

FOCUS GROUP ANALYSIS (First Round)

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Introduction

A focus group is a type of group interview conducted with selected participants. It is structured to gather in-depth opinions and knowledge about a particular topic, and in fact it often provides a wider range of information - in the form of qualitative data - than do surveys.

Within the LeHo project two focus groups have been planned. The first one, presented in this report, collected information on key educational aspects involved in Home and Hospital Education (HHE). The second one will assess and discuss ICT-related solutions for the education of children with a medical condition.

Five key educational factors (KEFs), i.e., Relationships, Making sense and constructing knowledge, Assuming roles, Metacognition, and Individualities, were used to structure the first round of focus groups (FG) conducted for LeHo. These educational factors are based on an analysis of existing research in psychology, education and the education of sick children. A short description of each KEF can be found in the below insert:

- I) Relationships: importance of interactions with others as a means of facilitating the educational process;
- 2) Making sense and constructing knowledge: active and meaningful interpretational process during knowledge construction.
- 3) Assuming roles: acknowledgement of new roles (e.g., such as tutor, participant, assessor, organizer, controller, etc.) that one assumes when acquiring new skills.
- 4) Metacognition: thinking, reasoning, planning, organizing, and controlling the learning process.
- 5) *Individualities*: strategies, approaches, capabilities used in the learning process that differ from individual to individual.

Further KEF documentation is **here** and on the LeHo Project website.

Method

Teachers and Hospital Care Professionals (HCP) were contacted in participating member countries (Belgium, Egypt, Germany, Italy, Spain and United Kingdom) through the use of mailing lists and direct contacts, to join FGs conducted by LeHo project staff. FGs were conducted to see how the 5 KEFs were applied in the field of Home & Hospital Education (HHE) across LeHo participating members countries to determine both good practices and problematic areas for each KEF.

574 distinct FG statements were categorized into one of 38 categories (see Category Glossary at the end of this report) that were inductively created by three coders after reading a subset of statements. Agreement between the three coders was between 89 and 95% with a good reliability score, i.e., α = .88 and disagreements were resolved through discussion.



1.0 Demographic Analysis

99 doctors and teachers participated in the focus groups (31 Health care professionals – i.e., HCP) and 68 teachers). The average age for focus group participants was 44, and while not all participants indicated their gender (14), of those that did 25 were male and 60 were female and the average amount of experience across both groups was more than 17.5 years.

Table I illustrates the breakdown of participants by Country by Role and by Gender. Only in Egypt and the United Kingdom were the teachers predominantly male, while again in these countries the majority of HCPs were males.

COUNTRY	ROLE	FEMALE	MALE	NA
BELGIUM	НСР	89%	11%	0%
EGYPT	HCP	44%	56%	0%
ITALY	HCP	90%	10%	0%
UNITED KINGDOM	HCP	29%	71%	0%
BELGIUM	TEACHER	40%	60%	0%
EGYPT	TEACHER	69%	31%	0%
ITALY	TEACHER	90%	10%	0%
SPAIN	TEACHER	0%	0%	100%
GERMANY	TEACHER	44%	11%	44%
UNITED KINGDOM	TEACHER	80%	20%	0%

Table I Country by Role by Gender

Table 2 reports that most teachers had an average level of experience exceeding 15 years for both teachers and HCPs, with Italian teachers having the highest average experience and United Kingdom HCPs having the highest average experience.

COUNTRY	ROLE	EXPERIENCE
BELGIUM	HCP	14.5
BELGIUM	TEACHER	18.5
EGYPT	HCP	15.22
EGYPT	TEACHER	15.77
ITALY	HCP	17.83
ITALY	TEACHER	20.9
SPAIN	TEACHER	17
GERMANY	TEACHER	17.89
UNITED KINGDOM	HCP	25
UNITED KINGDOM	TEACHER	14.6

Table 2 Country by Role by Experience

Table 3 reports the average age by country and role. Considering the data reported in Table 2 regarding average experience, it is not surprising that the highest average age reported was for Italian teachers and the highest HCP average age was reported by the United Kingdom.



COUNTRY	ROLE	AGE
BELGIUM	НСР	41.25
BELGIUM	TEACHER	43.22
EGYPT	HCP	43.33
EGYPT	TEACHER	38.7
ITALY	HCP	41.67
ITALY	TEACHER	48.36
SPAIN	TEACHER	42.5
GERMANY	TEACHER	48.05
UNITED KINGDOM	HCP	52.14
UNITED KINGDOM	TEACHER	42.1

Table 3 Country by Role by Age

In examining the level of ICT knowledge (Table 4) we found that the most advanced level was found for Italian teachers and the highest basic level was found for Egyptian teachers.

