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Team Collaboration Between Groups in the Marshall University Summer Enrichment Program

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Abstract

This study investigates the collaborative process of grade level teams as they progress through the 4 stages of a group collaboration model during a summer enrichment program at Marshall University. This study used a curriculum-based questionnaire that was filled out by each of the 47 graduate students who participated in collaboration training and continued to serve as members of a grade level team. The questionnaires were evaluated using a correlations between all questions and the temperature rating scale with a criterion correlation defined of n=.50. The results indicated that 5 questions on the questionnaire correlated with each other above the criterion level; however, no questions on the survey correlated with the temperature rating scale.

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Chapter 1

Review of literature

To create a successful team in a school system, the focus must be on group collaboration and coordination. However, before collaboration begins one must define the word team. A team is a small number of people with complementary skills who are equally committed to a common purpose, goals, and approach for which they hold themselves mutually accountable (F. J. Krieg Personal communication June 2010). The team members must have mutual accountability and be sincere about their commitment to the team. Developing trust among the members is essential for team success. Each team member should possess a technical or functional expertise on the given problem, decision-making and problem-solving skills, and interpersonal skills necessary for collaboration to create a successful team. Historically, school environments tend to foster rugged individuals working on personal goals for personal gain. Typically, reward, recognition, and pay systems single out the achievements of individual employees. Appraisal, performance management, and goal setting systems most frequently focus on individual goals and progress, not on team building. Faculty and staff in every school talk about team building, working as a team, and my team, but few understand how to create an effective team.

Many view teams as the best organization design for involving all school professionals in creating school success (Ackerman, 2007). As schools move toward a collaborative instructional model, teaming in schools has become more important now than ever before. Given the emphasis on cooperative learning, students will likely find

themselves as a member of a team at some point in their instructional lives. They are expected to complete assignments doing team projects, with all members receiving the same grade, regardless of the individual effort. Teams effectively using collaboration in the schools model that behavior for the students using the cooperative learning model.

It is one task to create a team, but an even greater task to create teamwork. What is teamwork? There are several ways to define teamwork but for some color why not think of it as the French do. The French language has an excellent phrase for teamwork: esprit de corps. This means a sense of unity, of enthusiasm for common interests and responsibilities, as developed among a group of persons closely associated in a task or a cause (Apex, 2010). Teamwork is also the oil that makes the team function. Teams and teamwork have become a central part of our school life. Teaming creates synergy, where the sum is greater than the parts. It supports a more empowered way of working, by removing constraints, which may prevent someone from doing his or her job properly. It encourages less hierarchy and multi-disciplinary work enabling teams to cut across organizational divides. It fosters flexibility and responsiveness, especially the ability to respond to change. Teaming promotes the sense of achievement, equity and camaraderie, essential for a motivated school, and when managed properly, teamwork is a better way to work (Apex, 2010).

Properly managed, teaming maximizes the individual strength of each member. These specific, unique individual strengths are combined with and complemented by the strengths of others, or of the team as a unit. This synergy allows for the team as a whole to be more successful than working individually. In today's school environment, teaming plays a more vital role than in the past. Schools have a distinctive organizational

behavior which integrates individual, group, and organizational processes in order to solve problems and resolve conflict. This structure allows for teams to be recognized and evaluated as a useful component in achieving an organization's goals. Thus teams influence the performance of the entire organization.

Another strength of teaming in the school setting is that teamwork can motivate and allow for each student to participate in a small group setting as well a large group setting. Cooperative learning can optimize each student's talents and resources and result in an increase in academic achievement. Students are encouraged and may be more likely to participate in the group process led by and influenced by peers resulting in better interpersonal skills. Teaming teaches students effective communication skills, coordination, motivation, synergy, goal congruence, flexibility, and how to clearly define roles and responsibilities.

