

**Need Survey on Future Directions of Educational
Research at the Secondary Level Curriculum
in Sri Lanka - 2014**



**Department of Research and Development
National Institute of Education
Maharagama**

Need Survey on Future Directions of Educational Research at the Secondary Level Curriculum in Sri Lanka -2014

Overall Guidance	B.Sanath Pujitha (Deputy Director General)
Research Guidance	M.N.S.Edirisingha (Director)
Project Co-ordinator	K.A.N.Sulochana Alexander (Assistant Lecturer)
Research Team (Internal)	W.K.S.Pushpamala (Lecturer) D.Keppetigoda (Senior Lecturer) K.A.N.Sulochana Alexander (Assistant Lecturer) D.Hettige (Lecturer)
Research Team (External)	W.P.S.Wakishta (Inservice Advisor) D.A.S.D.Rathnayaka (Chief Project Officer-Retired) M.A.P.Munasinha (Chief Project Officer-Retired) M.L.K.Rambukwella (President- Retired)
Tamil Translation	F.A.C.Karamath (Principal- Retired)
English Translation	M.A.P.Munasinha (Chief Project Officer-Retired)
Computer Word Processing	Nilmini Fernendo (Management Assistant)
Cover Page Design	Chura Madusanka (Department of Electronic Dissemination)

Content

	Page
Content	iii
Foreword	v-vi
Executive Summary	vii-xii
List of Table and Figures	xiii
Introduction	1-4
Literature Review	5-13
Research Method	14
research Findings	19-55
Conclusions and Recommendations	56-58
References	59

Foreword

At the present we are living in a millennium in which an unbelievable transformations are taking place in all the fields including social, economic, cultural, political and education in par with rapid developments in science and technology and speedy globalization. This situation is becoming more intense due to elevation of human expectations, population growth and expansion of knowledge occurring every moment. In this era progressing alongside the concept of electronic global village, no country in the world can exist in solitude being isolated from modernization and change. In the present millennium, in order to face these challengers successfully, in all countries, education has to shoulder an onerous task.

As other countries in the world, with a view to realizing the above task, it is important that Sri Lanka too identifies how its education system be oriented. For this, it is important to identify on a research basis, the strengths and weaknesses in the current education system, what sectors should be empowered to face new conditions and challenges and in such developments how it can be effected conducive to the indigenous culture with a sense of compatibility. In this context, the National Institute of Education (NIE) is entrusted a special responsibility.

Quality development in education in Sri Lanka is a foremost aim of the National Institute of Education. To achieve this aim, the NIE is legally vested with the power of identifying problems relating to various areas and roles in the education system and advising the minister on appropriate methodologies to solve them. That is the reason why the NIE has been assigned the tasks of conducting policy research to generate research-based data and submitting suggestions related to the structural amendments in the education system. On this platform, undertaking a need survey for identifying the direction of future research in relation to the secondary school curriculum in Sri Lanka is one instance of performing its role by the NIE.

The aim of this research was the identification of current problems deemed promptly studied within the ambit of secondary curriculum of Sri Lanka that would have cropped up in

relation to various tiers and roles from the grass root to policy maker level. A welcoming result of this study was that it offered opportunity to the sectors directly involved in education to surface problem according their perspective not only under their subject areas but also in relation to general education in common. So, this has shown direction to undertake research on their option for institutions and stakeholders representing different strata from the policy makers playing the flagship role in the development function of education to the practitioners. I see, this need survey initiated by the Research and Development Department of the NIE to lay foundation to identify not only the subject-related problems but also the burning issues in the field of education today as a monumental effort of current importance.

S.U.Wijerathna
Director General (Acting)
National Institute of Education
Maharagama
19.02.2015

Executive Summary

Sri Lanka being a country aspiring to be the hub of knowledge, for it, should discern the current state of the art in the Sri Lankan education system. Further, in order to face the future challenges successfully it should understand in what direction the education system should orient. To experience successful results, this process should be planned on research. This necessitates the identification of curriculum – related research areas that should be addressed promptly in the future.

The facts presented by the Report of the Special Committee on Education – Sessional Paper xxiv (1943) confirms that the importance of research in the context of Sri Lanka had been a subject in focus even in the days before independence.

In Sri Lanka, educational reforms in 1972 and proposals for educational reforms put forward by the white paper in 1981 can be cited as conspicuous attempts made in relation to curriculum and the school system in the decades of 70 and 80. Those proposals for change were made after studying how education systems and curricula were in progress in various countries in the world, as facts based on discussions held by various committees and in response to social requirement and demand at the time. Yet, it is implicit that they are not based on findings identified by a systematic course of research.

Thus, as a more effective strategy, a need survey was undertaken to fulfill the requirements such as identification of the priority areas for research in the field of education, opening up avenues in the arena for them, recognizing problem for policy formulation and postulating theory.

Coming to a common agreement is a prior requirement for socializing educational reforms successfully. A common acceptance for a social change can be brought about by following a meticulous inquiry and a transparent course of action. Educational venture is a concerted effort. Thus, in the task of investigation, conducting a need survey is of import to elicit information from various sectors and relevant stakeholders. A need survey comprises four stages – identification of needs, prioritizing needs, coming to an agreement about the needs and inquiring into the needs for which course of action can be proposed.

It is by research conducted through scientific analysis that successful solutions can be proposed for the challenges and problems in the education system. So, this study was launched on the basis of the following two objectives.

1. Identification of main research areas relating to secondary school curriculum that should be studied during the future three year period
2. Presentation of recommendations required to implement research in relation to secondary school curriculum during the future three year period.

For realizing above objects policy formulators, curriculum designers, curriculum managers, curriculum trainers and practitioners (teachers) implementing the curriculum in the field of education were selected as the population of the study. Stratified random sampling method was used to select the sample. A survey type questionnaire was used to collect data. The questionnaire was structured to facilitate analysis and identification of key areas.