COUNTRY	ROLE	ADVANCED	AVERAGE	BASIC	NA
BELGIUM	НСР	0.111	0.778	0.000	0.111
BELGIUM	TEACHER	0.400	0.500	0.100	0.000
EGYPT	HCP	0.444	0.556	0.000	0.000
EGYPT	TEACHER	0.077	0.462	0.462	0.000
ITALY	HCP	0.000	0.500	0.500	0.000
ITALY	TEACHER	0.636	0.273	0.091	0.000
SPAIN	TEACHER	0.000	1.000	0.000	0.000
GERMANY	TEACHER	0.111	0.611	0.222	0.056
UNITED KINGDOM	HCP	0.000	0.714	0.143	0.143
UNITED KINGDOM	TEACHER	0.200	0.300	0.500	0.000

Table 4 Country by Role by ICT knowledge

Most of the teachers who participated in the focus groups had middle or secondary teaching experience as can be seen in Table 5 as well as experience teaching in the hospital, as can be seen in Table 6. (Note: Most teachers had experience in more than one grade level.)

COUNTRY	PRESCHOOL	PRIMARY	MIDDLE	SECONDARY
BELGIUM	0%	50%	20%	30%
EGYPT	8%	92%	77%	54%
ITALY	27%	18%	27%	27%
SPAIN	0%	0%	83%	67%
GERMANY	17%	56%	72%	72%
UNITED KINGDOM	30%	50%	40%	80%

Table 5 Country by grade level teaching experience.



COUNTRY	HOSPITAL	SPECIAL	MAINSTREAM	HOME
BELGIUM	40%	20%	50%	30%
EGYPT	38%	46%	85%	15%
ITALY	82%	36%	91%	55%
SPAIN	100%	0%	0%	0%
GERMANY	100%	33%	50%	22%
UK	80%	60%	70%	80%

Table 6 Country by type of teaching experience.

2.0 Focus Group Statement Analysis

Focus group data was organized in the following way:

5 Key Educational Factors

Relationships, Making Sense, Assuming Roles, Metacognition and Individualities Issues

Practices, Hospital Problems, Home Problems and ICT

Evaluation

Positive, Negative

Given the data's heterogeneity, an analysis comparing results by country and by role was not possible.

2.1 Statements by KEF by Issue by Evaluation

A total of 574 statements were collected. Among those, 331 were negative, 235 were positive, and 8 were listed as other, as they were neither negative nor positive. Table 5 shows the percentage distribution of answers per Key Education Factors (KEF) and Issues.

		ISSUES					
	N	Prac	ctices	10	CT	Hosp.*	Home*
KEY EDUCATIONAL FACTORS		-	+	-	+	-	-
Relationships	163	0	35.6	0	17.1	34.4	9.8
Making sense & constructing knowledge	105	1.9	30.5	0	20	38.1	6.7
Assuming roles	120	0	50	2.5	10	24.2	13.3
Metacognition	89	0	40	- 1	11.2	32.6	5.3
Individualities	97	I	58.8	0	4.5	28.9	5.2

Table 7. Percentage distribution of statements per Key Educational Factor per issue.

^{*} It should be noted that these questions were asked in following way: "What problems do you see fulfilling this KEF at home/in the hospital?" therefore it is not unexpected that ALL of the statements were categorized as negative.



2.2 Table 5 Discussion

Table 5 shows the number of statements (i.e., N) offered by focus group participants for the 5 key educational factors (i.e., Relationships, Making sense & constructing knowledge, Assuming roles, Metacognition and Individualities) among the five issues (i.e., Practices, ICT, Hospital and Home Problems). The columns with the five issues represent the percentage of responses for each of those issues within a specific KEF. When columns are coloured red they are negative statements while when they are coloured green they are positive. It should be noted that most of the focus group participant negative statements were regarding the hospital environment as opposed to home schooling.

While most of the statements were for the Practices and Hospital issues, overall, the statements were well distributed among the five issues. While some (or all) of the statements for some of the key educational factors (i.e., KEF) were positive for some of the issues (i.e., Metacognition: Practices) all of the statements for the Hospital and Home issues were negative as the questions asked during the focus groups were to discuss problems at home/ in the hospital.