Today's schools are governed by many laws that promote collaboration. The Americans with Disabilities Act (ADA) of 1990 is a civil rights law that prohibits discrimination in work settings, job training programs, and postsecondary schools promoting collaboration between institutions and professionals to provide accommodations in both public and private organizations (Bryant, 2007). The Individuals with Disabilities Education Improvement Act of 2004, Public Law 108-446, hereinafter referred to as IDEA 2004, requires multi-disciplinary teams at all levels in the eligibility process and requires that Individualized Education Plans (IEP) be developed collaboratively. Although called many different things in different policies in different states, best practices suggest that schools should have active student assistance teams (SAT) and grade level teams. A SAT team is a trained school-based team which provides

a formalized process for the review of student needs and complements the work of student instruction and intervention teams. The SAT's mission is to develop appropriate solutions to problems in the school environment through a cooperative, problem-solving, team effort (F. J. Krieg Personal Communication 2010). Although the team may make referrals to special education and other special programs, the SAT is not part of the school's special education process, but rather part of the responsibility of regular education (Richardson, 2009). The SAT addresses academic and/or behavioral problems found through universal screening at Tier 1 or those brought up as concerns by parents, teachers, or other staff. The SAT serves as a "support group" to assist regular education teachers in supplementing instruction for students within their classrooms who are demonstrating a lack of response to the core program and differentiated instruction that is delivered with high fidelity (Richardson, 2009). Through the SAT, school staff, parents, community agencies, and others who can offer insight draw upon available resources, working together to plan a positive course of action. Similar to the school assistance team, there are other teams (grade level teams, instructional support teams) that provide assistance to struggling learners. These are teams familiar with the student and his or her instructional problems designed to assist individual students who have academic performance problems or behavioral concerns that interfere with their learning (F. J. Krieg Personal Communication June 2010). These teams are now well integrated into the fabric of schools. In order for these teams to be successful they must: develop an understanding of the team process, understand the conditions required to establish effective teams, assess the team's readiness for collaboration, and use the problem-solving process within the system and with individual students.

As demonstrated these teams must work together in aiding students to be successful. Each member must be on the same page and work not only with other members of the team, but also with other school employees. Team or group approaches have long been a valued part of the education profession and have become increasingly popular structures for addressing highly diverse issues in schools. The term collaborative teaming seems to embody this concept of working together. Heathfield (2011) described collaborative teaming as an ongoing process whereby educators with different areas of expertise work together voluntarily to create solutions to problems that are impeding students' success, as well as to carefully monitor and refine those solutions. In short, the major goal of collaborative teaming is to improve services to students whose needs are not being met satisfactorily when professionals act alone rather than in concert with others. The most productive collaborative relationships are characterized by mutual trust, respect, and open communication (Coffey, 2005). Collaborative teaming is a process rather than a specific service delivery model. For example, a general education teacher and a special education teacher may teach cooperatively in the same class setting with each taking on different instructional responsibilities depending on their individual strengths. In another teaming situation two teachers may get together regularly for cooperative planning purposes. In yet another scenario three special education teachers working in resource programs may team to coordinate group instruction and share students on their caseloads. In some schools, pre-referral teams engage in collaborative teaming as they generate possible interventions for a student having difficulty in content classes.

Because collaborative teaming means people working together in a supportive and mutually beneficial relationship, its possibilities and different configurations are truly endless. This statement is not meant to imply that anything goes and can be passed off as teaming. Collaboration has become the buzzword of the 21st century and often is used carelessly to merely give the appearance of being in step with the latest educational innovations (Stockey, 2011). The students with whom we work are too important for us to simply go through the motions of collaboration to satisfy a school district's initiative or the latest educational trend. If there is one obstacle to successful collaboration that will derail even the best developed plan, it is forcing collaboration a among unwilling teachers. The decision to collaborate has to be made by the teachers who are involved and supported by the administration (Inglish, 2007). The goal is always to move ahead in collaborative efforts. In attempts to work with others, people will encounter various degrees of readiness to collaborate. Assessing where the individual is on the "relationship continuum" with the other people can help choose realistic goals based on the colleague's level of readiness for collaborative teaming. In addition, this type of assessment can be useful in helping to determine how to best promote better relationships and move a colleague forward in collaborative efforts.

Essential ingredients to successful teamwork have been established and include good relationships, communications, trust, commitment, respect, and a willingness to listen and understand the other person’s positions (Bodwell, 2002). Bodwell further states that in schools where positive relationships were developing among the staff, there was a great deal of latitude in their dealings with one another. However, in schools with poor working relationships or low trust levels, minor imperfections were not overlooked and

personnel were constantly challenging each other's opinions and competence. Where positive team collaboration was developing, there was a great deal of latitude (Bodwell, 2002). Take a few top principals from successful schools, put them in a room together, and get them to work effectively as a team. That can be a challenging task, as men and women who are accustomed to being bosses must transition to a more collaborative mindset. But this kind of leadership team can be a great asset to a school, as long as the team goes beyond presentations and policy setting to true collaboration and collective problem solving (Baker, 2007). Teams must work together to create the desired whole, which is greater than the sum of the parts. People are more committed to a course of action when they are involved in the decision-making process. True participation is a way to release a person's full capabilities, which will result in increased productivity, greater creativity, and higher morale. Involvement in a problem-solving group will encourage the participant to expend more effort on coming up with a solution (Riyad, 2008).

