

APPENDIX A
PARTICIPANT LETTER OF CONSENT

PARENTAL CONSTRUCTIONS OF THE ROLE OF THE HELPING PROFESSIONAL IN
LEARNING SUPPORT

Dear Participant

You are invited to participate in a research undertaking that aims to explore the ideas and thoughts of parents regarding the role of the helping professional in learning support. These views may be important for a greater level of understanding of parental expectations of helping professionals.

In the first phase of the research, you are requested to participate in a one-to-one interview with the researcher during which your thoughts about helping professionals will be explored. This will be followed by a second interview to follow up on anything from the first interview that may need to be clarified. In this second phase I will request you to indicate your view of the relationships amongst the emerging themes. All interviews are to be recorded on audiotape so as to ensure accurate recording of participants' views and to ensure that no information is lost.

The research results will be used in the composition of a Master's degree mini-dissertation, in partial fulfilment of the academic criteria for the degree MEd (Educational Psychology) at the University of Pretoria. The mini-dissertation will as such become public domain for the scrutiny of examiners and the academic community. It is important to note that your anonymity will be guaranteed and that no personal information will be disclosed that will allow you or your family to be identified. Your participation is voluntary and confidential. Confidentiality will be guaranteed and you may decide to withdraw from the research at any stage during the data collection process.

If you are willing to participate in this study, please sign this letter as a declaration of your consent i.e. that you participate in this project willingly and that you understand that you may withdraw from the research project at any time. Under no circumstances will your identity be made known to any staff at your child's school or in the reporting of the research results in any format.

Participant's Signature : _____

Date : _____

Researcher's Signature : _____

Date : _____

Yours Sincerely

Lisa Zimmerman, MEd (Educational Psychology) candidate

Tel: ***

APPENDIX B

LETTER OF CONSENT FOR SCHOOL MANAGEMENT

9 June 2005

Mr. ***
Principal

Dear Sir

APPLICATION FOR PERMISSION TO CONDUCT RESEARCH WITH PARENTS OF LEARNERS AT ***

I hereby wish to seek permission to approach parents of learners at *** so as to obtain participants to contribute to an interview-based research undertaking. Three parents will be sought and the research process will take place after school hours. The findings will be used in the compilation of a Master's degree mini-dissertation in partial fulfilment of the academic requirements for the degree MEd (Educational Psychology) at the University of Pretoria.

The purpose of the research is to explore parental opinions of the role of the helping professional in learning support. A summary of my proposed study and a statement of personal ethical responsibility are attached. The ethical considerations for the research will be strictly adhered to during the course of the research process.

Your consideration of my request for approval with a written reply to the request will be much appreciated.

Yours Faithfully

Lisa Zimmerman
MEd (Educational Psychology) student

Dr S. Human-Vogel
Supervisor
Tel: ***
E-mail: ***

APPENDIX C

LETTER OF CONSENT FOR SCHOOL GOVERNING BODY

9 June 2005

The School Governing Body

To Whom It May Concern:

APPLICATION FOR PERMISSION TO CONDUCT RESEARCH WITH PARENTS OF LEARNERS AT ***

I hereby wish to seek permission to approach parents of learners at *** so as to obtain participants to contribute to an interview-based research undertaking. Three parents will be sought and the research process will take place after school hours. The findings will be used in the compilation of a Master's degree mini-dissertation in partial fulfilment of the academic requirements for the degree MEd (Educational Psychology) at the University of Pretoria.

The purpose of the research is to explore parental opinions of the role of the helping professional in learning support. A summary of my proposed study and a statement of personal ethical responsibility are attached. The ethical considerations for the research will be strictly adhered to during the course of the research process.

Your consideration of my request for approval with a written reply to the request will be much appreciated.

Yours Faithfully

Lisa Zimmerman
MEd (Educational Psychology) student

Dr S. Human-Vogel
Supervisor
Tel: ***
E-mail: ***

APPENDIX D

LETTER OF CONSENT: GAUTENG DEPARTMENT OF EDUCATION

2- 8-05:12:29 ;GDE

:011 3550512

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UMnyango WezeMfundo
Department of Education

Lefapha la Thuto
Departement van Onderwys

Date:	01 August 2005
Name of Researcher:	Zimmerman Lisa
Address of Researcher:	
Telephone Number:	
Fax Number:	
Research Topic:	Parents' Constructions of the Role of the Helping Professional in Learning Support
Number and type of schools:	1 LSEN School
District/s/HO	

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

Permission has been granted to proceed with the above study subject to the conditions listed below being met, and may be withdrawn should any of these conditions be flouted:

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*

Office of the Senior Manager – Strategic Policy Research & Development
Room 525, 111 Commissioner Street, Johannesburg, 2001 P.O.Box 7710, Johannesburg, 2000
Tel: (011) 355-0488 Fax: (011) 355-0286

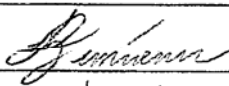
4. **A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.**
5. **The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.**
6. **Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Senior Manager (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.**
7. **Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year.**
8. **Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.**
9. **It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.**
10. **The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.**
11. **The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.**
12. **On completion of the study the researcher must supply the Senior Manager: Strategic Policy Development, Management & Research Coordination with one Hard Cover bound and one Ring bound copy of the final, approved research report. The researcher would also provide the said manager with an electronic copy of the research abstract/summary and/or annotation.**
13. **The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.**
14. **Should the researcher have been involved with research at a school and/or a district/head office level, the Senior Manager concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.**

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards



ALBERT CHANEE
ACTING DIVISIONAL MANAGER: OFSTED

The contents of this letter has been read and understood by the researcher.	
Signature of Researcher:	
Date:	2/08/2008

APPENDIX E

SEMI-STRUCTURED INTERVIEW SCHEDULE

- 1. Tell me about the contact that you have had with professionals for learning support of your child?**
 - a. If you reflect on these experiences, what impact do you think they have had on yourself as a parent?

- 2. What expectations do you remember having when you first approached the professionals you have had contact with?**
 - a. Why do you think you had these specific expectations at the time?
 - b. Do you feel that they managed to meet these expectations? If not, what would you have wanted them to do or say differently in these situations?
 - c. What do you think a professional should do so as to be experienced as being helpful and effective by parents?
 - i. For you, what has been most helpful?
 - d. What has to happen for you to feel that your expectations have been successfully met?
 - i. Overall, what have you felt about your experiences after seeing a professional about your child?

- 3. In your opinion, what were the professional's expectations of yourself in the process?**
 - a. How did you feel about your ability to meet these expectations?
 - b. Were these expectations different from what you thought they would be? If so, in what ways were they different?

4. If you reflect for a moment on your contact with professionals, what did you value most about these experiences?

- a. Some believe that learning support should be a teamwork effort between parents and professionals, how do you feel about this?

5. In your opinion, what does a helping professional do?

- a. How do you think you came to this understanding of what a professional does?
- b. How do you think your idea of what a professional does may influence the way you interact with professionals?

6. Given your experiences, if another parent asked for advice about approaching a professional for learning support of their child, what would you say?

- a. What have you learnt from your experiences?
- b. What would you do differently if you wanted to go to another professional?

<i>Question</i>	Target
1	Introduction, raising issues
2	Parents' views of the expectations of the professional
3	Expectations of the parent
4	What parents value
5	Discourses
6	Lessons learned

Table E: Breakdown of question target rationales

APPENDIX F

PHASE ONE: SEMI-STRUCTURED INTERVIEW EXCERPT

MEd data collection: phase 1 semi-structured interview Participant A: mother with 1 child in an LSEN school (20/10/2005) pp. 5-8.

Interviewer: Okay, We've touched on it again but maybe to go into it in (unit 116) more detail. um...What do you think, if you go to any helping professional such as a psychologist or the O.T. or the speech therapist or whoever you may feel would be able to help with learning support, ... what did you value most in those experiences?

Participant: *The honesty*
(unit 117)

Interviewer: Okay
(unit 118)

Participant: *The honesty um and they gave me no expectations.*
(unit 119)

Interviewer: Mmm hmm
(unit 120)

Participant: *No, they didn't put me on a high and then I would sort of be*
(unit 121) *like 'this is not what you told me'. They were honest with me. Straightforward whether it was good news or bad news and that's what I valued.*

Interviewer: Okay, so that 'straight down the line' you knew exactly...
(unit 122)

Participant: *... where I stood and where we were going or not going. I valued*
(unit 123) *that a lot because I didn't want... I didn't understand it and um they could have played me along if they wanted to and I wouldn't have been any the wiser but they weren't. They were honest and straightforward.*

Interviewer: Okay now you say 'played you along, you wouldn't have been any
(unit 124) the wiser'. Where do you think that you might have felt that that could have happened? Um... from past experiences or ideas...

Participant: *um ag you know I've been to a psychologist just myself and I*
(unit 125) *just found that um I was doing all the talking*

Interviewer: right...
(unit 126)

Participant: *...and from all the talking I was doing I wasn't coming to any*
(unit 127) *solutions*

Interviewer: okay
(unit 128)

Participant: *and after six weeks or so I still hadn't felt any better than I first did when I first walked in there and um ja that's the one time and I've been to another psychologist at one stage and at least I got feedback*
(unit 129)

Interviewer: okay
(unit 130)

Participant: *'now try different options try different ways' that sort of thing.*
(unit 131)

Interviewer: Now the feedback's important... it sounds like the first experience was disappointing?
(unit 132)

Participant: Ja
(unit 133)

Interviewer: The second one wasn't?
(unit 134)

Participant: Ja
(unit 135)

Interviewer: If you can reflect on that also being a helping professional even though it was a different experience what do you think exactly made the other person better, not in fine, personal detail, but what did you get from them that you didn't get from the first person?
(unit 136)

Participant: *Um.. again... the honesty ... especially I thought I was doing right and I actually wasn't and they actually told me 'well you're not doing right' because of whatever reason and then I would feel like a seed's planted*
(unit 137)

Interviewer: Okay
(unit 138)

Participant: *and then when I'd eventually had quiet time or on my own then I would sort of think about it and try be honest with myself and say well you know maybe they are right whereas just listening to myself waffle, waffle, waffle, and I just felt 'I'm getting nothing out of here' and ja*
(unit 139)

Interviewer: So it sounded as if a level of guidance was...
(unit 140)

Participant: *Ja... that's what I was... That's what I was looking for initially was guide me because I knew in a way I was doing... I didn't like what I was doing or what was happening and I needed guidance and I talked... listening to myself I didn't feel I was getting that*
(unit 141)

APPENDIX G
IQA DATA

The participants' phase two considerations of the relationships amongst their affinities led to the drawing up of a Systemic Interrelationship Diagram [SID] for each of the participants and myself. As stated in Chapter Three and Four, how these SIDs were drawn up will be elaborated on as the participants' and my own IQA data is presented. The strength of following this IQA process is that, in terms of the reliability of the method, two different researchers, when analysing the same participant's cause-effect analysis of the relationships amongst their affinities, will produce the same SID. In correspondence with the presentation of data in Chapter Four, the analysis of participant A's data is reported first. As indicated in Chapter Three and Four, the process [as discussed by Northcutt and McCoy (2004)] that led to the creation of each of the SIDs will be explained as each step in the generation of Participant A's SID is presented.