The questionnaire so prepared was administered to a sample of 1799 comprising policy formulators, curriculum designers, provincial directors representing the nine provinces, in – service advisers and teachers. Grounded theory based on thematic analysis was used to analyze data collected from 350 respondents. This involved coding and categorizing of data followed by formation of themes. In relation to the themes so identified, concept maps were constructed. Sub themes and subsidiary themes that emerged from those themes were incorporated into a concept map. Research literature on curriculum, experiences of former research and experiences gained by the involvement in the educational process were used to establish the interrelations within and interrelations among the concepts.

Data analysis gave rise to five key themes namely the content of the curriculum, implementation of the subject content (learning teaching process), teacher training methods, resources essential for the implementation of the curriculum and curriculum evaluation and assessment. In relation to these five themes, 14 main problem areas for research worth subjecting to study were identified. Relevant to one of those 14 themes , that is the key theme of evaluation and assessment, the problem area emerged in relation to evaluation of learning outcomes was analyzed in common. The other 13 areas were analyzed by the core subjects and other subjects and specific problem areas were identified under each subject.

When identifying specific problem areas by subject, the responses received for the 13 areas for the respective subjects were synthesized numerically. By ranking the synthesized responses in number, five problem areas in relation to each subject were identified in the order of priority.

Findings of the need survey

- Learning teaching process was the main problem area in History and Mathematics.
- In the case of the core subjects Mother tongue, English, Religion and Science and other subjects, the main problem area is the resources essential for the implementation of the curriculum.
- Development in technology, values and discipline are problem areas that should be studied promptly.
- The two problem areas that should be made themes for current research are management and coordination within and among the educational institutions and the gender of the school dropouts.

- As regards the subject content, problems in the content, problems related to updatedness in subject content and suggestions for updating are suitable for research.
- Shortcomings in the learning teaching process, failure to update the learning teaching process and weaknesses in the training methodology regarding the implementation of subject content are problem areas open for research.
- Policy – related problems in teacher training, functionality in teacher training programmes and planning of teacher training programmes are the problem areas related to the prevailing modes of teacher training.
- Under the theme “resources required to implement curriculum, human and physical resource management and improvement of resources are areas that should be subject to study.
- With regard to evaluation and assessment, there are problem areas related to the prevailing process of supervision and the suggestions for evaluating supervision
- When evaluation and assessment are considered, the factors that weaken them and strengthen them constitute the main problematic areas.
- The impact of grade five scholarship examination on general learning teaching process and the influence it creates on all stakeholders in education are special areas that need to be studied.
- The specific problem areas emerged in relation the school – based assessment were the way it is implemented and student participation, stakeholders knowledgeability of it, management of documents and social attitudes.

The above areas bought to view by the need survey could be identified as the issues that are of current importance for undertaking research.

Suggestions

Suggestions related to curriculum and the learning teaching process

01. When considering the subject content, research could be undertaken on the problems in the content, problems in the updatedness of the content and suggestions fitting for updating.
02. Launching research is essential on identifying shortcomings in the learning teaching process and weaknesses in implementation of subject content. As per the findings related of teacher training methodologies, research should be conducted on policy problems related of teacher training, dynamism of teacher training programmes and planning of teacher training programmes.
03. Under the resources essential for the implementation of the curriculum, management of human and physical resources and improvement of resources should be subject to research

Suggestions related to the process of evaluation and assessment

04. As regards the process of evaluation and assessment, research needs to be conducted on the existing process of supervision and issues giving rise to proposals in evaluation of supervision.
 - 4.1. It is necessary to launch research studies on the foremost problems related to the factors that impede and support evaluation and assessment.
 - 4.2. It is important that studies be undertaken on two specific problem areas, impact of grade five scholarship examination on the normal learning teaching process and the influence of the scholarship examination on all stakeholders in education.
 - 4.3. Implementation of school-based assessment and student participation, knowledgeability of stakeholders about school – based assessment and maintenance of documents and social attitudes should be the subject of study as current problematic areas.

Suggestions related to teacher training process

05. Research should be conducted on the problems related to the policies of teacher training, operation of teacher training programmes and planning of teacher training programmes.

Other Suggestions

06. Development in technology, values and discipline are current problem areas seeking prompt attention.
07. Management of educational institutions and coordination among them.
08. Gender of school dropouts is proposed as a current researchable theme.

Suggestions by subject

09. When conducting research on history and mathematics it is suggested that preference be given to studies related to the learning teaching process.
10. When conducting research on core subjects and other subjects except history and mathematics, it is more appropriate to give priority to the problems related to human and physical resource management.
11. It is appropriate that research be undertaken in the following order of priority from level two to level five by subject.

Mother tongue

- Shortcomings in the subject content
- Planning of teacher training programmes
- Updated nature of subject content

- Policy problems related to teacher training and continuous teacher education

English

- Updatedness of subject content
- Problems related to the implementation of subject content (learning teaching process)
- Shortcomings in the subject content
- Planning of teacher training programmes

Religion

- Learning teaching process
- Planning of teacher training programmes
- Updatedness of the subject content
- Suggestions to update subject content

Mathematics

- Resources required to implement the subject content
- Suggestions for evaluating the process of supervision
- Shortcomings in the subject content
- Updatedness in subject content

science

- learning teaching process
- Shortcomings in the subject content
- Updatiedness in the subject content
- Process of supervision

History

- Resource management
- Shortcoming in the subject content
- Evaluation of the process of supervision
- Updatedness of the learning teaching process

Other

- Updatedness of subject content
- Problems in the subject content
- Shortcomings in the learning teaching process
- Process of supervision

List of tables

		Page
Table 01	Number of respondents to the pilot questionnaire	12
Table 02	The sample and the number of respondents	13
Table 03	Number of respondents by subject, medium and category	14
Table 04	Distribution of the number of responses in relation to the five major themes and subthemes identified on the study - subjectwise	40