A lack of leadership is often seen as a roadblock to a team's performance. As Stewart and Manz (1995) put it, “More specifically, work team management or supervision is often identified as a primary reason why education teams fail to properly develop and yield improvements in student performance, productivity, quality of work, and quality of life for students” (Stewart & Manz, 1995). While there are several Team Leadership models, Hill's team model is perhaps one of the better known ones as it provides the leader or a designated team member with a mental road map to help diagnose team problems, and then take appropriate action to correct team problems (Northouse, 2007). Hill developed a model that had four layers. The Four Layers or Steps in the Team Leadership Model are: top layer, effective team performance begins with

leader's mental model of the situation and then determining if the situation requires action or just monitoring; second layer, is it at an internal or external leadership level; third layer, the leader must ask is it task, relational, or an environmental intervention and select a function depending on the type of intervention; fourth layer, correctly performing the above three steps creates high performance through development and maintenance functions (Northouse, 2007). As John Kotter stated, leaders establish the vision for the future and set the strategy for getting there; they cause change. They motivate and inspire others to go in the right direction and they, along with everyone else, sacrifice to get there (F. J. Krieg Personal Communication June 2010).

A study done by Stotler, Stroebel & O'Keefe used an anchored scale thermometer (rating scale) to assess cohesion of teams by asking team members to rate their teams (Stotler, Stroebel, & O'Keefe, 2008). They compared the thermometer ratings as a measure of teaming or cohesiveness to the children's achievement on DIBELS. The study was done twice in separate summers. The first summer a positive correlation was found between team cohesiveness and student achievement. The study was repeated using an independent evaluator (a member of a different team) and no correlation was found. The importance of familiarity of the examiner appeared to be the distinguishing variable. The study did show that children do perform better when evaluated by a familiar examiner who is from a cohesive team.

After a review of the above study this researcher questioned whether or not the graduate students who made up these teams actually understood the concept of collaboration as taught and knew how to measure it. An attempt was made to find a collaboration measure in the literature but it could not be found.

Purpose of this Study

The Marshall University Graduate College Summer Enrichment Program (MUGCSEP) uses multi-disciplinary teams to provide instruction to students. The purpose of this study is to evaluate the MUGC Summer Enrichment Program's use of team collaboration to determine if the current instrument (temperature thermometer rating scale) is an effective measure of team collaboration or if a more in-depth instrument is needed.

Questions

1. Does the thermometer rating scale measure collaboration as determined by comparing it to the newly developed expert rating scale?

2. Which items on the newly created rating scale are most predictive of team cohesion?

CHAPTER II
Method

Subjects:

The population group for this study consisted of all practicum students both male and female enrolled in Practicum III summer program at Marshall University Graduate College (MUGC). The group consisted of 47 students from each of 7 teams. These graduate students are seeking certification in one of four areas: School Counseling, School Psychology, Special Education, or Reading.

Instruments:

A weekly anonymous survey was given to the students of the MUGCSEP to measure team cohesiveness (Appendix B). This temperature rating scale was collaboratively developed by the faculty of the summer enrichment program. For this survey students were asked to use an anchored rating scale from 1 to 10 (with 1 being the lowest) of how they felt their team did during the week, and how they did this week. The only identifying information on the survey was the team number of the student's team.

The current instrument is a newly developed questionnaire by this researcher. This questionnaire has expert face validity because the expert who did the training of teams helped to develop the survey. This questionnaire is consistent with the training each graduate student received and is based on content and process of the training. The questionnaire was designed to analyze the student's experiences in group collaboration within their team. The questionnaire was designed to address the collaboration between team group members. To accomplish this, a Likert-like scale questionnaire was developed with 17 quantitative questions. The questions were quantitatively based and limited the respondents to alternatives determined in advance by the developer of the

questionnaire. The questionnaire gives respondents 6 choices: strongly disagree, somewhat disagree, disagree, agree, somewhat agree, strongly agree. The questionnaire can be found in Appendix A.