This appendix contains the following data for participants A, B and C:

1. Detailed Affinity Relationship Table (DART)
2. Tabular Interrelationship Diagram (IRD)
3. Tabular Interrelationship Diagram in descending order of delta
4. Cluttered Systemic Interrelationship Diagram
5. Rationalisation Process table
6. Uncluttered SID- redundant links retained
7. Uncluttered SID- redundant links removed
8. Clean SID

The appendix also contains the following data for my personal analysis of the affinities that Participant A, B and C generated:

1. Affinity Relationship Table (ART)
2. Tabular Interrelationship Diagram (IRD)
3. Tabular Interrelationship Diagram in descending order of delta
4. Cluttered Systemic Interrelationship Diagram
5. Rationalisation Process table
6. Uncluttered SID- redundant links retained
7. Uncluttered SID- redundant links removed
8. Clean SID

PARTICIPANT A

1. PARTICIPANT A: Detailed Affinity Relationship Table (DART)

- **The IQA data analysis process**

To recap briefly, each of the participant's views of the relationships amongst their affinities were recorded in a Detailed Affinity Relationship Table [DART] [refer to step one for each of the participants]. Participant A's DART, which shows how she hypothesised the relationships amongst her affinities, follows:

Affinity Pair Relationship			Give an example in natural language to explain the relationship according to your experiences (if you have an example to give)
1	→	2	<i>The professional needs to be able to "sus" out the parent's emotions to enable both parties to succeed. If they are sympathetic to my situation then I will feel comfortable because I feel they know what I'm going through. I can trust them that they know how to help me</i>
1	←	3	<i>One needs to feel comfortable with the professional</i>
1	→	4	<i>If the professional approach is not what the parent expected it could be a let down to me. When you actually sit and listen to someone [a professional] rather than reading a book (on the issue) that is what helps</i>
1	←	5	<i>Being honest and not misleading puts me at ease.</i>
1	→	6	<i>If the professional approach is wrong towards me, it doesn't matter how highly qualified they are it can turn me away from them. It depends how they handle me. If they handle me as inferior then I'm not going to think very highly of them. Normally if you go see someone you are feeling inferior in some way and you don't want them to make you feel they are looking down on you. You open up more easily if they are not condescending and are sympathetic</i>
1	←	7	<i>If I am not honest or I mislead the professional it could lead to the professional not taking the right approach to the "real" problem.</i>
1	←	8	<i>I feel that communicating the whole truth to the professional can play a large part of the way he approaches me.</i>
1	←	9	<i>"Seeing is believing" seeing progress is what really matters.</i>
1	↔	10	<i>NO RELATIONSHIP</i>
2	←	3	<i>NO COMMENT</i>
2	↔	4	<i>NO RELATIONSHIP</i>
2	←	5	<i>the professional must have high values and conveys those values me.</i>
2	↔	6	<i>NO RELATIONSHIP</i>
2	↔	7	<i>NO RELATIONSHIP</i>
2	←	8	<i>NO COMMENT</i>
2	↔	9	<i>NO RELATIONSHIP</i>
2	←	10	<i>NO COMMENT</i>

3	→	4	NO COMMENT
3	<>	5	NO RELATIONSHIP
3	←	6	<i>When you walk in they somehow are going to judge you but how they make you feel changes that. It comes to being comfortable. They still spoke to me as if I was doing nothing wrong, not making me feel like I was doing something wrong</i>
3	→	7	<i>It is how you click. If the person is genuinely trying to help with a problem, talking sense, I will go home and try or think about why I didn't try that</i>
3	←	8	NO COMMENT
3	→	9	<i>If I've taken a dislike to the person and I'm not feeling comfortable, I won't go back. However if my child is happy I will reconsider</i>
3	<>	10	NO RELATIONSHIP
4	←	5	NO COMMENT
4	←	6	NO COMMENT
4	<>	7	NO RELATIONSHIP
4	←	8	<i>Teamwork is what I need, not just myself.</i>
4	←	9	NO COMMENT
4	<>	10	NO RELATIONSHIP
5	→	6	NO COMMENT
5	→	7	NO COMMENT
5	→	8	<i>What I valued about them made me feel comfortable enough to open up during the interaction</i>
5	<>	9	NO RELATIONSHIP
5	→	10	<i>If the professional's values are high, my expectations would be high of him too.</i>
6	<>	7	NO RELATIONSHIP
6	←	8	<i>Teamwork very important. I found they never looked down on me and that had an influence on how I saw them professionally. I never felt judged during the interaction</i>
6	<>	9	NO RELATIONSHIP
6	<>	10	NO RELATIONSHIP
7	<>	8	NO RELATIONSHIP
7	<>	9	NO RELATIONSHIP
7	→	10	<i>If I really want results I have to do my bit, not sitting back and not helping and that would influence what I expect of the professional. It is useless going for help if you are not willing to help</i>
8	←	9	<i>Is this person genuinely trying to help my problem in the process? If so, there is full co- operation in the interaction</i>
8	←	10	<i>I try not to have expectations so I am not let down. I keep an open mind and see what is put forward to me. If I have expectations of what they will do or say and they do not do this then I feel let down and it doesn't help me especially if I know there's a problem and they don't see it as a problem</i>
9	→	10	NO COMMENT

2. PARTICIPANT A: Tabular Interrelationship Diagram (IRD)

The relationships suggested by the participants were then recorded in an Interrelationship Diagram (IRD). The IRD shows arrows that indicate whether each affinity in a pair is viewed as a cause or effect, or if no relationship exists. Arrows point to the left or upwards and each relationship is entered into the diagram twice. At the end of this analytical exercise, the arrows

are counted to find the value of *delta* (Δ). Participant A's IRD of her views of all the relationships amongst the participants' affinities is illustrative of the process undertaken.

AFFINITY	1	2	3	4	5	6	7	8	9	10	OUT	IN	Δ
1		↑	←	↑	←	↑	←	←	←	<>	3	5	-2
2	←		←	<>	←	<>	<>	←	<>	←	0	5	-5
3	↑	↑		↑	<>	←	↑	←	↑	<>	5	2	3
4	←	<>	←		←	←	<>	←	←	<>	0	6	-6
5	↑	↑	<>	↑		↑	↑	↑	<>	↑	7	0	7
6	←	<>	↑	↑	←		<>	←	<>	<>	2	3	-1
7	↑	<>	←	<>	←	<>		<>	<>	↑	2	2	0
8	↑	↑	↑	↑	←	↑	<>		←	←	5	3	2
9	↑	<>	←	↑	<>	<>	<>	↑		↑	4	1	3
10	<>	↑	<>	<>	←	<>	←	↑	←		2	3	-1

To ascertain the value of delta, the number of upward arrows (↑) or *outs* were counted as were the number of left arrows (←) or *ins*. The *ins* were then subtracted from the *outs* to provide the value of delta ($\Delta = Out - In$). Based on these values, the affinities were then sorted into descending order of delta. The IRD in the next section shows Participant A's IRD in descending order of delta.

3. PARTICIPANT A: Tabular Interrelationship Diagram in descending order of delta

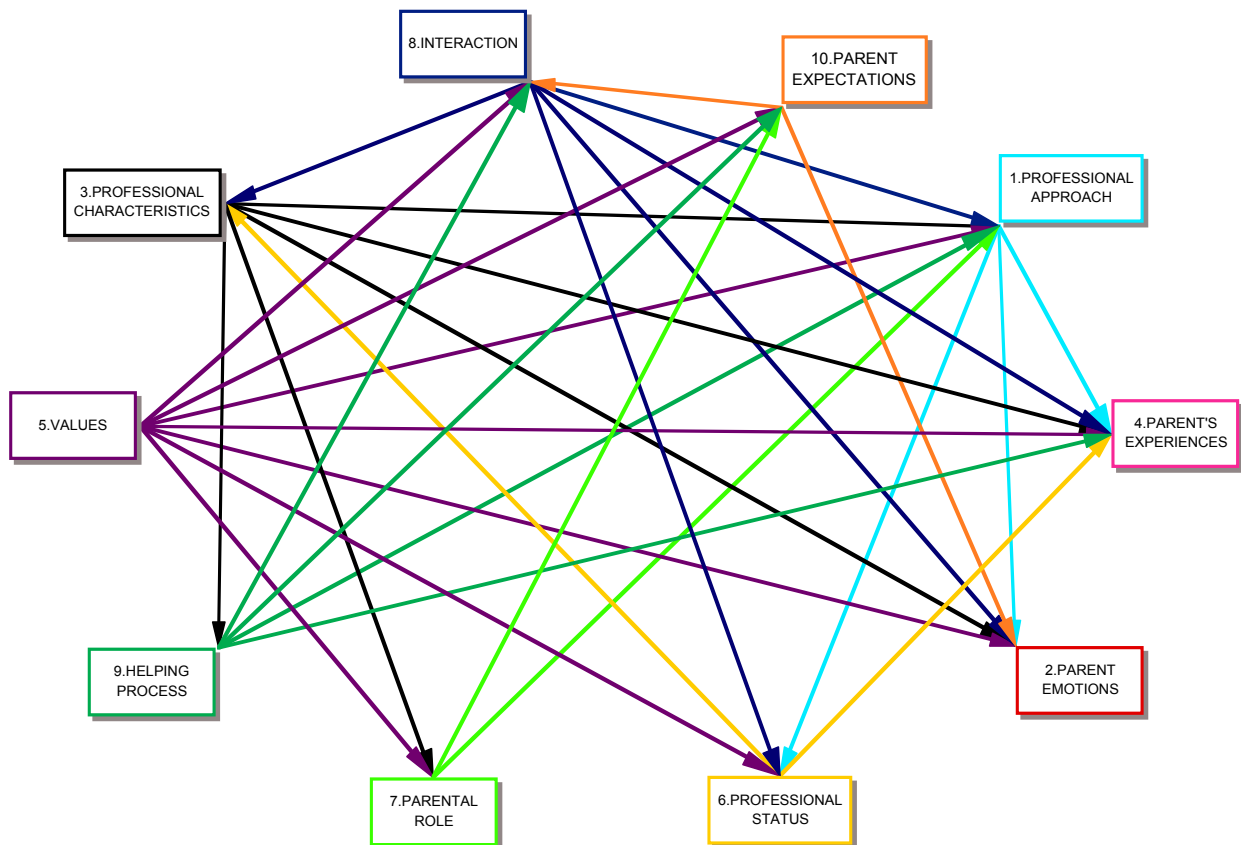
AFFINITY	1	2	3	4	5	6	7	8	9	10	OUT	IN	Δ	SID ASSIGNMENT
5	↑	↑	<>	↑		↑	↑	↑	<>	↑	7	0	7	Primary driver
3	↑	↑		↑	<>	←	↑	←	↑	<>	5	2	3	Secondary driver
9	↑	<>	←	↑	<>	<>	<>	↑		↑	4	1	3	Secondary driver
8	↑	↑	↑	↑	←	↑	<>		←	←	5	3	2	Secondary driver
7	↑	<>	←	<>	←	<>		<>	<>	↑	2	2	0	Circulator/ Pivot
6	←	<>	↑	↑	←		<>	←	<>	<>	2	3	-1	Secondary outcome
10	<>	↑	<>	<>	←	<>	←	↑	←		2	3	-1	Secondary outcome
1		↑	←	↑	←	↑	←	←	←	<>	3	5	-2	Secondary outcome
2	←		←	<>	←	<>	<>	←	<>	←	0	5	-5	Primary outcome
4	←	<>	←		←	←	<>	←	←	<>	0	6	-6	Primary outcome

Affinities with positive deltas are the relative drivers or causes of the participant's system of meaning. Primary drivers have no *Ins* as they are not influenced by other affinities. Secondary drivers are also causes in the system and have *Ins* and *Outs* but there are more *In* arrows than *Out* arrows. Some affinities have equal numbers of *Ins* and *Outs*. This means that they are situated in the middle of the system. They are then referred to as *pivots* in the system. Those affinities with negative deltas are the relative effects or outcomes of the system. A secondary

outcome has more *In*s than *Out*s. An affinity with no *Out*s is a primary outcome of the system in that it is a significant effect caused by many of the affinities in the system. Affinities with no *In*s will always be at the top of a list as a primary driver and an affinity with zero *Out*s will always be at the bottom, regardless of the value of their deltas (Northcutt & McCoy, 2004, pp. 170-174).