List of Figures

Figures 01	Distribution of major identifiedin relation to the curriculumpresents the distribution of the aforesaid theme	08
Figures 02	Interrelationships among the themes related to the curriculum content	20
Figures 03	Interrelationships among the themes related to the implementation of curriculum content (Learning teaching process)	22
Figures 04	Interrelationships among the themes related to training methods used for the implementation of curriculum content	25
Figures 05	Interrelationships among the themes related to the provision of resources essential for the implementation of curriculum	28
Figures 06	Interrelationships among the themes related to the evaluation of learning teaching process	31
Figures 07	interrelationships among the themes and sub themes related to evaluation of learning outcomes	34
Figures 08	Problem areas identified according to the responses	37
Figures 09	Distribution of the number of research areas based on the findings of the entire research study by theme	39

Introduction

Educational research in being concerned with the conduct of educational inquiry and the development and evaluation of its methods and findings has become a part and parcel of any country or an institution aspiring to strengthen the human resource through the process of education. Its findings are expected to command attention, serve as a sound basis for action, find whether the beliefs are fact or falsehood and to constitute legitimate knowledge claims thereby leading to informed decisions in the field of education. In the Sri Lankan context too, the importance of this aspect was not overlooked even before gaining independence. The following extract from the sessional paper xxiv – 1943: Report of the Special Committee on Education (1943) witnesses this fact.

The future training colleges, it has already been stated, will also be centres of educational research. We are of opinion that educational experiments should also be fostered in our schools. Both individual teachers and organized bodies should be encouraged to carry out experiments. There should be some central authority to give advice and guidance to experimenters and research workers and to co-ordinate their work. For this purpose we recommend the constitution of a Council of Educational Research.

Above proposal was materialized long afterwards with the establishment of the National Institute of Education in 1985. The National Institute of Education Act, No. 28 of 1985 empowers the Institute to initiate, promote, conduct and coordinate research, surveys and investigations in relation to any aspect of the development of education. With the establishment of the NIE, this function was entrusted to the Department of Educational Research which subsequently became the clearing house of research and crystallized thinking in the area. Moreover, by improving it further, from 2014, a Research Steering Committee comprising scholars with expertise was appointed for the Department of Research and Development under the approval of the Academic Affairs Board and the Council.

When supporting educational research, it is needless to say that the Institute is bound to use its resources parsimoniously. Besides, as there is no comprehensive and effective strategies in the system to oversee the research undertaken by different sectors, there is a danger of unnecessary duplication, and addressing issues which are not real priorities for the fact that they lack true knowledge gaps. What is thus required is the identification of priority areas for research in the field of education with more room left for field- initiated ideas, pressing issues for policy formulation, theory building, conceptual work to shape new inquiries and for the cumulative insights of long-term empirical investigations leading to pragmatic

solutions. It was envisaged that conducting a need survey would be the most effective strategy that fulfils this requirement.

Surveying needs for educational research has also become important due to the reforms taken place in the primary and secondary education especially in the post - ninety period. In 1992 the National Education Commission published its first report (Sessional paper No: v of 1992) which formulated a set of national goals relevant to education and identified a set of competencies as an essential foundation for realizing the national goals. The document put out by the commission in 1995 dealt mainly with extending educational opportunities and quality improvement in education. Guidance for policy formulation in education was subsequently provided by the policy document Envisioning Education for Human Development Proposals for a National Policy Framework on General Education in Sri Lanka (2003) published by the NEC. The sector-wide approach effected under the recommendations of the World Bank provided a better mechanism to monitor the educational plans. Introduction of Program for School Improvement (PSI) reportedly has succeeded in several schools.

Paralleling these reforms and proposals, changes occurred in the sphere of education both in relation to management and the learning- teaching process. Some of them seem to be radical.

As regards management, educational administration was decentralized to the zonal and provisional levels and more powers were delegated to the principals in schools. Financial powers too were decentralized making the utilization of funds more efficient and effective under the Norm Based Unit Cost Resource Allocation Mechanism. Recruitment of teachers and teacher assistants eased the shortage of teachers and adoption of a rolling plan approach has streamlined the channeling of funds especially for higher order quality inputs such as laboratories, ICT centres and libraries.

Alongside these, the curricular changes envisioned and implemented have made the classroom learning teaching process more pupil – centered and competency based. Attempts have been made to develop more generic skills in students through activities and authentic learning events. A bilingual approach has been adopted as regards the medium of instruction on an optional basis while international schools have emerged posing an alternative for the ownership in education. School textbooks provided freely have been made more attractive with colourful illustrations while the teacher instruction materials were made more elaborate and detailed. New teaching methodologies such as 5E and innovative evaluation practices such as school – based assessment were brought into the system with a view to creating plausible situations more conducive to learning.

In spite of these changes brought into the system for a period of nearly two decades, there seem to be no adequate dialogue among the discerning sectors in society regarding them. This situation demands the need of systematic studies conducted in this field addressing the relevant issues on a priority basis.

Thus, it was mooted that the research studies conducted on the areas identified by a need survey would (a) respond to critical issues (b) have a greater impact on policies and practices and (c) generate new ideas and perspectives in the field of education.

Rationale

One of the foremost future expectations of Sri Lanka is making the country a hub of knowledge (Mahinda Chinthana, 2). Knowledge that grows in an exponential manner over time is generated by research, so a country that aspires to be a knowledge hub needs to be a site where research can flourish. This view is further corroborated by the set targets of the Government of Sri Lanka that expects to increase its cadre of scientists to 20,000 by 2020 as against their number of 4,000 at present (Ministry of Planning, 2007). There is no doubt as to the value of research – based knowledge in any recognized field to fill the knowledge gaps, yet, special emphasis seems to be laid on the research in education, not only because it is an overarching area but also for little attention paid to it, especially in countries like ours, probably due to its slow rate of return preventing the fostering of a strong research culture.

Being a developing country, Sri Lanka cannot afford research studies on ad hoc basis as per the whims and fancies of the researchers or donor demands. Hence it is imperative that educational research is undertaken on a priority basis addressing the foremost areas first. This requires, firstly, identification of research needs and sequencing them in a systematic order of priority. In this context, it has already been pointed out that policy research has to be given special emphasis as it leads to informed decision making in education.