Procedure:

During the 6 weeks of the summer enrichment program members of the team rated how they thought their team was doing, and how they thought they were doing, using an anchored scale with 1 being the lowest and 10 being the highest. On the last Friday of the Summer Enrichment Program each student filled out the temperature rating scale described above in the instrument section and these scales were compared to the expert rating scale.

To measure group collaboration between students in the Marshall University summer enrichment program all 47 students were asked to complete the questionnaire described above in the instrument section. The questionnaire was delivered to the students on the last day of summer practicum. Students were asked to complete the questionnaire anonymously and were given as much time as needed to complete the questionnaire. All questionnaires were carefully collected and stored to maintain confidentiality and anonymity.

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CHAPTER III
Results

The correlational study included 47 participants who were enrolled in the Practicum III summer program. A total of 47 questionnaires were delivered on the final day of the practicum, to the students who completed the Practicum III summer program. All 47 of the questionnaires were completed and returned. Correlations were made between each survey question and between the survey questions and the temperature rating scale. Data was interpreted using a correlation matrix and a factor analysis. Correlations having an n=.50 met the pre-established criterion level.

When looking at the data, the expert rating scale was based on a Likert-like scale of 1-7; however, the temperature rating scale was on an anchored rating scale of 1-10. In order to compare the temperature rating scale to the expert rating scale the scales for each had to be measured on the same scale. In order to accomplish this task the temperature rating scale was adjusted to meet the expert rating scale by multiplying each answer on the temperature rating scale by .70. The temperature rating scale answers were 10=7, 9=6.3, 8=5.6, 7=4.9, 6=4.2, and 5=3.5.

The results of the correlation matrix revealed that questions #1, #3, #4, #6, #8, #9, #15, and #16 had a high correlation among the survey questions (Appendix C). The questions above were then grouped and termed collaboration questions. The collaboration questions were then correlated to each other and the 2 questions on the temperature rating scale (Appendix D). The results of this second order correlation determined that from the collaboration questions #1, #3, #4, #6, and #8 exceeded the criterion level. Therefore the most parsimonious scale would be the 5 items. A factor analysis also supported the selection of these 5 items as the primary measures of collaboration (Appendix E).

The two questions on the temperature rating scale also met the predetermined criterion level; however, there was no data to support that they were a strong method for measuring collaboration.

CHAPTER IV
Discussion

The purpose of this scale development study is to determine whether the temperature rating scale or expert rating scale is more reliable. In previous years, a temperature rating scale thermometer was used to measure the collaboration between team members. That instrument contained two questions and was based on an anchored rating scale of 1-10 with a score of 1 being poor and a score of 10 being excellent.

The questions of the expert rating scale were correlated with each other to determine which question exceeded the criterion level. Of the 17 questions on the expert rating scale, 8 had a correlation of n =.50 (Appendix C), when comparing the questions to each other. These questions were then termed collaboration questions. The collaboration questions were then correlated to each other and the results of this correlation matrix (Appendix D) revealed that among the collaboration questions 5 exceeded the criterion level. When comparing the collaboration questions to the temperature rating scale, no questions exceeded the criterion level. However, the two questions on the temperature rating scale exceeded the criterion level when compared to each other.

Based on this information, it is suggested that questions 1, 3, 4, 6, and 8 on the expert rating scale should be used to measure collaboration between team members in the MUGC Summer Enrichment Program. It can also be determined that the two questions on the temperature rating scale are reliable when used alone; however, the data did not support that they were a good measure of collaboration. Therefore it can be determined that the temperature rating scale was apparently measuring a concept other than collaboration. The most likely interpretation is that the temperature rating scale is a

measure of interpersonal attraction or liking their teammates rather than effective collaboration.

Based on this research, the use of the 5 questions on the expert rating scale (collaboration questions) would provide a better measure of team cohesiveness and would not require that much more time to complete. This research would suggest that the 5 collaboration questions should replace the temperature rating scale as a measure of team cohesiveness.

This study is the first step to determine if the expert rating scale is a reliable instrument for measuring collaboration. To further this research, an independent measure of collaboration should be used and compared in order to determine the validity. Future research should also be done on the expert rating scale to address the reliability of the shortened scale and validity of this particular rating scale compared to the criterion measure of collaboration determined by experts.

A limiting factor in this study is the population of the MUGC Summer Enrichment Program. Each person in the summer enrichment program was trained on a specific teaming model to be used and have come with different experiences and backgrounds. These differences may have caused higher correlated scores on some of the expert rating scale questions. It is suggested that limiting the generalization to teams with similar training may have caused the expert rating to be a measure of the training and not a specific measure of cohesiveness.