4. PARTICIPANT A: Cluttered Systemic Interrelationship Diagram

The first version of the SID contains all links present in the IRD. Primary drivers were placed to the left of the diagram and primary outcomes to the right. The secondary drivers and outcomes were placed in between these primaries. Arrows were drawn between all the affinities to indicate all the perceived relationships. It was as such *Cluttered* or saturated with linkages between affinities. This *Cluttered SID* can be difficult to decipher due to all the linkages that exist. The SID is detailed but lacks parsimony (Northcutt & McCoy, 2004, p.329).



5. PARTICIPANT A: Rationalisation Process
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A process of rationalisation was therefore undertaken in which all redundant relationship links are removed to produce a simplified or *Uncluttered* SID. Rationalisation allowed for alteration of the cluttered SIDs to make them more comprehensible and less complex without interfering with their constitution (Northcutt & McCoy 2004, pp.37-38). Redundant relationships occur when there are obvious or mediating links between affinities. Redundant links were removed according to their delta and SID assignments and, as such, I compared affinities at the extreme left to those at the extreme right, working back to the left. The relationship between the highest positive delta and lowest negative delta was scrutinised. If there was a path between these two deltas the direct path became redundant and could be removed (Northcutt & McCoy 2004, pp.176-178). For example, in Participant A's cluttered SID, affinity **5** [*Values*] influences affinity **4** [*Parent's experiences*] and affinity **1** [*Professional approach*] but there is also a direct link from **4** to **1**. The line from **5** to **4** could be removed as the relationship between **5** and **4** is still apparent through the mediation of **1** [**5**→**1**→**4**]. After this link was removed, the relationship between **5** and the next lowest delta **2** [*Parent emotions*] could be checked for any mediating relationships. This process was continued in this way, checking for mediating relationships from highest to lowest deltas, until all non-recursive relationships had been considered and all redundant links were removed. Recursive links occur when an affinity with a lower delta value influences an affinity with a higher delta value.

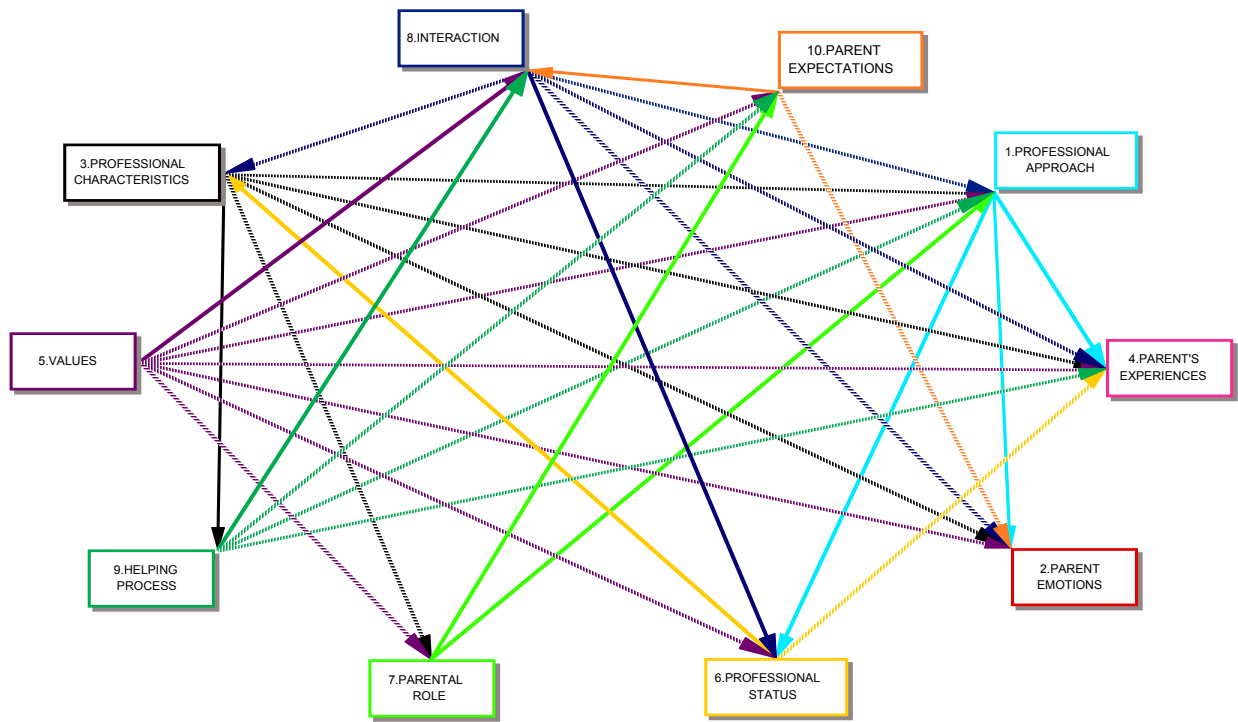
After the first step, all relationships that remain are again considered. This time the researcher checks from right to left, considering the relationship between remaining affinities with the lowest delta value and their links to those affinities with the highest delta value. In this step recursive links are included in the rationalisation process. In a final step, all remaining links are checked again to make sure no alternate paths exist.

PARTICIPANT A Step 1: Initial rationalisation		
ANALYTICAL STEP	LINK REMOVED	RATIONALE
1	5-4	5-1-4
2	5-2	5-1-2
3	5-1	5-8-1
4	5-6	5-8-6
5	5-10	5-7-10
6	5-7 is retained	5-8-3-7 involves a recursive link
7	5-8 is retained	5-7-10-8 involves a recursive link
8	3-4	3-1-4

9	3-2	3-1-2
10	3-1	3-7-1
11	3-6 is retained	Recursive links are ignored in this step
12	3-7 is retained	No other path exists
13	3-8 is retained	Recursive links are ignored in this step
14	3-9 is retained	No other path exists
15	9-4	9-1-4
16	9-1	9-8-1
17	9-10 is retained	9-8-10 involves a recursive link
18	9-8 is retained	9-10-8 involves a recursive link
19	8-4	8-1-4
20	8-2	8-1-2
21	8-1 is retained	8-6-1 involves a recursive link
22	8-10 is retained	Recursive links are ignored in this step
23	8-6 is retained	8-1-6 involves a recursive link
24	7-1 is retained	No other path exists
25	7-10 is retained	No other path exists
26	6-4 is retained	No alternative path without recursive links available
27	6-1 is retained	Recursive links are ignored in this step
28	10-2 is retained	No alternative path without recursive links available
29	1-4 is retained	1-6-4 involves a recursive link
30	1-2 is retained	No alternative path without recursive links available
Step 2: Check in opposite direction from lowest to highest delta		
1	1-6 is retained	No alternative path available
2	10-8 is retained	No alternative path available
3	6-3 is retained	No alternative path available
4	8-3	8-6-3
Step 3: Check of re-arranged SID for remaining redundant links		
1	5-7	5-8-6-3-7
2	5-8 is retained	No alternative path available
3	3-7 is retained	No alternative path available
4	3-9 is retained	No alternative path available
5	9-10	9-8-6-3-7-10
6	9-8 is retained	No alternative path available
7	8-1	8-6-3-7-1
8	8-6 is retained	No alternative path available
9	7-1 is retained	No alternative path available
10	7-10 is retained	No alternative path available
11	6-4	6-3-7-1-4
12	10-2	10-8-6-3-7-1-2
13	1-4 is retained	No alternative path available
14	1-2 is retained	No alternative path available

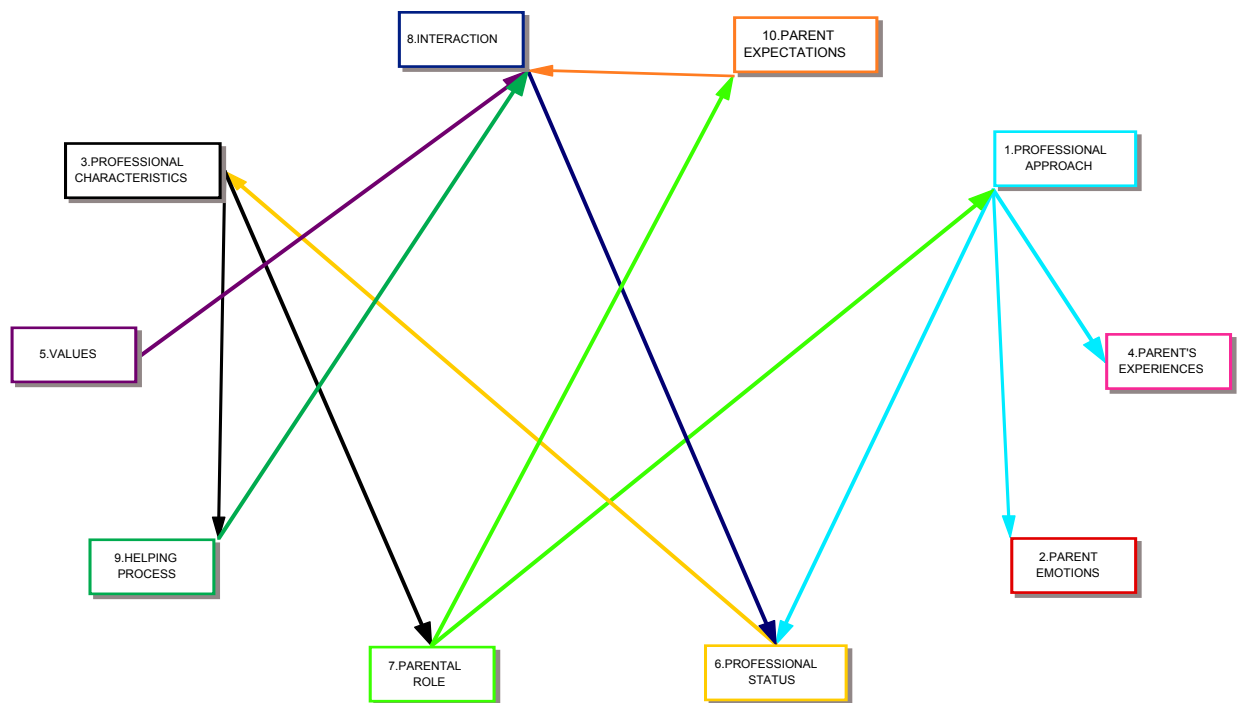
The next section shows Participant A's uncluttered SID before the removal of the redundant links in the SID [arrows to be removed are indicated by the dashed arrows].