The less managed KEFs with educational practices appear to be Making sense and Constructing reality. From a pedagogical point of view this issue is related to the ability to structure an educational medium and long term projects with custom goals and a solid network of relationships. Not surprisingly, the KEF that recognizes the individuality of the student (i.e., Individualities) is well covered by appropriate educational practices, given that most of the educational activities within HHE are individualized.

The use of ICT, which will be investigated specifically with a second focus group, shows some interesting trends. First of all, it should be noted that the field in which ICTs are perceived to be more useful could be found in the KEFs Making sense and Constructing knowledge. ICT is therefore perceived as a tool of choice for creating a socio-constructivist path that respects the needs of the child. Given the positive role of the KEF Individualities in the previous paragraph it is interesting that there are less ICT statements in the KEF Individualities than in all the other KEFs. ICT might be best thought of as a tool for keeping the child socially connected with his peers.

Questions regarding the hospital environment were asked in following way: "What problems do you see fulfilling this KEF at home/ in the hospital?" therefore it is not surprising that ALL of the statements were categorized as negative. It should be noted that the majority of teachers who participated in the focus groups worked in the hospitals and that children who are instructed in a home environment are observed less than those who are instructed in a hospital environment. It might therefore be useful to develop better tools for observation and evaluation within the home environment, as it is easy for this environment to fall "under the radar."



2.2 KEF by Evaluation by participants

Figure I shows the overall number of positive and negative statements (i.e., N) offered by focus group participants for each one of the 5 key educational factors. When graphic bars are coloured red they are negative statements while when they are coloured green they are positive. This graph offers a general overview of the comments for each Key education factor.

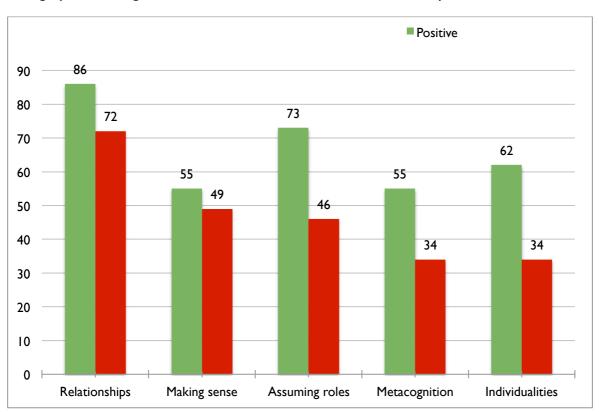


Figure 1. Count of positive and negative statements for each one of the 5 KEFs.

This figure shows that for all KEFs positive statements are more frequent than negative ones. This means that teachers and HCPs are able to indicate effective and widely used pedagogical solutions, especially when it comes to more traditional and practical educational aspects such as Assuming roles in front of others, ensuring individualised education, providing metacognitive tools and practice.

There are two aspects where the difference between negative and positive statements is not great; Making sense of the surrounding and internal reality and Relationships. These KEFs are connected with the complex reality of the child's life with a medical condition (e.g., continuity in social relationships, connecting the meaning of the school subjects with the present situation of illness, etc.) and thus present more difficulties. These problematic KEFs need more work and details about them will be discussed later.



3. Key Educational Factors (KEF) for Children with a medical condition

Before we being our discussion of the categories for each KEF, Table 6 reports the percentage and number of occurrences of each of the categories across all 5 KEF. The top 5 categories accounted for about 36% of all statements categorized across the 5 KEFs.

Category	%	Count
ICT learning tools	11.32%	65
Integration	7.49%	43
Isolation factors	5.92%	34
Communication	5.75%	33
External psychological factors	5.40%	31
Assessment	5.23%	30
Re-integration	4.70%	27
Teamwork	4.18%	24
Adaptive	3.83%	22
Intrapersonal psychological factors	3.83%	22
HHE not valued	3.48%	20
Experiential learning factors	3.31%	19
Stigma	2.79%	16
Other	2.44%	14
ICT use	2.26%	13
Individual factors	2.26%	13
Setting	2.26%	13
Cooperative learning	1.92%	П
Cost factors	1.74%	10
Family factors	1.74%	10
Safety	1.74%	10
Motivation	1.57%	9
Orientation factors	1.57%	9
Time factors	1.57%	9
Goal orientation	1.39%	8
Self-expression	1.39%	8
Virtual community	1.39%	8
Support factors	1.22%	7
Lack of personnel	1.05%	6
Academic factors	0.87%	5
Awards	0.87%	5
Children support factors	0.87%	5
Autonomy	0.52%	3
Mobility	0.52%	3
Reverse roles	0.52%	3
Age	0.35%	2
Long term factors	0.35%	2
Professional judgment	0.35%	2

Table 8 Statement categories by percentage and frequency



3.1 Relationships

In terms of Relationships 163 distinct statements were analysed (86 positive, 72 negative, 5 neutral).