The National Institute of Education, (NIE), the professional arm of the Ministry of Education, is the body legally entrusted to conduct and promote educational research and provide advice to the Ministry of Education. With an understanding of this role, the NIE has surveyed research needs from time to time using various methodologies. The last of them was conducted in 2006 but using a small sample not covering different sectors in the field.

Moreover, nearly eight years have elapsed since then and the area of education has undergone noteworthy changes during this period. The 30 long war came to an end and with the dawn of peace dispelling fear in all parts of the island, education became a focus of many citizens. More provisions were pumped to the educational sector leading to infrastructure development and recruitment of teachers. Steps were taken to draft a new Act for basic education and new streams were started for secondary education. In a rapidly changing

context such as this, obviously the research needs too should have changed and the usefulness of a need survey for educational research couldn't be overlooked. It is in this backdrop that the Department of Educational Research of the NIE decided to undertake this survey.

Literature Review

For the countries that are connected with the modern world economy, it is imperative to synchronise with the social, economic and political changes occurring globally. Education is the most effective and efficient medium that can be used to secure this compatibility. It is compulsory to make various changes in the field of education to promote the ability to adapt to these global changes while safeguarding the national identity. In Sri Lanka too, alongside the timely needs, an attempt had been made to reform education aiming the human resource development from the days of impending independence (Sessional paper xxiv – 1943: Report of the Special Committee on Education). Subsequently proposals for reforms were put forward in the years 1950, 1964, 1972, 1980, 1992 and 1997. This shows that the need of continuous change in the field of education had been accepted by the educationists, sociologists, as well as the politicians. However, some of the proposals such as those of 1964 and 1980 were not even carried to the level of implementation. The reason for these failures was their presentation without a systematic study of national goals and social needs going hand in hand with the prevailing state and methods.

When making changes for social development, they become effective only if they are grounded on a broad vision of the future. It will give an opportunity for personal and social development while realizing the common national goals of a nation. For the first time, it was in 1992, that proposals for educational reforms were tabled with such a broad foundation. The plans were prepared after holding seminars, raising awareness of people in different fields and getting feedback through public opinion. This enabled to minimize the emergence of wrong attitudes in society and to carry those changes to society effectively. In 1993, these policies were accepted in principle and were continued forward continuously (National Education Commission, 2003).

When taking educational reforms to society successfully, coming to a common agreement is a must. Such a common acceptance for a social change can be generated by following a specific inquiry and a transparent and systematic course of action.

Curriculum

With a view to achieving the common national goals expected by the educational reforms, changes in the school system should be made through the curriculum.

Dewey (1938), Ragan and Shepherd interpret curriculum placing more weight on student experiences.

Curriculum is all the experiences children have under the guidance of teachers (Dewey).

The curriculum consists of the on - going experiences of children under the guidance of the school. It represents a special environment... for helping children achieve self - realization through active participation within the school (Regan and Shepherd).

Saylor, Arthur and Lewis (1981) define curriculum as a plan for providing sets of learning opportunities for persons to be educated. Wiles and Bondi (1981) view curriculum as a four step plan involving purpose, design, implementation and assessment.

Attempts have been made to analyze curriculum giving various definitions from various perspectives. Accordingly, the curriculum encompasses all the affairs that are planned, implemented and evaluated by the school. Further, there is a chance to outside the school.

Problems related to the curriculum

Curricula should be revised and re-designed to convey the changes expected by the educational reforms to students. Besides, if we aspire to produce a human resource with a national identity that couples with the fast developing technology, the curriculum needs to be subject to frequent discussion and be updated. The need of change always arises based on an unsatisfaction or a problem as regards its state of the art. That means, due to a visible discrepancy between the expected state and the real state. Despite the educational reforms have taken efforts to iron out such gaps from time to time constructively, still there seem to exist problems in the sphere of education that should be remedied. Given below are the problems surfaced by the Second Report of the National Education Commission (2003).

- Disparities in the pattern of distribution of schools.
- Distancing of small schools from the main stream of education.
- Widening of the disparities among the schools by district and by location (urban and rural) as regards their establishment
- Lack of facilities conducive to exercise effective learning teaching strategies and organization of wide – range programs in a majority of schools.
- Conversion of the scholarship examination into a competitive examination increasing the time spent on desk work making it an experience full of mental stress for children.
- Decrease in higher pass rate in English and Mathematics at the G.C.E. (O/L) Examination.
- The conspicuous differences between 1AB and 1C schools leading to a skewed hierarchy among the schools.
- Lack of adequate cognitive skills and commitment among the teachers and their advisers.

- Lack of transformation in learning teaching methodologies (supported by all the studies)
- Lack of development in science education by quality
- Teachers, not given adequate training
- Shortage of English medium teachers in schools

The following issues emerged among the problems subject to debate at a study conducted by the National Institute of Education (2010) on the students scoring between 0-5 at the grade 5 scholarship examination conducted to select students to schools and award scholarships.

- Low commitment of teachers and their low accountability especially towards the low achieving students
- Lack of supervision of the learning teaching process
- Students low level of literacy
- Lack of self –study habits among students
- Problems relating to the validity of assessment reports due to low level of credibility and accuracy
- Organization of the learning teaching process focusing results

(National Institute of Education, 2010)

Hence, these problems too can be subsumed in the current study.

The need of a curriculum reforms was also highlighted by a study on the **emphasis** given to values in the curriculum of Sri Lanka.

(Senevirathna, 2010)

- Adequate attention has not been paid to value education.
- Researchers and local scholars have paid little attention to value education.

The existence of the foregoing shortcomings have been further corroborated by the subsequent studies.

The national level research study conducted in 2008 on the new curriculum introduced to grades 6 and 10 in 2007 had disclosed, inter-alia, the following weaknesses in the curriculum.

- High academic orientation, examination - centeredness and incompatibility with the modern world requirements.
- Lack of a clear philosophical foundation in new curriculum reforms
- Shortcomings in the content, teaching methods and curricular materials
- Failure to distribute curricular materials, textbooks and teacher instruction manuals to schools in time.