6. PARTICIPANT A: Uncluttered SID- redundant links retained



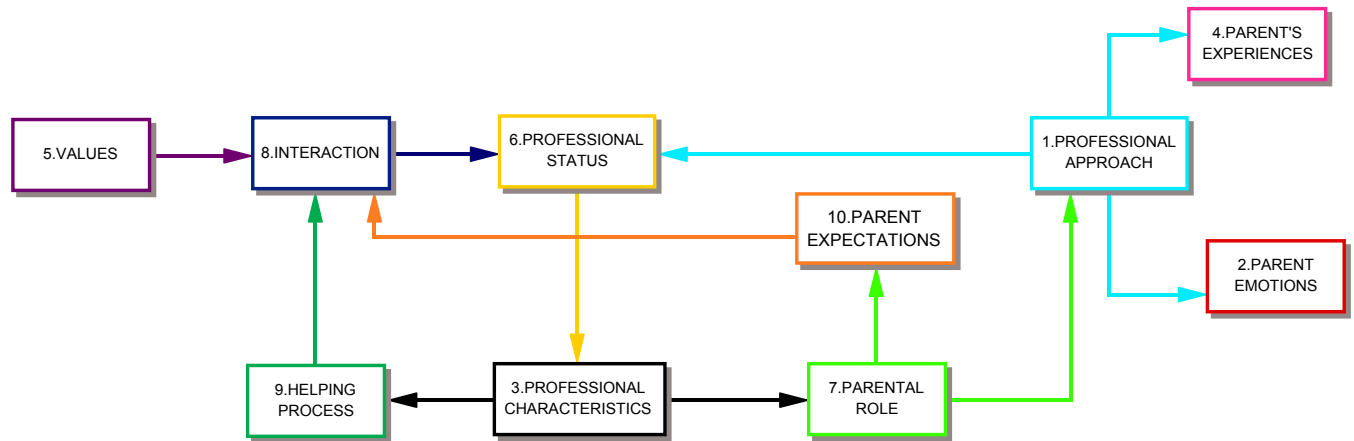
7. PARTICIPANT A: Uncluttered SID- redundant links removed

This is the *uncluttered* SID with redundant links removed.



8. PARTICIPANT A: Clean SID

This final representation is the so-called *Clean SID*, which is the finalised version of Participant A’s construction or social representation of the helping professional in learning support.



Henceforth, the process initiated with Participant B and C’s DARTs as well as my own consideration of the relationships amongst the participants’ collective affinity groupings will be illustrated.

PARTICIPANT B

1. PARTICIPANT B: Detailed Affinity Relationship Table (DART)

Affinity Pair Relationship		Give an example in natural language using an if/ then statement to explain the relationship according to your experiences	
1	←	2	<i>If the professional does diagnose the parent doesn't want to accept it or denies it</i>
1	←	3	<i>NO COMMENT</i>
1	←	4	<i>NO COMMENT</i>
1	→	5	<i>Parent's role is also very important. Both influence each other you couldn't do without them to understand</i>
1	<>	6	<i>NO COMMENT</i>
1	→	7	<i>It's a delicate subject, you've got to know how to handle whatever situation</i>
1	<>	8	<i>NO COMMENT</i>

2	←	3	<i>I think it would be how the professional would go and assist you</i>
2	←	4	<i>We shouldn't live in our past, make same mistakes try to avoid it</i>
2	←	5	<i>Parent's role is more important- can be positive or negative but as a parent you have to put them aside</i>
2	→	6	<i>If you are expecting or thought your child would have a learning disability influences emotions</i>
2	←	7	NO COMMENT
2	←	8	<i>I think being at school and going through that being hurt or being called names, treated differently would effect (emotions)</i>
3	→	4	NO COMMENT
3	→	5	<i>You can be a negative parent or a positive parent</i>
3	→	6	<i>Process changes expectations (R: Why?) because they are helping you and dealing with that and what you expected no longer has to be what you expected you got to know your limitations because they've given you advice and they've helped you basically</i>
3	←	7	NO COMMENT
3	→	8	<i>You shouldn't really have a stigma because you give other people a stigma (Do you learn that in the process?) Yes</i>
4	←	5	<i>You know what you have been through and you can deal with it</i>
4	<>	6	No relation
4	←	7	NO COMMENT
4	←	8	<i>you've gone through it, they're so similar, well you've got the stigma from your past experiences the somehow just carry on forward</i>
5	→	6	NO COMMENT
5	←	7	<i>They can give you all the necessary info</i>
5	→	8	<i>I wouldn't want the stigma to affect my role</i>
6	→	7	<i>What you expect from the outcome of the consultation influences your view of their approach</i>
6	←	8	<i>What you expect from your stigma from the past or whatever you're carrying you wouldn't want your expectations to be too much</i>
7	→	8	<i>You want help you don't want the stigma to be there so you try to rectify it and help the child (R: Their approach assists towards rectifying a stigma?) Yes, giving you information and that kind of support</i>

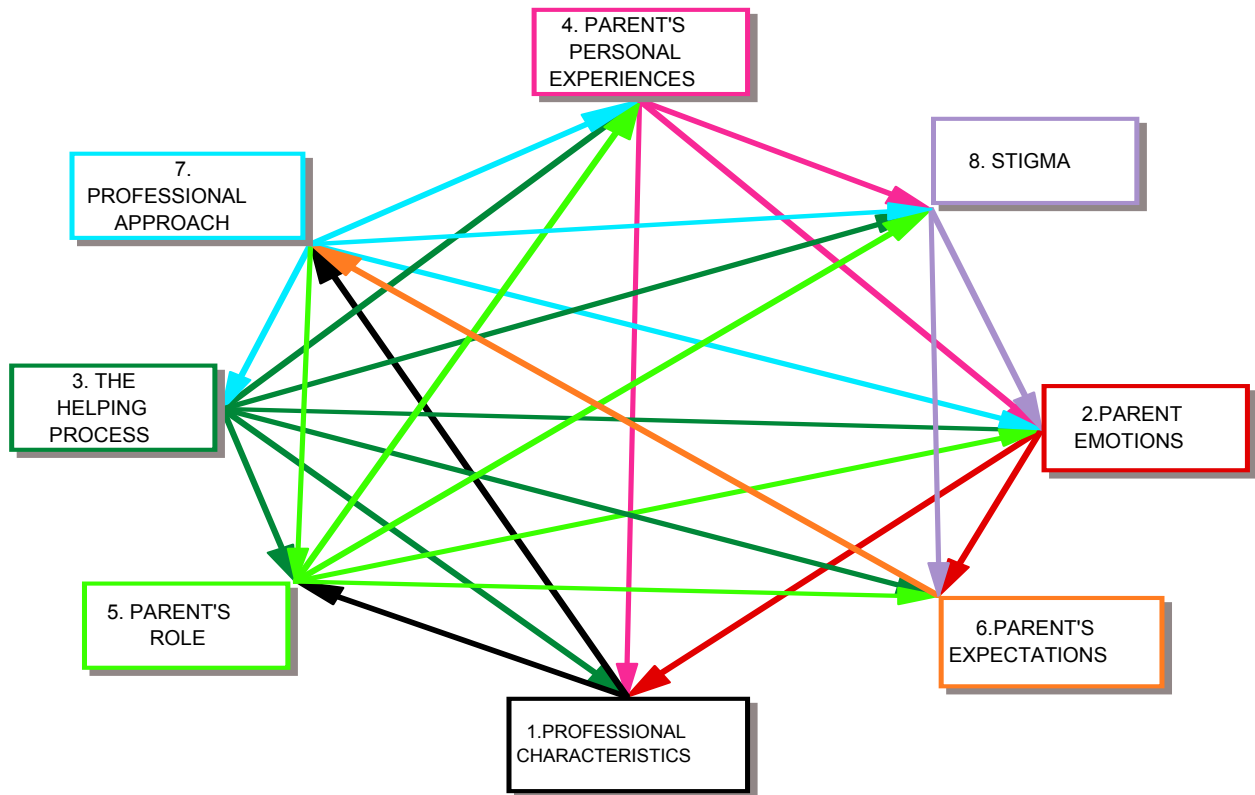
2. PARTICIPANT B: Tabular Interrelationship Diagram (IRD)

AFFINITY	1	2	3	4	5	6	7	8	OUT	IN	Δ
1		←	←	←	↑	<>	↑	<>	2	3	-1
2	↑		←	←	←	↑	←	←	2	5	-3
3	↑	↑		↑	↑	↑	←	↑	6	1	5
4	↑	↑	←		←	<>	←	↑	3	3	0
5	←	↑	←	↑		↑	←	↑	4	3	1
6	<>	←	←	<>	←		↑	←	1	4	-3
7	←	↑	↑	↑	↑	←		↑	5	2	3
8	<>	↑	←	←	←	↑	←		2	4	-2

3. PARTICIPANT B: Tabular Interrelationship Diagram in descending order of delta

AFFINIT Y	1	2	3	4	5	6	7	8	OUT	IN	Δ	SID ASSIGNMENT
3	↑	↑	■	↑	↑	↑	←	↑	6	1	5	Primary driver
7	←	↑	↑	↑	↑	←	■	↑	5	2	3	Secondary driver
5	←	↑	←	↑	■	↑	←	↑	4	3	1	Secondary driver
4	↑	↑	←	■	←	<>	←	↑	3	3	0	Circulator/ Pivot
1	■	←	←	←	↑	<>	↑	<>	2	3	-1	Secondary outcome
8	<>	↑	←	←	←	↑	←	■	2	4	-2	Secondary outcome
6	<>	←	←	<>	←	■	↑	←	1	4	-3	Secondary outcome
2	↑	■	←	←	←	↑	←	←	2	5	-3	Primary outcome

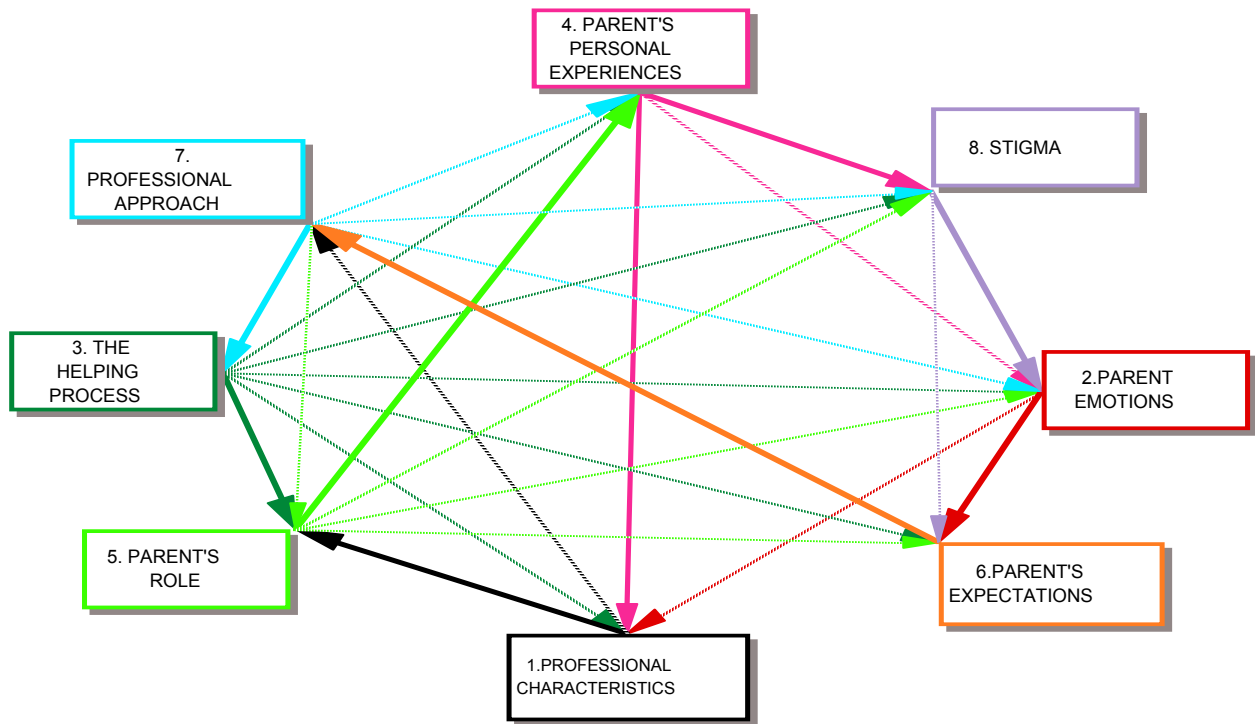
4. PARTICIPANT B: Cluttered Systemic Interrelationship Diagram