Most recurring positive statements were about ICT learning tools (27), integration (14), teamwork (4).

ICT learning tools: "Interactive whiteboard for the patients" Integration and school re-integration: "Ensure child maintains contact with his classmates" Teamwork: "Use specific skills in science to support teamwork."

Most recurring problems here are about external psychological factors (12), isolation factors (10), stigma (5).

External psychological factors: "Rooms with 2-3 children does not help ..." Isolation: "Would be helpful to have a teacher or classmate from school of origin ..." Stigma: "Mental health is stigmatized ..."

Discussion

The comparison between positive and problematic aspects raises some questions regarding the effectiveness of the solutions adopted. For example, the use of ICT tools and the declared pedagogical attention to the policies of integration and re-integration in school, are associated with problems of isolation and child's psychological issues related to external stressors such as lack of movement, space, the uncertainty linked to disease and so on. The presence of stigma against the sick child draws attention to the need to improve the actions of human and social mediation, such as the adoption of specifying educational projects aimed at the management of back to school (school re-entry Educational Programmes) or the transition between school and hospital.

Recommendations for the LeHo project

The use of ICT and attention to the integration processes should be more focused in the following areas:

I. The actual creation and maintenance of social bonds that are stable over time, that will help the child to overcome the occasional use of educational activities for the benefit of educational projects in the medium and long term. The use of a connective context¹ or building understanding using the mediation of a character or tool² may be an appropriate methodology.

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¹ Placing events in front of a proper background can help understand them and making sense of them, just like a background in a play helps you understand what's going on in the scene in the front. A typical example of a connective context is the cub scouts theme from Kipling's story called "Mowgli's Brothers" from the Jungle books. The terms "Law of the Pack," "Akela," "Wolf Cub" "Grand Howl", "den," and "pack" all come from the Jungle Book, and gain a new meaning in the eyes of the child living the cub scout adventure. The Jungle's fantasy theme acts as a connective context because it first appeals to a child's imaginative mind and then connects with some real-life activities.

² An example of such mediation character is the monkey in my chair, a program developed by Missing school, an association for kids having treatment for cancer. The kids receive a Monkey, who can go to school when the kid is too sick to attend, and sit in the kid's place in the classroom. The Monkey is an on going reminder to everybody of the class-member who is missing, and comes



- 2. The knowledge and information of classmates.
- 3. The impact of psychological stressors could be dealt with paths and awareness of meaning (see KEF making sense), they may also be facilitated by educational planning that includes long-term design and is able to engage and integrate the different aspects of the life of the child with a medical condition (home school, hospital, home, peer group).

3.2 Making sense

In terms of Making sense 105 distinct statements were analysed (55 positive statements, 49 negative, I neutral).

Most recurring positive statements were about ICT learning tools (13), adaptive (4), Virtual community (8).

ICT learning tools: "Groups of students autonomously use the internet."

Adaptive: "Do their best to adapt to suit the situation of the child."

Virtual community: "Facebook group allows for communication between parents and ..."

Most recurring problems here are about isolation factors (12), HHE not valued (6), external psychological factors (6).

Isolation: "Hospital cubicle = isolation."

HHE not valued: "Teachers often lack the preparation."

External psychological factors: "Difficulty to find space and tools."

Discussion

While ICT seems to be the elective choice when it comes to creating meaningful and constructivist activities with ill children, isolation still remains the bigger burden. It's somehow paradoxical, therefore, that despite the use of ICT, those communication technologies are not able to effectively solve the fundamental problem of isolation. The influence of some external psychological factors (e.g., the limitation of space, time and materials) and the management of the educational setting cannot be sustained only by teachers. We need a coordinated policy in general among those who manage hospital wards and those who manage the educational process. Lack of communication at this level is probably the real problem to be addressed if we are to resolve issues related to environmental factors (isolation, space, materials, time, stigma).