- Inability to fulfill students' and social needs to the expected level (National Institute of Education, 2008)
- Not paying adequate attention to value education
- Low commitment of teachers especially towards low – achieving students
- Learning teaching process not subject to supervision
- Low literacy level of students
- Result – chasing learning
- Implementation of the curriculum without pre-testing and lack of formative evaluation at all stages

(NIE, 2009)

Instances were seen where the formal process that should be followed was overlooked when launching a curriculum at the national level.

The curriculum has not been subjected to pre-testing before implementing at the national level. A formative educational process is required in all stages.

(NIE, 2009)

There were instances where the formal steps that are generally followed when implementing a curriculum at the national level were overlooked.

The course of action that realizes the expected objectives through curricular reforms should be strongly linked to the development of competencies in students across the school and the classroom. This practical process launched as a result of a concerted effort of various sectors, should be subject to testing by way of a pilot – program before implementing at the national level. Having identified its strengths, weaknesses, opportunities and threats and taking up remedial action, it can be implemented at the national level successfully. Refraining from this, in some occasions, have brought even the curricular reforms considered important by educationists, sociologist and politician to severe criticism making the task a failure. So, before carrying curricular development policies into action, the theoretical and practical aspects connected with it should be identified by research.

Research studies have disclosed that there are problems in various sectors in the field of education in Sri Lanka. Society holds manifold ideologies and criticisms. This is obstructive to realize the common goals of education in a country. Therefore, the need of solving or minimizing the problems cropped up in the education field today has emerged strongly.

Research helps identify problems clearly and propose solutions for them systematically. The first step of this exercise is the identification of areas in which research is conducted. This is effected by need surveys. The number of need surveys conducted to identify research needs is scanty.

In the year 2006, the Department of Research and Development of the NIE conducted a survey to identify the contemporary research needs. Its report indicates that the aim of the survey was to cast recommendations regarding the research topics, themes and controversial problems that would be undertaken by the researchers in the field of education for research. In this survey, relevant information had been collected from the personnel involved in policy formulation and implementation, viz. academic staff of the NIE including all its departmental heads, subject directors and advisers of the Ministry of Education, Commissioner of the National Colleges of Education, officers of the Provincial Departments of Education, In-service advisers, officers in-charge of teacher centers and teachers. The needs identified had been summarized under the 29 areas given below.

1. Primary education
2. Teacher
3. Grade 5 scholarship examination
4. Sinhala Language
5. Failure at the G.C.E. (O/L) Examination
6. Subject Mathematics
7. Changing the subject Social Studies
8. Subject Health and Physical Education
9. Decline of values in Sri Lanka
10. Subject Science
11. Subject English Language
12. Role of In-Service advisers
13. Changing syllabi
14. Subject Practical and Technical Skills
15. Mental development
16. Education through mass media
17. Emigration of parents
18. Courses in the National Institute of Education
19. Teacher transfers
20. Nature of the National Colleges of Education
21. G.C.E. (A/L) Science stream
22. Seeking private classes deserting the school
23. Condition of Education offices
24. Uses of foreign training
25. Closure of schools
26. Success of quality inputs
27. Provision of textbooks
28. Inability to get syllabi and teacher manuals in time
29. Enthusiasm of the personnel in the field of education for work

(National Institute of Education, 2006)

The first thirteen topics of the themes and problems identified by a majority of respondents as the researchable are listed below.

1. Which way the education in Sri Lanka? Need of a national plan
2. The role of the in-service advisers and their support for the process of educational development
3. On what grounds the syllabi are being changed at present? The course of action needed to streamline the process of changing syllabi?
4. How far does the training imparted by the National Institute of Education reach the classroom? If not what are the barriers and what alternative methods can be taken to remedy the situation?
5. How values are emphasized in the school curriculum in Sri Lanka?
6. How should the role of the teacher be changed?
7. Does the curriculum designed by the National Institute of Education bring about a development in essential competencies?
8. Reasons for directing primary grade students for private tuition classes and measures that should be taken to minimize it
9. Students failing Sinhala Language at the G.C.E (O/L) examination
10. The learning teaching process related to History, Geography and Citizenship Education introduced from 2005 in place of Social Studies
11. Factors affecting the inability of students to apply science in day to day life though it is taught in school
12. Reasons for the low achievement level in English Language and inability of a majority of students to use English in speech
13. Does the subject ‘practical and technical skills’ fulfil its expected aims? if not, what factors affect it? What measures can be taken to minimize those factors?

As at present eight years have elapsed since the undertaking of research studies on the above areas and there is a current need of eliciting updated information on research needs. The process of education is a communal effort, so to identify problems information should be obtained from various sectors and different persons. This can be effected by a need survey.

A survey is a means of receiving information from the representatives of a selected society or a social group about their views on a relevant area. An education survey, as Millar (1991) describes is an event which involves collection of information on various problems in the field of education, analyzing those information to understand the nature of the problem and thereby making decisions relating to education .

In the field of education survey method had been used for many research studies. Survey research can be divided into two classes.

1. Population Survey
2. Sample Survey

In the case of a Population Survey, study is conducted by collecting data from a whole population. In Sample Surveys data are collected from a specially selected part of the population (Sample) and the research is carried out. Survey methodology makes collection of data from persons of wide range easily. It helps collect lot of information in a shorter period of time with less expenditure.

A need survey has been described as a gap between "what is" and "what should be" (Withkin, 1995) and also as a gap between real and ideal that is both acknowledged by community values and potentially amenable to change (Reviere, 1996). According to these definitions a need is caused by the difference between the existing state and the expected state. Thus a need survey should concentrate on the following.

1. The current state
2. The state that is expected to be
3. The difference between the two states
4. Deciding priority to balance the differences

There are various approaches for a need survey. The four step approach proposes a staggered mechanism comprising the following.

1. Identification of needs
2. Prioritizing needs
3. Coming to an agreement about the needs
4. Inquiring into the needs for action

" Need analysis is the process identifying and evaluating needs in a community or other defined population of people ".