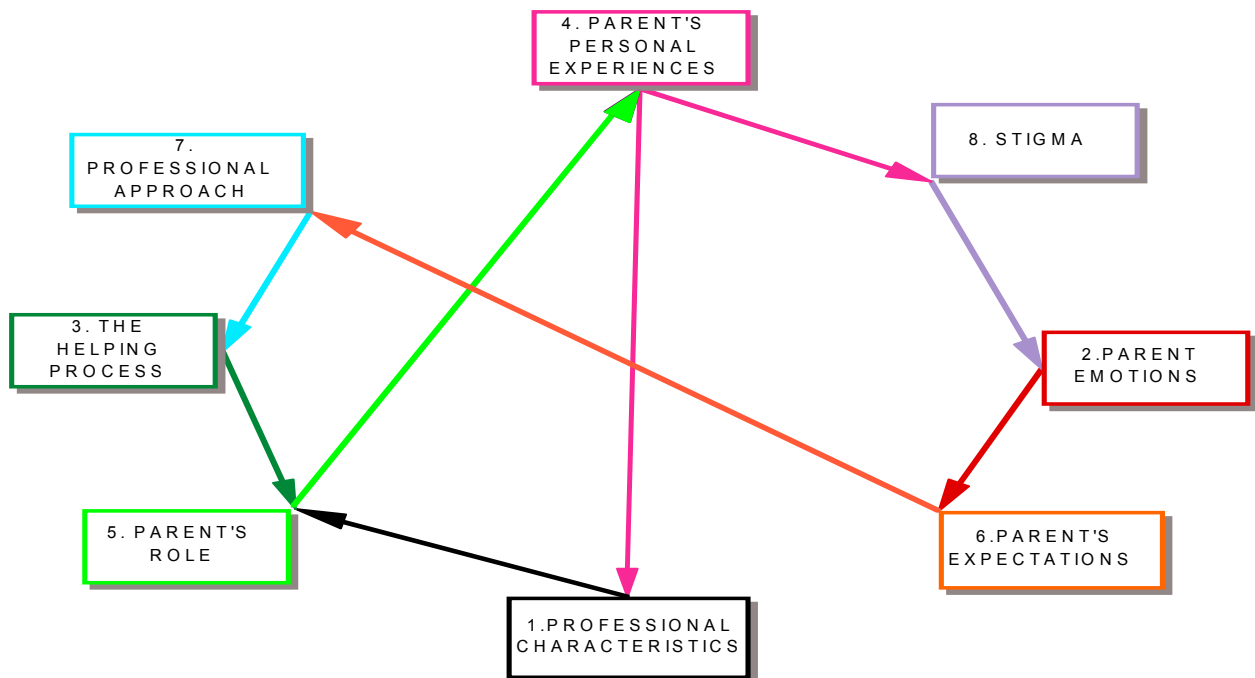
5. PARTICIPANT B: Rationalisation Process
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Participant B Step 1: Initial rationalisation		
ANALYTICAL STEP	LINK REMOVED	RATIONALE
1	3-2	3-8-2
2	3-6	3-8-6
3	3-8	3-4-8
4	3-1	3-4-1
5	3-4	3-5-4
6	3-5 is retained	No other path exist
7	7-2	7-8-2
8	7-8	7-4-8
9	7-4	7-5-4
10	7-5 is retained	7-3-5 contains a recursive link
11	7-3 is retained	Recursive links are ignored in this step
12	5-2	5-8-2
13	5-6	5-8-6
14	5-8	5-4-8
15	5-4 is retained	No other path exists
16	4-2	4-8-2
17	4-8 is retained	No other path exists
18	4-1 is retained	4-8-2-1 contains a recursive link
19	1-5 is retained	Recursive links are ignored in this step
20	1-7 is retained	Recursive links are ignored in this step
21	8-2 is retained	No other path exists
22	8-6	8-2-6
23	6-7 is retained	Recursive links are ignored in this step
24	2-6 is retained	No other path exists
25	2-1 is retained	Recursive links are ignored in this step
Step 2: Check in opposite direction from lowest to highest delta		
1	2-1	2-6-7-5-4-1
2	2-6 is retained	No other path exists
3	6-7 is retained	No other path exists
4	8-2 is retained	No other path exists
5	1-7	1-5-4-8-2-6-7
6	1-5 is retained	No other path exists
7	4-1 is retained	No other path exists
8	4-8 is retained	No other path exists
9	5-4 is retained	No other path exists
10	7-3 is retained	No other path exists
11	7-5	7-3-5
12	3-5 is retained	No other path exists
Step 3: Check of re-arranged SID for remaining redundant links		
1	2-6 is retained	No other path exists
2	6-7 is retained	No other path exists
3	8-2 is retained	No other path exists
4	1-5 is retained	No other path exists
5	4-1 is retained	No other path exists
6	4-8 is retained	No other path exists
7	5-4 is retained	No other path exists
8	7-3 is retained	No other path exists
9	3-5 is retained	No other path exists

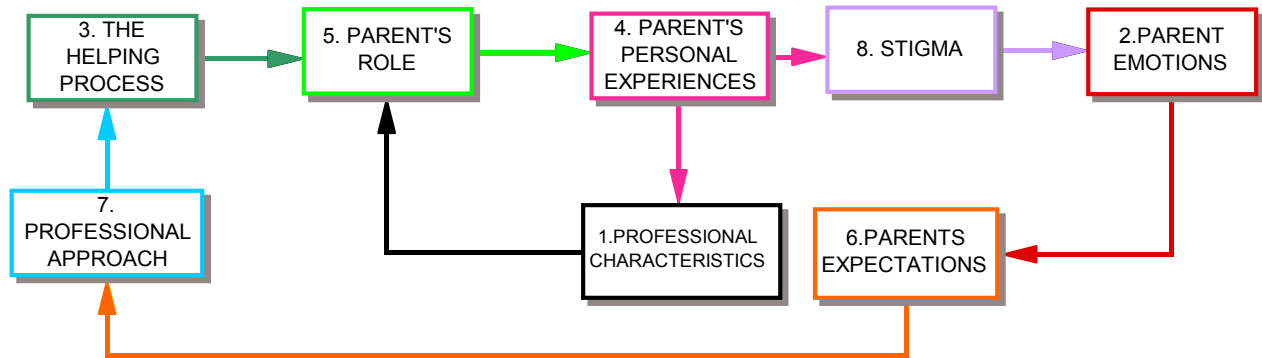
6. PARTICIPANT B: Uncluttered SID- redundant links retained



7. PARTICIPANT B: Uncluttered SID- redundant links removed



8. PARTICIPANT B: Clean SID



PARTICIPANT C

1. PARTICIPANT C: Detailed Affinity Relationship Table (DART)

Affinity Pair Relationship			Give an example in natural language using an if/ then statement to explain the relationship according to your experiences
1	←	2	<i>When the child has been assessed only then can the helping process start</i>
1	→	3	<i>Once it is clear what process would be beneficial recommendations can be made</i>
1	←	4	<i>The child must feel comfortable with the professional</i>
1	←	5	<i>If parents support the professional's role in the helping process it will create a trusting relationship</i>
1	←	6	<i>Parents can understand that the helping process might take time, and hard work</i>
1	←	7	<i>Through knowledge and expertise, a problem can be identified</i>
1	←	8	<i>All parties needs to be involved in the helping process</i>
2	→	3	<i>One a child are assessed recommendations can be made and understood</i>
2	<>	4	NO COMMENT
2	<>	5	NO COMMENT
2	→	6	NO COMMENT
2	←	7	<i>Expertise of professional important when assessing child</i>
2	<>	8	<i>Only professional is really involved in formal assessing</i>
3	←	4	<i>Previous successes will influence recommendations</i>
3	→	5	<i>Recommendations will determine what role the parents needs to play in the helping process</i>
3	<>	6	NO COMMENT
3	←	7	<i>Area of specialization will influence recommendation</i>
3	→	8	<i>If recommendation is for different stakeholders to be involved, it will influence team approach</i>
4	<>	5	NO COMMENT
4	<>	6	NO COMMENT

4	→	7	<i>If the personal characteristic is to be able to communicate well with children, field of expertise will probably be to work with children</i>
4	→	8	<i>Will the professional be able to work as part of the team in the helping process</i>
5	←	6	NO COMMENT
5	→	7	<i>Parent suspects a problem and involve the professional to get expert advise</i>
5	→	8	<i>If parent is involved in the helping process, a complete team will be involved</i>
6	→	7	<i>The feedback will determine what parents expect from therapy</i>
6	→	8	NO COMMENT
7	→	8	<i>The recommendations from the professional will indicate the approach of the team</i>

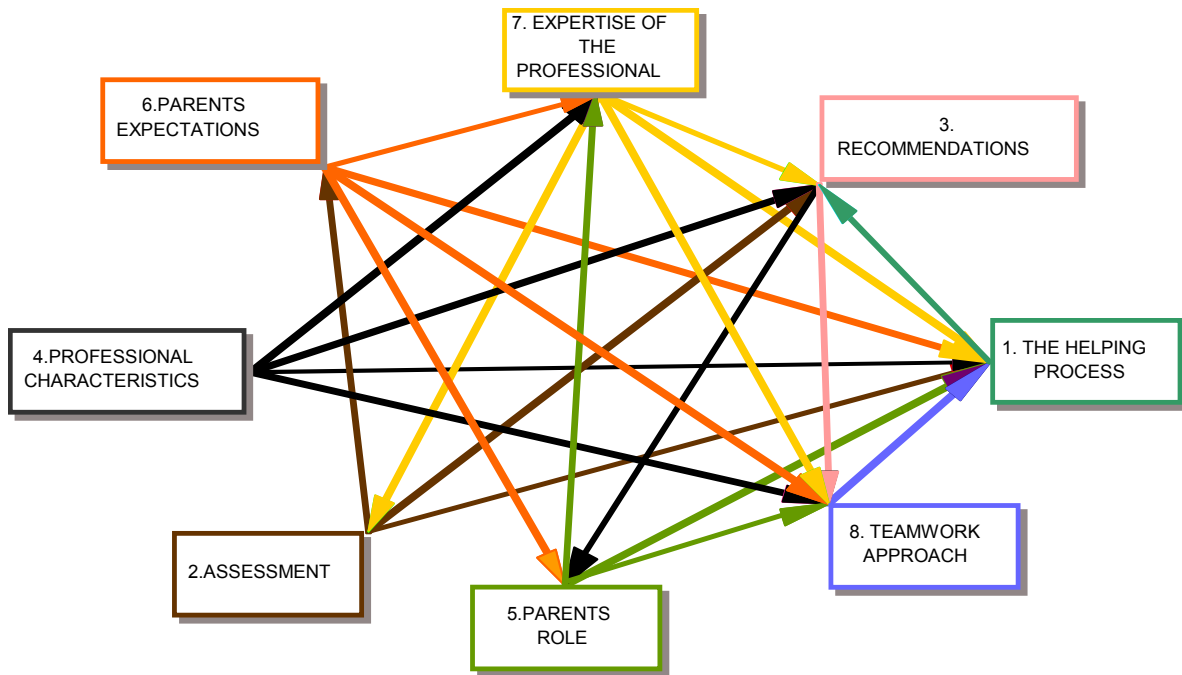
2. PARTICIPANT C: Tabular Interrelationship Diagram (IRD)