Another limiting factor in this study is the population of the MUGC Summer Enrichment Program. This program is made up of many different people with different backgrounds and specializations within a school environment. Each person is trained on a

collaborative model that is specific to his or her professional background, thus causing some variation in answering and understanding some of the survey questions on the expert rating scale. This may have caused lower correlated scores on some of the expert rating scale questions.

The five items on the expert rating scale which met the criterion level have a common theme of collaboration. As defined by Higgins and Kreischer (2007) collaborative teams are most effective at achieving and enhancing a school's strategy. Their efforts are firmly grounded in external and future orientations, in harnessing conflict productively, in constantly accelerating the pace of learning and change, and in delivering innovation and results. The five items on the expert rating scale meet Higgins and Kreischer's definition, by encouraging a collaborative model, understanding the functions of a team, and fostering the 4 stages of group development.

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Appendix A
Expert Rating Scale

Rate your summer practicum team experience

1	2	3	5	6	7
Strongly Disagree	Somewhat Disagree	Disagree	Agree	Somewhat Agree	Strongly Agree

1. Do you feel you had the best experience possible working in a collaborative model?

1 2 3 5 6 7

2. Did you foster an environment that was free from biased attitudes about race and ethnic background and promote diversity within your classroom?

1 2 3 5 6 7

3. Did the summer program foster an environment for team collaboration, and did it help you to better understand how a team functions within a school setting?

1 2 3 5 6 7

4. Has this experience given you a better understanding of how grade level teams work together toward a common goal?

1 2 3 5 6 7

5. Do you feel the teams were well prepared for the students each day with planned activities that foster learning?

1 2 3 5 6 7

6. Did your team collaborate with each other and progress through the 4 stages of group development with success?

1 2 3 5 6 7

7. Team members bring different strengths to the group; do you feel each team member used their strengths to their full potential with in a collaborative model?

1 2 3 5 6 7

7A. Team members bring different weaknesses to the group; do you feel that team members helped that member compensate for their weaknesses?

1 2 3 5 6 7

8. Within your team do you feel all the needs of the students were met and that each member of the team used all their individual talents appropriately?

1 2 3 5 6 7

9. Did your team use effective and efficient ways to teach the students?

1 2 3 5 6 7

10. Do you feel some members of the team put fourth more effort than others in making the group collaborative?

1 2 3 5 6 7

11. When a problem arose within the classroom did all the professionals work collaboratively to solve it and come up with a solution as a team?

1 2 3 5 6 7

12. Were there conflicts between team members that hindered the instruction quality of the students?

1 2 3 5 6 7

13. Did a leader emerge from the group process of teaming?

1 2 3 5 6 7

14. Did you modify your behavior in any way to help the team run smoother?

1 2 3 5 6 7

15. Was your attitude about team collaboration different in the beginning of this practicum than it was in the end?

1 2 3 5 6 7

16. Has this experience altered your attitude about team collaboration?

1 2 3 5 6 7

Appendix B
Temperature Rating Scale

Date _____

Team _____

Please answer the following questions using a scale from 1 to 10:
Circle your response.

	1 = poor	10 = excellent
1. How have you done this week?	1 2 3 4 5 6 7 8 9 10	
2. How did your team do this week?	1 2 3 4 5 6 7 8 9 10	