(Web 01)

" The identification of need is a process of describing problems of a target population ".

(Web 02)

A need survey discloses needs of a certain target population. Therefore, it is important that the selected personnel have skills to identify their own specific needs and present them with a self-assessment. As what they present is related to the current state, they are important as updated piece of information. Hence need survey is a strong foundation to divulge correct information.

Methodology

Objectives of the Study

In an education system which is transforming and assuming new roles continuously confront challenges and problems. It is only through scientific analysis, that successful solutions can be proposed for such issues and problems and this is possible only by way of research. The study was thus initiated and conducted with the following objectives.

1. To identify the main research areas that should be addressed in the future three year period in connection with the secondary school curriculum in Sri Lanka.
2. To propose recommendations to implement research activities during the three year period in the future, in relation to the secondary school curriculum.

Population and Sample

Since the research in education is generally undertaken by the professionals attached to the field of education, the following categories were selected to collect data for the study.

- Policy formulators
- Curriculum designers
- Curriculum managers
- Curriculum trainers
- Curriculum practitioners (teachers)

Thus, the empirical sites that were selected to collect data were the institutions in which the above categories are employed. Those were as follows.

- Linear Ministry of Education
- National Education Commission
- National Institute of Education
- Department of Examinations
- Provincial Departments of Education
- Zonal Education Offices
- National Colleges of Education
- Teacher Centres
- Schools
- Universities (with Faculties of Education)

On this basis, all the educational professionals, constituted the population of the study. When selecting the sample from the above, stratified random sampling technique was adopted. The

number of respondents drawn into the sample was approximately proportional to the number of subjects in the respective categories though not exact. This difference was due to the fact that some purposiveness had to be exercised on some categories as regards the ease of getting the questionnaires completed and the ease of access. The total number of respondents drawn into the sample was 1799 and the sample in detail appears in Table 2.

Data Collection

The questionnaire survey mode was used to collect data. With a view to making the questionnaire structured to facilitate analysis, implications regarding the priority areas for research had to be identified. For this, first, a pilot questionnaire with three main open-ended questions was administered to a purposive sample of 255 comprising 50 curriculum designers, 25 directors (manager category), 80 in-service advisers and 100 teachers. They represented Southern, Northern, North-western, Central, North-central, Sabaragamuwa, Western and Eastern provinces of the country. Of them 91 responded to the questionnaire (Table 1).

Table 1: Number of respondents to the pilot questionnaire

Category	Personnel	Number of the sample	Number responded
Curriculum designers	Officers of NIE	50	08
Education managers	Directors at zonal and provincial levels	25	03
	Zonal education officers	80	38
Practitioners	Teachers and In-service advisers	100	42
total		255	91

After analyzing the responses, the major themes for research were tentatively identified and based on them the main questionnaire was prepared (Annexes 1 and 2). Information was elicited from the questionnaire in relation to six major areas listed below as they were given priority by the first questionnaire.

1. Curriculum
2. Learning teaching process
3. Evaluation and assessment
4. Monitoring and supervision
5. Professional development
6. Physical and human resource management

In addition to the above, freedom had been offered to write any other area for research of the respondents' choice. As was stated earlier, the questionnaire was administered to a sample of 1799 representing the five categories described above. It should also be noted that, of the subjects drawn into the sample, directors, subject directors (both at zonal and provincial levels), in-service advisers and teachers geographically represented all the nine provinces of Sri Lanka. Of the 1799, 350 responded to the questionnaire. The details are presented in Table 2.

Table 2: The sample and the number of respondents

Stakeholders	Sample	Number of respondents		
		Sinhala medium	Tamil medium	English medium
Curriculum designers and Education managers	954	136	47	183
Curriculum implementers	845	112	55	167
Total	1799	248	102	350

Table 3: Number of respondents by subject, medium and category

Subject	Level of education management and Policy formulation		Curriculum implementation level		Medium of instruction		Total
	Sinhala	Tamil	Sinhala	Tamil	Sinhala	Tamil	
Mother tongue	18	07	13	09	31	16	47
Religion	14	03	09	05	23	08	31
English	27	03	33	05	60	08	68
History	09	03	05	07	14	10	24
Science	15	04	10	06	25	10	35
Mathematics	16	06	30	04	46	10	56
Others	37	21	12	19	49	40	89
Total	136	47	112	55	248	102	350

Data Analysis

As the data sought by the instrument used were qualitative in nature, a qualitative method was preferred to analyze data. Besides, as the respondents were offered a greater degree of freedom when responding to the questionnaire, the data, at times looked diffused, less focused to the objective and the opinions expressed were more implicit rather than explicit. In such a situation it is imperative that the data laden with a wealth of information be streamlined in such a way that prospective researchers can unambiguously call out the areas to address. So, it was thought that to analyze data Thematic Analysis Based on the Grounded Theory would be successfully applied which looks for indicators of categories in events and behaviour finally making the central themes identifiable.

Therefore, the data provided by the respondents were first subject to open coding and then axial coding. This enabled to find the consistencies and differences between the codes revealing categories. Eventually when certain categories became more of central focus, they became axial categories. This was followed by selective coding. The compounding of selective categories of the different sectors of respondents finally gave rise to theme generation. Frequencies of the themes so identified were presented which facilitated the prospective researchers to identify the areas of priority.

Limitations and delimitations

Due category of stakeholders the Teachers, College lecturers have not been taken into the sample. It was assumed that this category is more or less represented by the staff members of the National Colleges of Education.

Since the study had to be completed within the frame of the available resources and time line, the sample had to be restricted to 1799 and the findings were based only on the ideas expressed by them. Of these only 350 had respondend.

None of the individuals representing the policy formulators in education and scholars (members of the academic staff of the National Education Commission and Universities) had responded to the questionnaire and their valuable opinions and suggestions were pathetically lost from the corpus.

As the numbers of respondents drawn into the sample from different strata were not strictly proportional to the total numbers in them, there is a possibility of a sample bias.

The instrument was not piloted. It was directly administered.