AFFINITY	1	2	3	4	5	6	7	8	OUT	IN	Δ
1		←	↑	←	←	←	←	←	1	6	-5
2	↑		↑	<>	<>	↑	←	<>	3	1	2
3	←	←		←	↑	<>	←	↑	2	4	-2
4	↑	<>	↑		<>	<>	↑	↑	4	0	4
5	↑	<>	←	<>		←	↑	↑	3	2	1
6	↑	←	<>	<>	↑		↑	↑	4	1	3
7	↑	↑	↑	←	←	←		↑	4	3	1
8	↑	<>	←	←	←	←	←		1	5	-4

3. PARTICIPANT C: Tabular Interrelationship Diagram in descending order of delta

AFFINITY	1	2	3	4	5	6	7	8	OUT	IN	Δ	SID ASSIGNMENT
4	↑	<>	↑		<>	<>	↑	↑	4	0	4	Primary driver
6	↑	←	<>	<>	↑		↑	↑	4	1	3	Secondary driver
2	↑		↑	<>	<>	↑	←	<>	3	1	2	Secondary driver
7	↑	↑	↑	←	←	←		↑	4	3	1	Secondary driver
5	↑	<>	←	<>		←	↑	↑	3	2	1	Secondary driver
3	←	←		←	↑	<>	←	↑	2	4	-2	Secondary outcome
8	↑	<>	←	←	←	←	←		1	5	-4	Secondary outcome
1		←	↑	←	←	←	←	←	1	6	-5	Secondary outcome

4. PARTICIPANT C: Cluttered Systemic Interrelationship Diagram

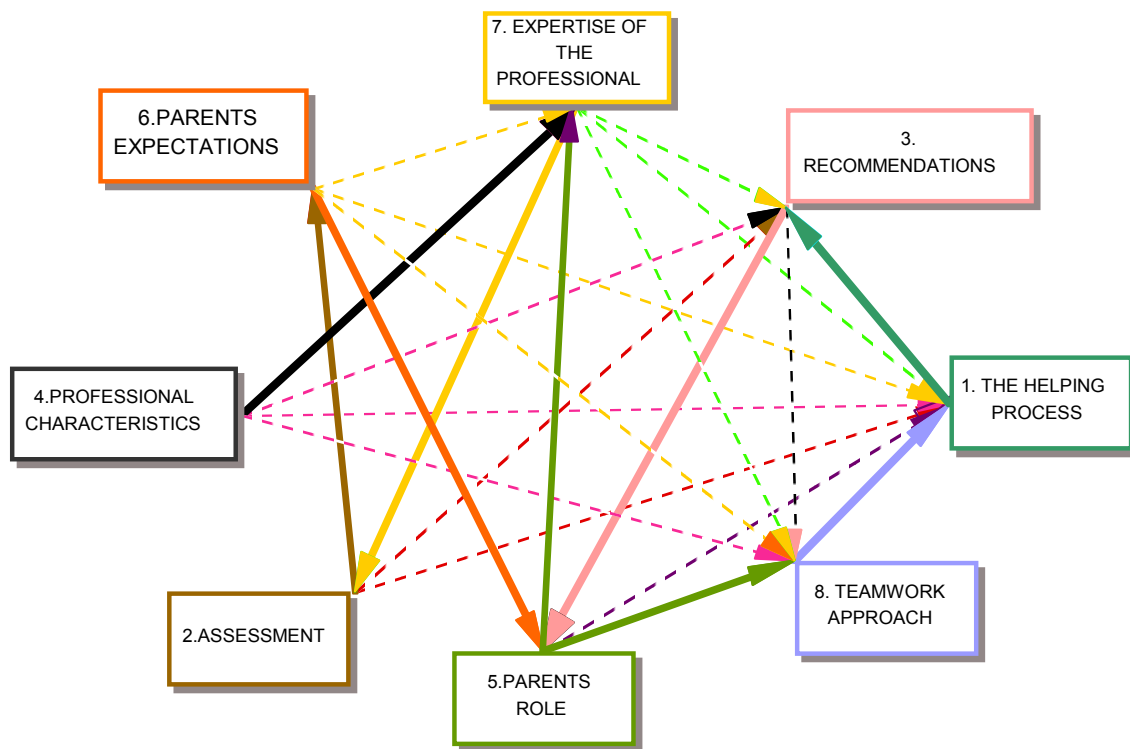


5. PARTICIPANT C: Rationalisation Process

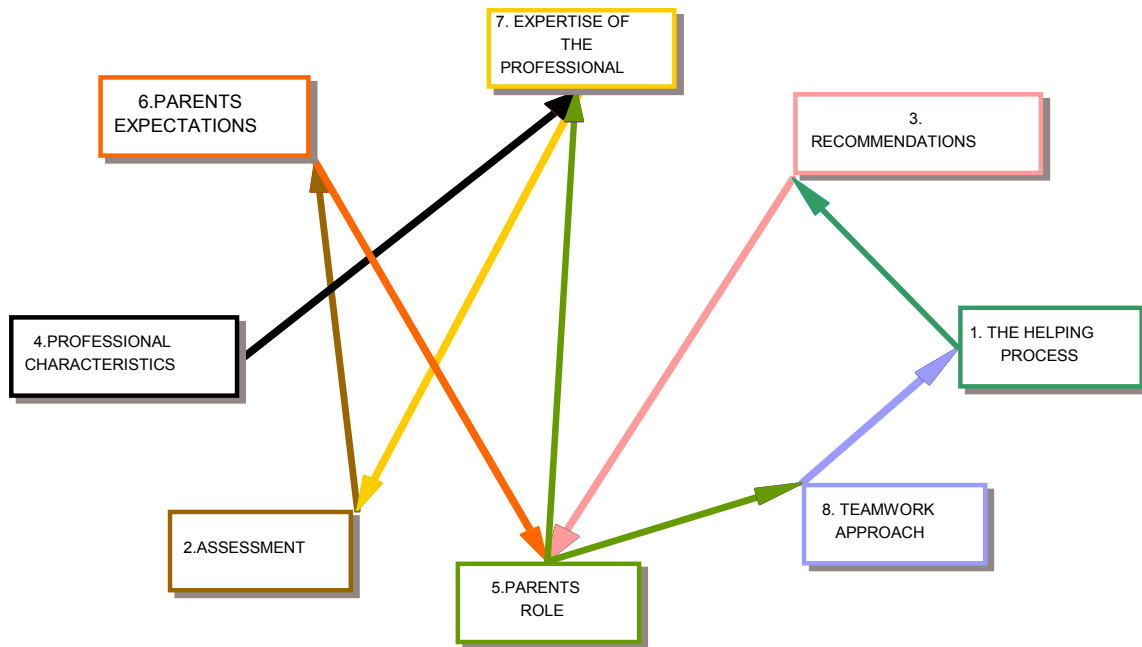
PARTICIPANT C: Step 1: Initial rationalisation		
ANALYTICAL STEP	LINK REMOVED	RATIONALE
1	4-1	4-7-1
2	4-8	4-3-8
3	4-3	4-7-3
4	4-7 is retained	No other path exists
5	6-1	6-7-1
6	6-8	6-7-8
7	6-5 is retained	6-7-3-5 contains a recursive link
8	6-7 is retained	6-5-7 contains a recursive link
9	2-1	2-3-8-1
10	2-3 is retained	2-6-7-3 contains a recursive link
11	2-6 is retained	Recursive links are ignored in this step
12	7-1	7-3-8-1
13	7-8	7-3-8
14	7-3 is retained	7-2-3 contains a recursive link
15	7-2 is retained	Recursive links are ignored in this step
16	5-1	5-8-1
17	5-8	5-7-3-8 contains a recursive link
18	5-7	Recursive links are ignored in this step
19	3-8 is retained	3-5-8 contains a recursive link
20	3-5 is retained	Recursive links are ignored in this step
21	8-1 is retained	No other path exists
22	1-3 is retained	Recursive links are ignored in this step

Step 2: Check in opposite direction from lowest to highest delta		
1	1-3 is retained	No other path exists
2	8-1 is retained	No other path exists
3	3-5 is retained	No other path exists
4	3-8	3-5-8
5	5-7 is retained	No other path exists
6	5-8 is retained	No other path exists
7	7-2 is retained	No other path exists
8	7-3	7-2-3
9	2-6 is retained	No other path exists
10	2-3	2-6-5-8-1-3
11	6-7	6-5-7
12	6-5 is retained	No other path exists
13	4-7 is retained	No other path exists
Step 3: Check of re-arranged SID for remaining redundant links		
1	4-7 is retained	No other path exists
2	6-5 is retained	No other path exists
3	2-6 is retained	No other path exists
4	7-2 is retained	No other path exists
5	5-7 is retained	No other path exists
6	5-8 is retained	No other path exists
7	3-5 is retained	No other path exists
8	8-1 is retained	No other path exists
9	1-3 is retained	No other path exists

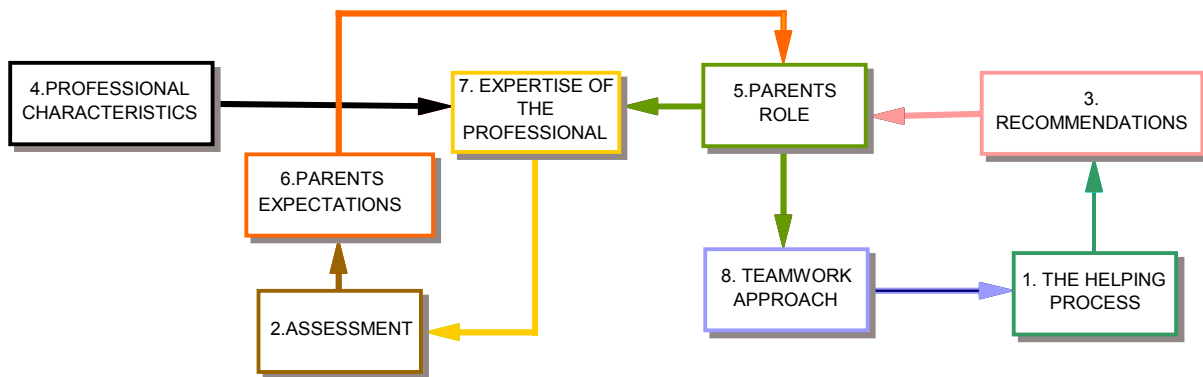
6. PARTICIPANT C: Uncluttered SID- redundant links retained



7. PARTICIPANT C researcher: Uncluttered SID- redundant links removed



8. PARTICIPANT C: Clean SID



RESEARCHER SID

1. RESEARCHER: Affinity Relationship Table (ART)

RESEARCHER ART		
1 Parental expectations	→	2 Professional characteristics
1 Parental expectations	→	3 The helping process
1 Parental expectations	→	4 Parents' role
1 Parental expectations	→	5 Status of the helping professional
1 Parental expectations	→	6 Professional approach
1 Parental expectations	←	7 Parents' personal experiences
1 Parental expectations	→	8 Parents' emotions
1 Parental expectations	→	9 Assessment
1 Parental expectations	→	10 Recommendations
1 Parental expectations	←	11 Stigma
1 Parental expectations	<>	12 Team approach
1 Parental expectations	→	13 Parent-professional interaction
1 Parental expectations	→	14 Values
2 Professional characteristics	→	3 The helping process
2 Professional characteristics	→	4 Parents' role
2 Professional characteristics	→	5 Status of the helping professional
2 Professional characteristics	→	6 Professional approach
2 Professional characteristics	←	7 Parents' personal experiences
2 Professional characteristics	→	8 Parents' emotions
2 Professional characteristics	→	9 Assessment
2 Professional characteristics	→	10 Recommendations
2 Professional characteristics	→	11 Stigma
2 Professional characteristics	→	12 Team approach
2 Professional characteristics	→	13 Parent-professional interaction
2 Professional characteristics	→	14 Values
3 The helping process	←	4 Parents' role
3 The helping process	←	5 Status of the helping professional
3 The helping process	←	6 Professional approach
3 The helping process	←	7 Parents' personal experiences
3 The helping process	←	8 Parents' emotions
3 The helping process	←	9 Assessment
3 The helping process	←	10 Recommendations
3 The helping process	←	11 Stigma
3 The helping process	←	12 Team approach
3 The helping process	←	13 Parent-professional interaction
3 The helping process	→	14 Values
4 Parents' role	←	5 Status of the helping professional
4 Parents' role	←	6 Professional approach
4 Parents' role	←	7 Parents' personal experiences
4 Parents' role	←	8 Parents' emotions
4 Parents' role	←	9 Assessment
4 Parents' role	←	10 Recommendations
4 Parents' role	←	11 Stigma

