to ambitious projects that seldom succeed (43.48% in agreement as opposed to the 47.83% disagreement recorded). Some of the respondents also agreed that creativity is not necessarily realistic (17.39%), which furthermore expresses doubt regarding the role of creativity in the minds of some managers. In general, however, there is strong support for the idea that creativity should be encouraged in teams (89.13%). All but one manager disagreed with the statement that encouraging teamwork in schools is a risk to be avoided (4.35%), while another was undecided (4.35%), which confirms that these education managers have a very favourable perception of the role of teamwork in schools.

The results of this section indicate that, although the value of creativity and risk taking in effective teamwork was appreciated by most educational managers, aspects such as creativity being the reason for ambitious projects failing, and, creativity in teamwork not necessarily being realistic, should be addressed in teamwork training.

This general positive attitude of the managers on the five components of teamwork discussed in the preceding sections also manifested in the positive construct score means of the other five aspects of teamwork management reported in Table 2, and in the composite frequency tables of these aspects (which are not discussed in detail in this article). Those components not discussed include *characteristics of teamwork, team roles, team building, team meetings and team motivation*. Identified is-

ues which education managers experienced negatively or indifferently and which should also be addressed in training are summarized in Table 8.

DISCUSSION

For this first exploratory study in the Nkangala region, the analysis results on scale reliability proved that, even with a small sample size ($N=23$), a reliable measuring instrument to assess managers' perceptions of teamwork could be developed. This addressed the first objective of the study. Perception trends were furthermore assessed and used - in principle - to guide the development of training programmes in effective teamwork and management for schools in which attention focus on aspects (and issues) of teamwork which respondents indicated indifference or a negative attitude towards. The respondents selected for this particular study, however, proved to be a limitation of the sample in some sense: the sample was well informed on teamwork, as was indicated previously and as such their perceptions cannot be regarded as representative of the average education manager in the Nkangala region. Another sample from the same region in general might experience a teamwork approach differently and might exhibit different training needs to those expressed by the informed manager sample. The information on perceptions used to indicate training needs will have to be validated by further research on other groups of school managers before a training programme is finalised. However, the training guidelines identified as

Table 8: Summary results on the five constructs not covered in detail in the article which respondents perceived indifferently or negatively

<i>Teamwork aspect</i>	<i>Issues which elicited indifferent or negative perceptions from respondents</i>
<i>Characteristics of Teamwork</i>	<ul style="list-style-type: none"> • Characteristics of teams at respondents' own school • Goal setting in teamwork • Effective communication in teams
<i>Team Roles</i>	<ul style="list-style-type: none"> • The role of dominating personalities in teams • Matching team members to their best team roles • Team functioning and team roles matching • Team relationships management
<i>Team Building</i>	<ul style="list-style-type: none"> • The influence of overbearing personalities in team building • Building team spirit through celebration • The value of team activities/ice breakers
<i>Team Meetings</i>	<ul style="list-style-type: none"> • The purpose of teamwork meetings
<i>Team Motivation</i>	<ul style="list-style-type: none"> • Feedback as motivator • Fairness as motivator • Gratitude as motivator

needs indicated in this study provide the framework for a training schedule.

CONCLUSION

The research objectives of the study had been to develop a measuring instrument to investigate school manager perceptions of a teamwork approach in schools. Towards this objective, relevant aspects of teamwork were identified from literature and provided the basis for the development of a measuring tool on teamwork perceptions.

The research furthermore aimed to identify (with perception responses to the developed questionnaire) training needs for teamwork management in the school environment through the identification of indifferent or negative perceptions towards components of teamwork functioning. The identified needs would then act as guideline for the structuring and enrichment of teamwork training courses. This constructivist approach to a neglected theme in the South African educational research environment has rendered useful provisional results in this pilot case study.

The results indicated that it is possible to identify teamwork training needs through the application of the instrument, which relates to the second purpose of the research. These results can be used to enrich training programmes to promote and improve effective teamwork implementation in schools.

RECOMMENDATIONS

Since reliable measures of educational managers' perceptions of effective teamwork could be obtained, the broader and more specific training needs of managers can be derived from perception construct score means and perceptions on issues that constitute these constructs. The reasoning was followed that negative perceptions indicated training needs since the questionnaire probed perceptions of aspects that describe effective teamwork functioning and management. Aspects of teamwork and issues essential to the effective functioning of teams which education managers therefore experienced negatively or indifferently should be explained to educational managers and teachers alike to promote understanding of the importance of the aspect or issue to effective teamwork functioning.

The study revealed that the ten identified components of teamwork functioning were positively received by respondents (although not highly positive), as reflected in the construct score means (Table 2). The role of the components of *teamwork meetings*, *motivation* and the *characteristics of teams* were best perceived by educational managers and the role of *conflict management* in teams and *creativity and risk taking* in teamwork were perceived almost indifferently, indicating teamwork components in need of more attention in training programmes.

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