Appendix C
Correlation Matrix

	Item 1	*Item 2*	*Item 3*	*Item 4*	*Item 5*	*Item 6*	*Item 7*	*Item 7A*	*Item 8*	*Item 9*	*Item 10*	*Item 11*	*Item12*	*Item13*	*Item14*	*Item 15*	*Item 16*	*Temp 1*	*Temp 2*
Item 1	1																		
Item 2	0.30428	1																	
Item 3	0.66062	0.32774	1																
Item 4	0.47805	0.256	0.57397	1															
Item 5	0.39769	0.10537	0.27324	0.41472	1														
Item 6	0.63019	0.37724	0.57969	0.56837	0.48984	1													
Item 7	0.40902	0.0486	0.24826	0.12569	0.52703	0.48785	1												
Item 7A	0.28937	0.39971	0.32221	0.20883	0.31443	0.3877	0.57038	1											
Item 8	0.51275	0.21984	0.52957	0.43268	0.31933	0.69687	0.43674	0.40491	1										
Item 9	0.29414	0.5904	0.23434	0.24255	0.48087	0.35584	0.33888	0.44006	0.4415	1									
Item 10	-0.16201	0.17453	-0.05136	-0.07374	-0.27843	-0.19345	-0.28613	-0.09104	-0.28625	-0.06382	1								
Item 11	0.22266	0.18231	0.07531	0.24895	0.44374	0.42801	0.40694	0.24995	0.13793	0.2628	-0.20287	1							
Item12	-0.26568	-0.40406	-0.19031	-0.1935	-0.17169	-0.28366	-0.10266	-0.18425	-0.16508	-0.30581	-0.10232	-0.23901	1						
Item13	0.06386	0.31061	0.16802	0.38246	-0.23044	0.3031	-0.16774	0.03377	0.21514	0.13426	0.04481	0.13645	-0.07456	1					
Item14	-0.02327	0.33629	0.02194	0.01469	-0.08747	0.1184	-0.13343	-0.00514	0.11475	0.37969	0.42951	0.08782	-0.25678	0.25759	1				
Item 15	-0.20375	-0.23968	0.0437	-0.06546	-0.11517	-0.08225	-0.0638	0.07153	0.12906	-0.17181	-0.01223	-0.31073	0.24694	0.03979	-0.26956	1			
Item 16	-0.06642	-0.10263	0.27204	0.1542	-0.05005	0.05057	-0.00843	0.16488	0.14476	-0.12152	0.13568	-0.24339	0.21462	0.16181	-0.08102	0.74133	1		
Temp 1	0.00033	-0.01466	-0.06215	0.10644	0.15665	0.13881	0.22877	0.13903	0.08673	0.06011	-0.14124	0.27109	-0.18696	0.11322	-0.09966	-0.06541	-0.16776	1	
Temp 2	0.28226	0.0507	-6.1E-17	0.23427	0.46648	0.43003	0.29447	0.14355	0.23777	0.34584	-0.21456	0.47304	-0.38193	0.10335	0.12957	-0.14967	-0.17848	0.55107	1

Appendix D
Correlation Matrix

	Question 1	*Question 3*	*Question 4*	*Question 6*	*Question 8*	*Question 9*	*Question 15*	*Question 16*	*Temperature 1*	*Temperature 2*
Question 1	1									
Question 3	0.660622875	1								
Question 4	0.478047978	0.573966481	1							
Question 6	0.630188298	0.579692362	0.568371027	1						
Question 8	0.512748028	0.529569782	0.432679152	0.696870767	1					
Question 9	0.294138873	0.234339068	0.242549954	0.355843856	0.441504624	1				
Question 15	-0.203745241	0.043696436	-0.065464712	-0.082254683	0.129056811	-0.171805735	1			
Question 16	-0.066417818	0.272044019	0.154198622	0.050574648	0.144763864	-0.121515346	0.741329209	1		
Temperature 1	0.000330943	-0.062147315	0.106438171	0.138805809	0.08673196	0.060107718	-0.065409523	-0.167757485	1	
Temperature 2	0.282257186	-6.06734E-17	0.234270141	0.430033165	0.237768809	0.345835731	-0.14967217	-0.178475794	0.551069807	1

Appendix E
Factor Analysis
Extracted from the principal component of the correlation matrix

	Eigen values	% of variance	Cumulative %
Factor 1	**5.369**	**28.260**	**28.260**
Factor 2	**2.443**	**12.855**	**41.116**
Factor 3	**2.276**	**11.977**	**53.092**
Factor 4	**1.436**	**7.557**	**60.649**
Factor 5	**1.333**	**7.018**	**67.667**
Factor 6	**0.944**	**4.970**	**72.637**
Factor 7	**0.866**	**4.556**	**77.192**
Factor 8	**0.794**	**4.180**	**81.372**
Factor 9	**0.726**	**3.821**	**85.193**
Factor 10	**0.598**	**3.147**	**88.340**
Factor 11	**0.420**	**2.212**	**90.552**
Factor 12	**0.352**	**1.855**	**92.407**
Factor 13	**0.344**	**1.808**	**94.215**
Factor 14	**0.291**	**1.534**	**95.749**
Factor 15	**0.253**	**1.333**	**97.082**
Factor 16	**0.180**	**0.950**	**98.032**
Factor 17	**0.157**	**0.827**	**98.858**
Factor 18	**0.136**	**0.718**	**99.576**
Factor 19	**0.081**	**0.424**	**100.000**