4 Parents' role	←	12 Team approach
4 Parents' role	←	13 Parent-professional interaction
4 Parents' role	←	14 Values
5 Status of the helping professional	←	6 Professional approach
5 Status of the helping professional	←	7 Parents' personal experiences
5 Status of the helping professional	→	8 Parents' emotions
5 Status of the helping professional	→	9 Assessment
5 Status of the helping professional	→	10 Recommendations
5 Status of the helping professional	→	11 Stigma
5 Status of the helping professional	→	12 Team approach
5 Status of the helping professional	→	13 Parent-professional interaction
5 Status of the helping professional	←	14 Values
6 Professional approach	←	7 Parents' personal experiences
6 Professional approach	→	8 Parents' emotions
6 Professional approach	→	9 Assessment
6 Professional approach	→	10 Recommendations
6 Professional approach	→	11 Stigma
6 Professional approach	→	12 Team approach
6 Professional approach	→	13 Parent-professional interaction
6 Professional approach	→	14 Values
7 Parents' personal experiences	→	8 Parents' emotions
7 Parents' personal experiences	→	9 Assessment
7 Parents' personal experiences	<>	10 Recommendations
7 Parents' personal experiences	→	11 Stigma
7 Parents' personal experiences	<>	12 Team approach
7 Parents' personal experiences	→	13 Parent-professional interaction
7 Parents' personal experiences	→	14 Values
8 Parents' emotions	←	9 Assessment
8 Parents' emotions	←	10 Recommendations
8 Parents' emotions	←	11 Stigma
8 Parents' emotions	<>	12 Team approach
8 Parents' emotions	→	13 Parent-professional interaction
8 Parents' emotions	←	14 Values
9 Assessment	→	10 Recommendations
9 Assessment	←	11 Stigma
9 Assessment	←	12 Team approach
9 Assessment	←	13 Parent-professional interaction
9 Assessment	→	14 Values
10 Recommendations	<>	11 Stigma
10 Recommendations	←	12 Team approach
10 Recommendations	←	13 Parent-professional interaction
10 Recommendations	→	14 Values
11 Stigma	<>	12 Team approach
11 Stigma	←	13 Parent-professional interaction
11 Stigma	←	14 Values
12 Team approach	→	13 Parent-professional interaction
12 Team approach	<>	14 Values
13 Parent-professional interaction	→	14 Values

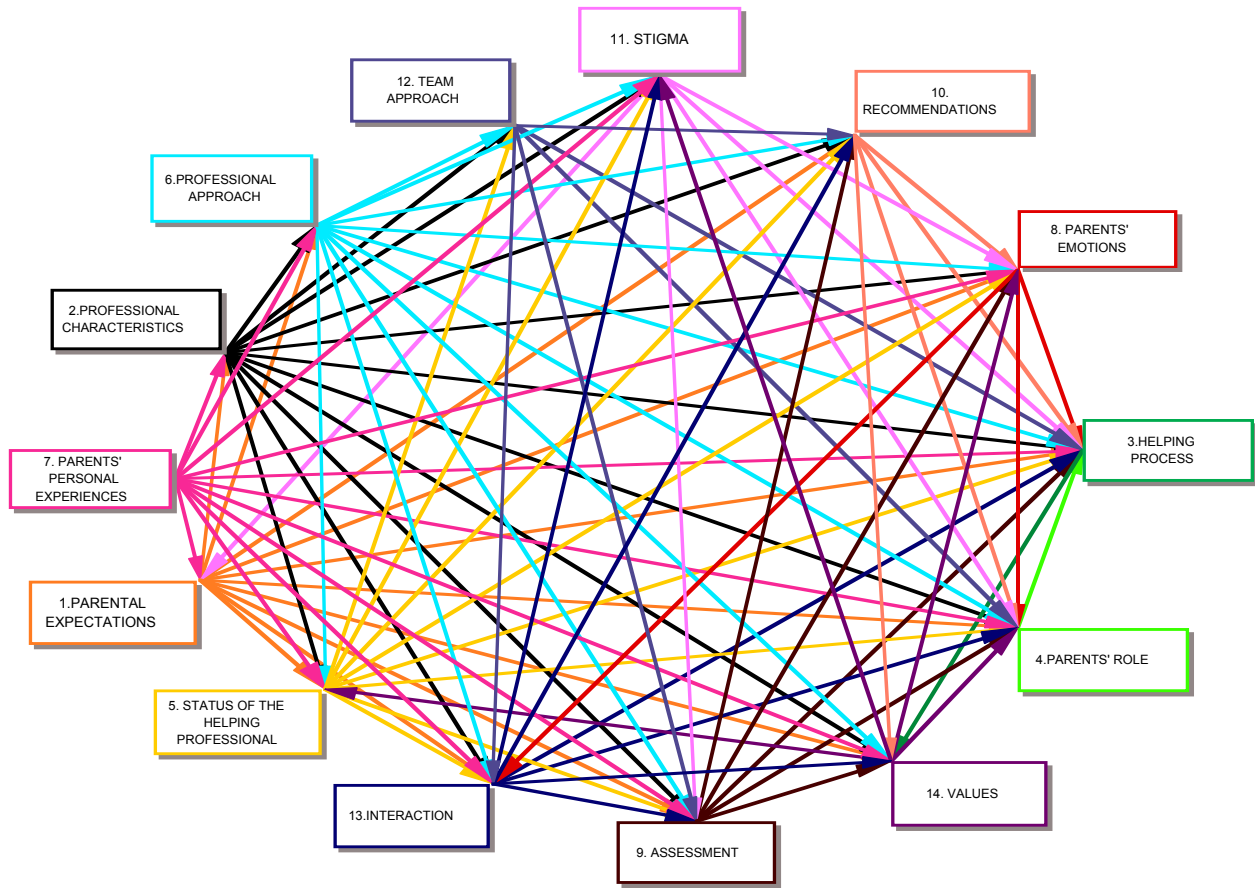
2. RESEARCHER: Tabular Interrelationship Diagram (IRD)

Affinity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	out	in	Δ
1		↑	↑	↑	↑	↑	←	↑	↑	↑	←	◇	↑	↑	10	2	8
2	←		↑	↑	↑	↑	←	↑	↑	↑	↑	↑	↑	↑	11	2	9
3	←	←		←	←	←	←	←	←	←	←	←	←	↑	1	12	-11
4	←	←	↑		←	←	←	←	←	←	←	←	←	←	1	12	-11
5	←	←	↑	↑		←	←	↑	↑	↑	↑	↑	↑	←	8	5	3
6	←	←	↑	↑	↑		←	↑	↑	↑	↑	↑	↑	↑	10	3	7
7	↑	↑	↑	↑	↑	↑		↑	↑	◇	↑	◇	↑	↑	11	0	11
8	←	←	↑	↑	←	←	←		←	←	←	◇	↑	←	3	9	-6
9	←	←	↑	↑	←	←	←	↑		↑	←	←	←	↑	5	8	-3
10	←	←	↑	↑	←	←	◇	↑	←		◇	←	←	↑	4	7	-3
11	↑	←	↑	↑	←	←	←	↑	↑	◇		◇	←	←	5	6	-1
12	◇	←	↑	↑	←	←	◇	◇	↑	↑	◇		↑	◇	5	3	2
13	←	←	↑	↑	←	←	←	←	↑	↑	↑	←		↑	6	7	-1
14	←	←	←	↑	↑	←	←	↑	←	←	↑	◇	←		4	8	-4

3. RESEARCHER: Tabular Interrelationship Diagram in descending order of delta

AFFINITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	out	Ξ	\triangleright	SID assignment
7	↑	↑	↑	↑	↑	↑		↑	↑	◇	↑	◇	↑	↑	11	0	11	Primary driver
2	←		↑	↑	↑	↑	←	↑	↑	↑	↑	↑	↑	↑	12	1	11	Secondary driver
1		↑	↑	↑	↑	↑	←	↑	↑	↑	←	◇	↑	↑	11	2	9	Secondary driver
6	←	←	↑	↑	↑		←	↑	↑	↑	↑	↑	↑	↑	10	3	7	Secondary driver
5	←	←	↑	↑		←	←	↑	↑	↑	↑	↑	↑	←	8	5	3	Secondary driver
12	◇	←	↑	↑	←	←	◇	◇	↑	↑	◇		↑	◇	5	3	2	Secondary driver
13	←	←	↑	↑	←	←	←	←	↑	↑	↑	←		↑	6	7	-1	Secondary outcome
11	↑	←	↑	↑	←	←	←	↑	↑	◇		◇	←	←	5	6	-1	Secondary outcome
9	←	←	↑	↑	←	←	←	↑		↑	←	←	←	↑	5	8	-3	Secondary outcome
10	←	←	↑	↑	←	←	◇	↑	←		◇	←	←	↑	4	7	-3	Secondary outcome
14	←	←	←	↑	↑	←	←	↑	←	←	↑	◇	←		4	8	-4	Secondary outcome
8	←	←	↑	↑	←	←	←		←	←	←	◇	↑	←	3	9	-6	Secondary outcome
3	←	←		←	←	←	←	←	←	←	←	←	←	↑	1	12	-11	Secondary outcome
4	←	←	↑		←	←	←	←	←	←	←	←	←	←	1	12	-11	Secondary outcome