Recommendations for the LeHo project

The fact that teachers mention ICT does not mean that they use it effectively or that this is the most effective tool. LeHo should investigate further top ICT uses. In particular, the following question needs to be investigated: how can ICT meet the educational needs of children in the

with its own backpack which can be couriered between school and home to deliver letters, cards, notes – and even homework. Hence The monkey becomes a mediator between the child and his classroom (http://au.thecurestartsnow.org/media/1014/monkey-in-my-chair-media-release-2013-10-07.pdf; http://missingschool.org.au/wp-content/uploads/2014/04/2014-04-BC-APR14-Monkey-In-My-Chair.jpg).



creation of meaning? Management aspects and the problems with the educational settings were highlighted here as a problem along with other external factors that influence significantly all parties involved in HHE. While these are beyond the scope of the LeHo project it should be noted that they are identified as a priority area of work that must be addressed to improve the educational needs of sick children and their families.

3.3 Assuming roles

In terms of Assuming roles 120 distinct were analysed (73 positive, 46 negative, 1 neutral).

Most recurring positive statements were about integration (10), teamwork (9), ICT learning tools (7), ICT use (5).

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Integration: "Students in the hospital attend classes together in the hospital..." Teamwork: "Medical staff and teachers communicate well and work together ..." ICT learning tools: "Via Skype we shared poems ..." ICT use "It has a website with the students, the parents and the foundation ..."
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Most recurring problems here are about stigma (7), isolation factors (5), intrapersonal psychological factors (4), external psychological factors (4),

Stigma: "Some children refuse to talk about their illness as they feel that they are not normal ..."

Intrapersonal psychological factors: "Teachers can sometimes be too emotionally involved."

Isolation factors: "The situation with home education is more isolating than ..." External psychological factors: "No systematic activities ..."

Discussion

Working in an integrated educational environment, through forms of cooperative learning seems to be the ideal choice to allow sick children to take active roles in front of their peers. ICT is indicated as an aid to these methodologies. The presence of stigma and problems related to intrapersonal psychological factors indicate the need to properly prepare the educational level of recipients (including the class and the teachers in the school to which the ill child belongs).

Recommendations for the LeHo project

The psycho-pedagogical preparation of the class (information about the disease and the physical appearance of the sick child, sharing of problems, concerns and forms of aid, etc.) should be strengthened and given due consideration. Proper management of ICT in general (for example, a web portal with an appropriate repository of activities) could be an interesting tool (see, for example, http://pso.istruzione.it; http://www.hospitalteachers.eu/timsis/). The concept of expression of the self is crucial to this key factor and education should be further developed and strengthened.



3.4 Metacognition

In terms of Metacognition 89 distinct statements were analysed (55 positive, 34 negative, 0 neutral).

Most recurring positive statements were about adaptive (8). ICT learning tool factors (7), experiential learning factors (5).

Adaptive: "Mainstream schools adapt activities ..."

ICT learning tool factors "Using PowerPoint and movies ..."

Experiential learning factors: "Using puzzles in math and science."

Most recurring problems here are about safety (7), cost factors (5).

Safety: "Science is a problem because experiments cannot be done." Cost factors: "There is a low budget for such activities.

Discussion

Metacognition is well connected with experiential learning tools and activities. However children's metacognitive learning processes are affected by the disease state (e.g., safety) or by the lack of economic resources. An example is the need to conduct scientific or practical work on natural or artificial materials. The fact that a sick child cannot operate directly and personally with things that might be "contaminated" due their compromised immune system (e.g., Leukaemia, Sickle Cell Anaemia) does not mean that they cannot participate vicariously or in a mediated way in such activities.

Recommendations for the LeHo project

There are two directions of work for the use of ICT.

The first is the use of ICT as a facilitator of metacognitive processes (for example, thinking tools, repositories and shared whiteboard card of reflection and organization of work, shared ICT thinking sheets, etc. www.thinkingclassroom.co.uk is rich in examples and activities, which could be adapted to a range of hospital and mediated by ICT).

The second is as a communication tool to facilitate the vicarious participation of the student with concrete classmate experiences. You could also think of the school hospital as partnering with science museums to enable children to see and interact with scientific experiments.

3.5 Individualities

In terms of Individualities 97 distinct statements were analysed (62 positive, 34 negative, 1 neutral).

Most recurring positive statements were about communication (10) assessment (10), integration (6).