Data Analysis

This research study was basically designed with a view to forwarding recommendations as regards the direction of future research on the curriculum in Sri Lanka. The major aim of the study was the identification of main current problem areas relating to curriculum that should be addressed promptly. In order to realize this broader aim, the study was designed on two specific objectives.

01. Identification of main research areas relating to secondary school curriculum that should be studied during the future three year period
02. Presentation of recommendations required to implement research in relation to secondary school curriculum during the future three year period.

The sample of the study was selected in such a way that it included personnel representing different tiers from the school level, the active stratum of the Sri Lankan education system to the layers that take policy decisions relating to education (The details are given under methodology).

The qualitative data obtained by the study conducted under a qualitative research approach were analyzed using the Grounded Theory based on Thematic Analysis.

Through the analysis of the responses received for the questionnaire prepared relating to the areas identified by the pilot study, five broad themes were surfaced in connection with the curriculum in Sri Lanka. The themes were as follows.

- | | |
|----------------|---|
| 01. Theme one | -Content of the curriculum |
| 02. Theme Two | -Implementation of the curriculum content
(learning teaching process) |
| 03.Theme three | -Training methodologies used in the implementation of the curriculum |
| 04.Theme four | -Supply of resources for the implementation of the curriculum |
| 05.Theme five | -Evaluation and assessment of the curriculum
(Evaluation of learning outcomes/ learning process) |

Figure 1 : presents the distribution of the aforesaid themes.

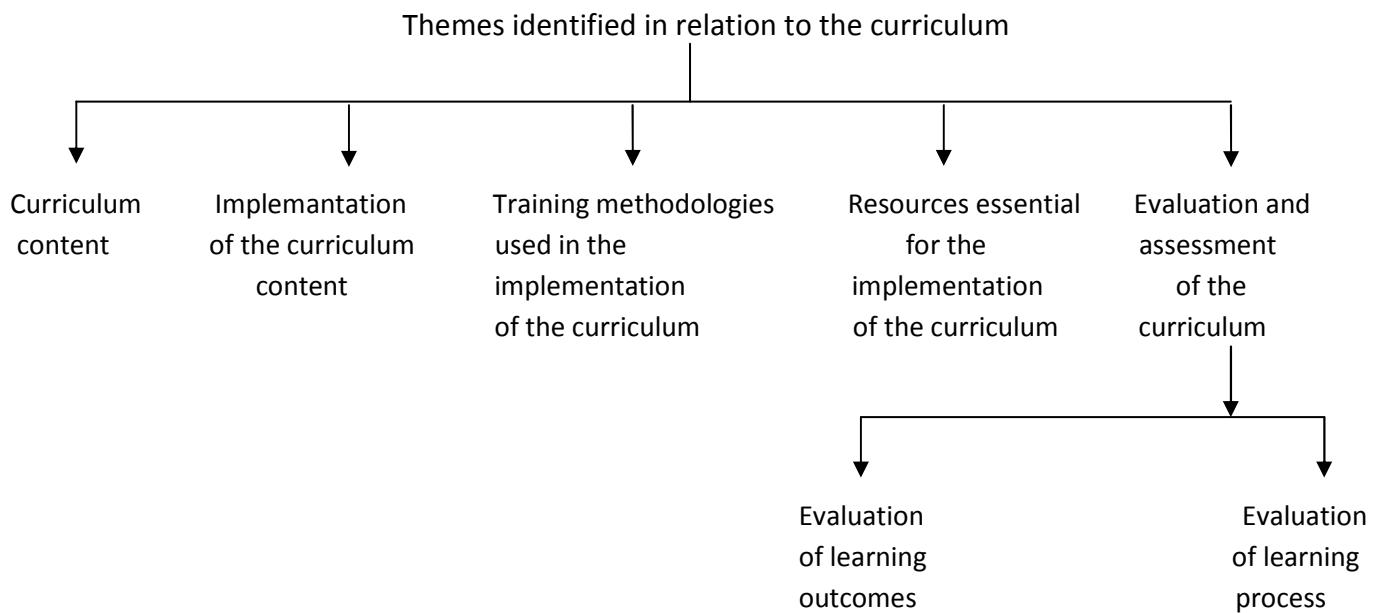


Figure 01 : Distribution of major themes identified in relation to the curriculum

The following steps were adopted to analyze data of the research that was developed conforming to the qualitative genre of analysis. The open responses elicited from personnel belonging to different sectors by the questionnaire were subject to

- 01 open coding ;
- 02 axial coding; and
- 03 theme development using data categories respectively.

A concept map was constructed using the themes so identified. Themes and sub themes generated from data were used for the construction of the concept map. In order to establish interconceptual and intraconceptual relationships the following were used.

- 01. Literature on curriculum research
- 02. Experience gained from the previous literature
- 03. Experiences gained through the involvement in the educational process

Through this, problem areas and sub areas deemed necessary subjecting to research studies in relation to themes were figured out on qualitatively organized data. This was done taking into consideration the number of responses received for the themes and sub themes relevant to each subject.

Four main steps were followed when compiling the analysis reports.

- | | |
|----------------|---|
| 01.Fist step | Construction of a concept map based on qualitative data received from the questionnaire in relation to the key themes of the curriculum |
| 02.Second step | Analyzing how data received relating to the key themes by subject |
| 03.Third step | Surfacing research problem areas that would be studied in the future in consonance with the behaviour of above data |
| 04:Fourth step | Presenting recommendations relevant to a research plan that can be implemented in the future three year period using identified areas |

Data Analysis Relating to Key Themes

i. Content of the Curriculum

In this study conducted with the pivotal objective of identifying the direction of prospective research that should be undertaken in relation to the curriculum in Sri Lanka, the first theme that emerged among the key themes that unfolded was the content of the curriculum. Figure 2 displays the information allied to the themes and sub themes identified under curriculum content based on the responses for an open question posed about the adequacy and timeliness of the curriculum.