4. RESEARCHER: Cluttered Systemic Interrelationship Diagram



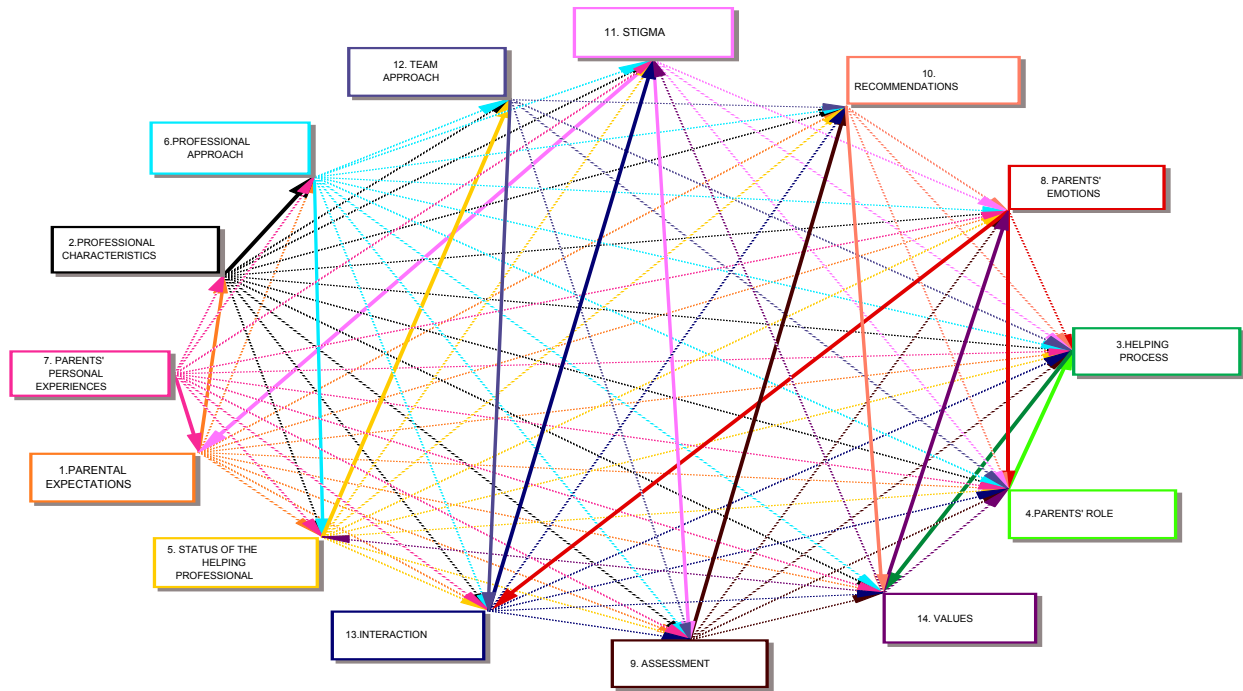
5. RESEARCHER: Rationalisation Process

Researcher Cluttered SID- Step 1 rationalisation		
ANALYTICAL STEP	LINK REMOVED	RATIONALE
1	7-3	7-8-3
2	7-4	7-8-4
3	7-8	7-11-8
4	7-14	7-9-14
5	7-9	7-11-9
6	7-11	7-6-11
7	7-13	7-5-13
8	7-5	7-6-5
9	7-6	7-2-6
10	7-1 is retained	7-2-11-1 contains a recursive link
11	7-2 is retained	No other path exists
12	2-3	2-8-3
13	2-4	2-8-4
14	2-8	2-10-8

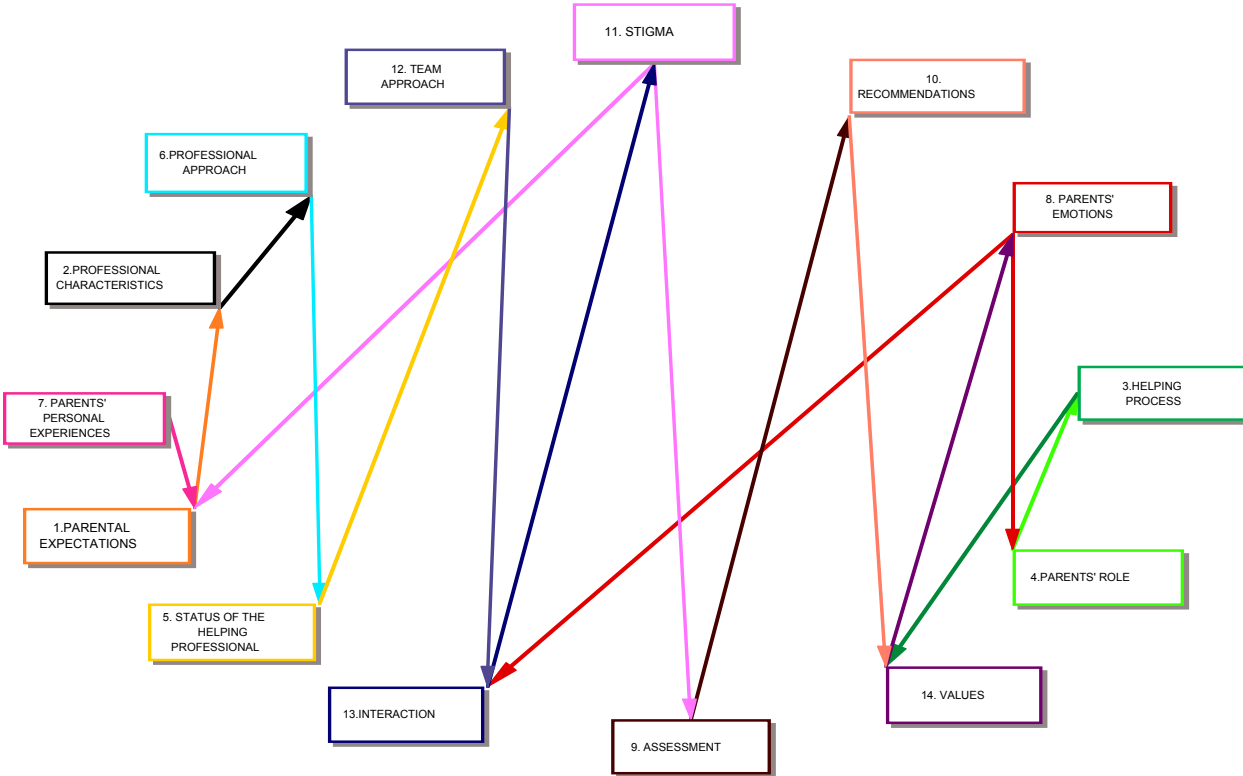
15	2-14	2-10-14
16	2-10	2-12-10
17	2-9	2-12-9
18	2-11	2-6-11
19	2-13	2-12-13
20	2-12	2-6-12
21	2-5	2-6-5
22	2-6 is retained	No other path exists
23	1-3	1-8-3
24	1-4	1-8-4
25	1-8	1-10-8
26	1-14	1-10-14
27	1-10	1-9-10
28	1-9	1-13-9
29	1-13	1-5-13
30	1-5	1-6-5
31	1-6 is retained	1-2-6 contains a recursive link
32	1-2 is retained	Recursive links are ignored in this step
33	6-3	6-8-3
34	6-4	6-8-4
35	6-8	6-10-8
36	6-14	6-10-14
37	6-10	6-12-10
38	6-9	6-12-9
39	6-11	6-5-11
40	6-13	6-5-13
41	6-12	6-5-12
42	6-5 is retained	No other path exists
43	5-3	5-8-3
44	5-4	5-8-4
45	5-8	5-10-8
46	5-10	5-12-10
47	5-9	5-13-9
48	5-11	5-13-11
49	5-13	5-12-13
50	5-12 is retained	No other path exists
51	12-3	12-10-3
52	12-4	12-10-4
53	12-10	12-13-10
54	12-9	12-13-9
55	12-13 is retained	No other path exists
56	13-3	13-10-3
57	13-4	13-10-4
58	13-14	13-10-14
59	13-10	13-9-10
60	13-9	13-11-9
61	13-11 is retained	No other path exists
62	11-3	11-8-3
63	11-4	11-8-4
64	11-8	11-9-8
65	11-9 is retained	No other path exists
66	11-1 is retained	Recursive links are ignored in this step
67	9-3	9-8-3
68	9-4	9-8-4
69	9-8	9-10-8
70	9-14	9-10-14
71	9-10 is retained	No other path exists
72	10-3	10-8-3

73	10-4	10-8-4
74	10-8	10-14-8
75	10-14 is retained	No other path exists
76	14-4	14-8-4
77	14-8 is retained	No other path exists
78	14-11 is retained	Recursive links are ignored in this step
79	14-5 is retained	Recursive links are ignored in this step
80	8-3	8-4-3
81	8-4 is retained	No other path exists
82	8-13 is retained	Recursive links are ignored in this step
83	3-14 is retained	Recursive links are ignored in this step
84	4-3 is retained	No other path exists
Step 2: Check in opposite direction from lowest to highest delta		
1	4-3 is retained	No other path exists
2	3-14 is retained	No other path exists
3	8-13 is retained	No other path exists
4	8-4 is retained	No other path exists
5	14-5	14-11-1-6-5
6	14-11	14-8-13-11
7	14-8 is retained	No other path exists
8	10-14 is retained	No other path exists
9	9-10 is retained	No other path exists
10	11-1 is retained	No other path exists
11	11-9 is retained	No other path exists
12	13-11 is retained	No other path exists
13	12-13 is retained	No other path exists
14	5-12 is retained	No other path exists
15	6-5 is retained	No other path exists
16	1-2 is retained	No other path exists
17	1-6	1-2-6
18	2-6 is retained	No other path exists
19	7-2	7-1-2
20	7-1	No other path exists
Step 3: Check of re-arranged SID for remaining redundant links		
1	7-1 is retained	No other path exists
2	2-6 is retained	No other path exists
3	1-2 is retained	No other path exists
4	6-5 is retained	No other path exists
5	5-12 is retained	No other path exists
6	12-13 is retained	No other path exists
7	13-11 is retained	No other path exists
8	11-9 is retained	No other path exists
9	11-1 is retained	No other path exists
10	9-10 is retained	No other path exists
11	10-14 is retained	No other path exists
12	14-8 is retained	No other path exists
13	8-4 is retained	No other path exists
14	8-13 is retained	No other path exists
15	3-14 is retained	No other path exists
16	4-3 is retained	No other path exists

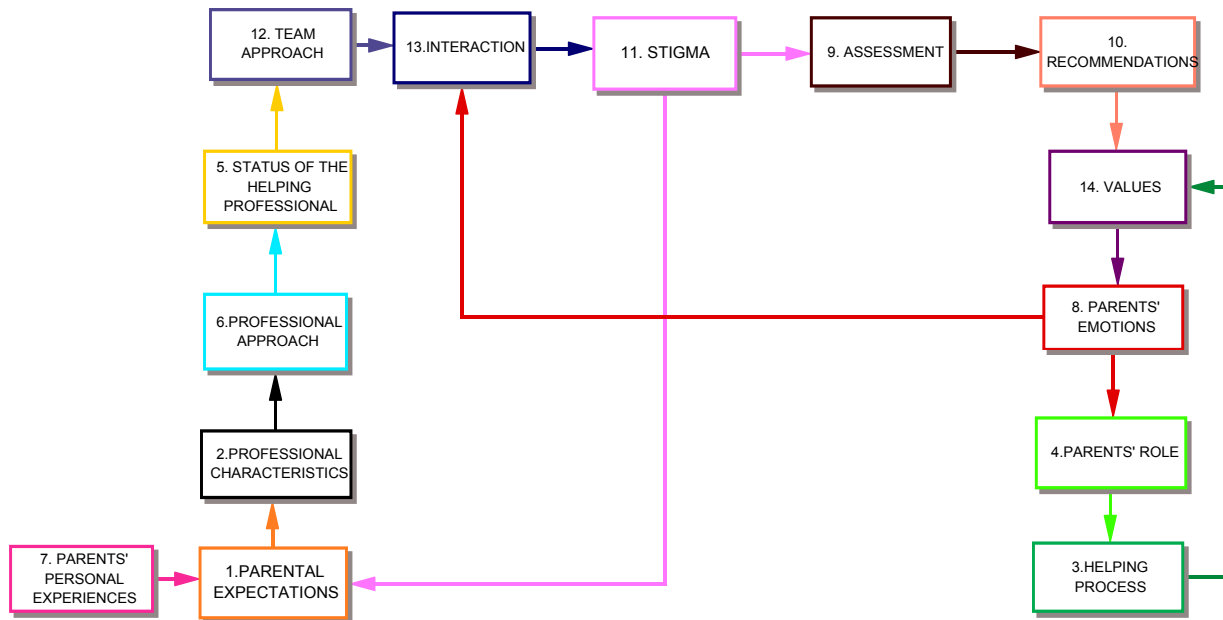
6. RESEARCHER: Uncluttered SID- redundant links retained



7. RESEARCHER: Uncluttered SID- redundant links removed



8. RESEARCHER: Clean SID



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