Communication: "Open discussion with the parents during the interview process..." Assessment: "Self-assessments are better than ..." Integration: "Art happens as a group activity ..."



Most recurring problems here are about assessment (5), re-integration (4). time factors (3),

Assessment: "Assessment is difficult in this setting ..."

Re-integration: "Mainstream schools have difficulties recognizing the limitations of HHE

children when the return to class."

Time factors: "Staff need to have the time to evaluate ..."

Discussion

The recognition of the individuality of each student seems adequately covered by appropriate pedagogical practices (adaptive teaching and guidance, communication, systems of self-evaluation and assessment, while being centred on the dynamic characteristics of the individual, and attention to integration). The problems identified appear to relate to the sharing of practices and procedures with the school to which they belong, or are probably linked to the rigid use in the context of the hospital school of assessment procedures of the normal school.

Recommendations for the LeHo project

The main line of work to be followed is in the integration and recognition of specific issues regarding education in the hospital (different times, specific evaluation procedures, psychological limitations, objective, etc.) by the child in HHE. This can be enhanced by clear regulations requiring the recognition of the hospital school within the mainstream school. The individualized teaching and expression can be further enhanced with the adoption of workshops or small groups, such as those represented in the Genius Hour (http://www.geniushour.com/what-is-genius-hour). Such activities could be done synchronously with the class of origin.

Future work in LeHo

This first round of Focus Group was designed to address issues related to the fulfilment of the Key Educational Factors in the Hospital and Home Education. A new round of Focus groups will be performed in the forthcoming months in order to address specifically how ICT can help fulfil the above mentioned KEF, and what problems still exists related to ICT use.



Glossary of Categories

Category	Definition
Academic factors	Something that actively contributes to the accomplishment, results or process of learning.
Adaptive	Changes that are made to the learning process.
Age	Length of life of child in HHE.
Assessment	Systematic collection and review of information relevant to educational process
Autonomy	Ability of the HHE or HCP or learner to make decisions.
Awards	Prize or mark of recognition for achievement.
Children support factors	Support for children within HHE.
Communication	Imparting or exchanging information.
Cooperative learning	Educational approach where activities are organized around academic and social learning experiences.
Cost factors	Amounts to be paid or spent for the obtaining of something related to HHE.
Experiential learning factors	Process of making meaning from direct experience.
External psychological stressors	Events and stimuli outside of the person that cause HCP, teachers or HHE children to experience psychological stress.
Family factors	Issues involving HHE children's family members.
Goal orientation	Desire to develop the self by acquiring new skills, mastering new situations and improving one's competence.
HHE not valued	HHE is not given the amount of time and resources FG members believe it should.
ICT use	Learning issues that ICT can either help resolve or is impossible to resolve within HHE.
ICT learning tools	ICT tools, i.e., software, hardware, services or applications that can, are or should be involved in HHE.
Individual factors	Issues particular to the individual that affect their participation either negatively or positively within HHE.
Integration	The bringing together or incorporating of parts into a whole within HHE.
Intrapersonal psychological factors	Psychological factors that occur within the mind of the individual.
Isolation factors	The setting or placing apart of any individual that participates in HHE.
Lack of personnel	Not having enough people employed (either paid or volunteer) that engaged within HHE.
Long term factors	Issues that occur or happen or will happen over a long period of time to anyone or anything involved in HHE.
Mobility	The ability of any person within HHE to move freely and easily.
Motivation	The reason(s) anyone within HHE has for behaving/thinking in a particular way.
Orientation factors	Finding for oneself or others their bearings in new HHE environments.
Other	Anything that not included in the other categories.



Professional judgment	Ability to make considered decisions by HHE professionals.
Re-integration	The restoration of HHE children into their mainstream school, activities - i.e., their life prior to illness.
Reverse roles	Someone in HHE adopting a role which is the reverse of what they normally assume.
Safety	Condition of any HHE member being protected from danger, risk or injury.
Self-expression	The expression of one's feelings, thoughts or ideas within activities.
Setting	The place or type of surroundings where something associated with HHE takes place.
Stigma	A stain or reproach for the illness associated with children in HHE.
Support factors	Assistance given to support HHE members financially, psychologically, and emotionally.
Teamwork	Combined action of HHE members towards a common goal.
Time factors	The planning or scheduling or arranging of events within HHE.
Virtual community	Community of people sharing the common interest of HHE over the Internet.