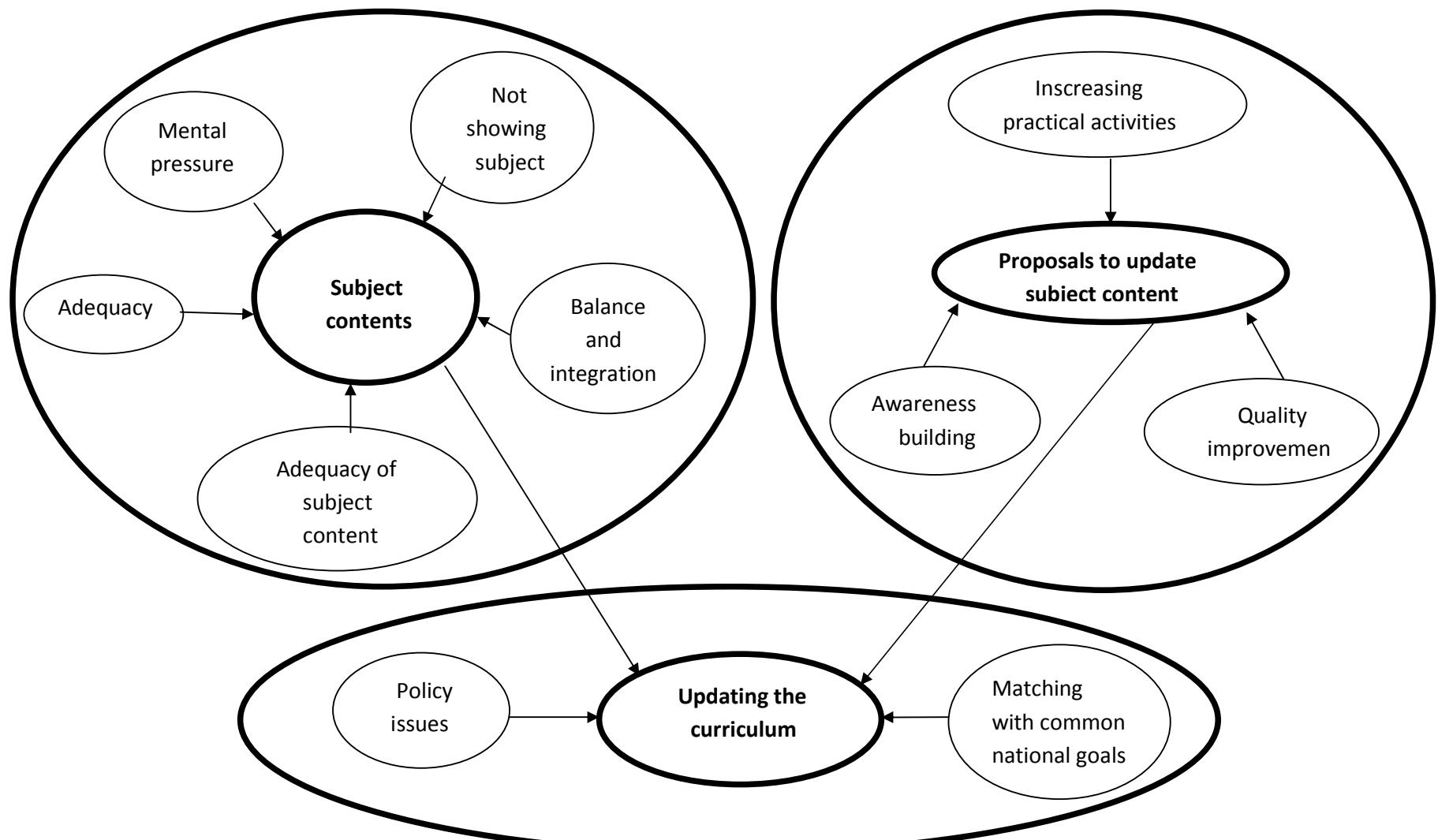


Figure 2 : Interrelationships among the themes related to the curriculum content

The broad theme, the content of the current curriculum in Sri Lanka is composed of three composite sub themes.

1. Shortcomings in the present subject content
2. Updated nature
3. Suggestions for updating

According to Figure 2, it is clear that there are problems with regard to the quantity as well as the quality of subject content. The limits of subject matter, balance of subject content among the grades and vertical and horizontal integration affect quality of the curriculum,. Also, it is implicit from Figure 2 that time limit debars implementation of the curriculum due to overloading. The ultimate result of this is subjecting the stakeholders who implement curriculum as well as the students to mental pressure. The policy – related problems as regards the timeliness of curricular content prevents achieving the common national goals and delivering a product fitting the world of work and matching the demand. Planning awareness building programmes about the curriculum, increasing practical activities and the need of improving the quality of the curriculum were the other sub themes generated from the suggestions relevant to the updating of the curriculum.

The areas in which research would be undertaken as identified by the study of the overarching field of curriculum content as a whole were as follows.

1. Subject content and its limits
2. Distribution and integration of subject content
3. Common national goals and the curriculum
4. Volume of the subject content
5. Policy problems related to the curriculum
6. Methods adoptable to update the curriculum
7. Improvement of the quality of the curriculum
8. Methods by which curriculum can be made practical
9. Implementation of the curriculum and the adequacy of the proposed time for it
10. Influences caused by various stakeholders when implementing the current curriculum (It is suitable to examine this influence caused by personnel representing various levels from curriculum designers to practitioners)
11. Awareness building programmes on curriculum

The national level study on the new curriculum introduced to grades 6 – 10 in 2007 (National Institute of Education, 2008) highlighted the high academic orientation, examination – centredness, mismatch with the new global requirements and failure of the curriculum to fulfil students and social requirement to the expected level. Common national goals and curriculum

was one problem area identified by the present study. Identification of this area as a problem at present confirms that the findings disclosed by the study in 2008 still remain unresolved even at present.

ii. Implementation of the content of curriculum (Learning Teaching Process)

The second major theme that could be extracted in relation to the curriculum was the implementation of the content of the curriculum (learning teaching process). Figure 3 illustrates the themes and sub themes subsumed in the major theme identified as the active component of the curriculum.

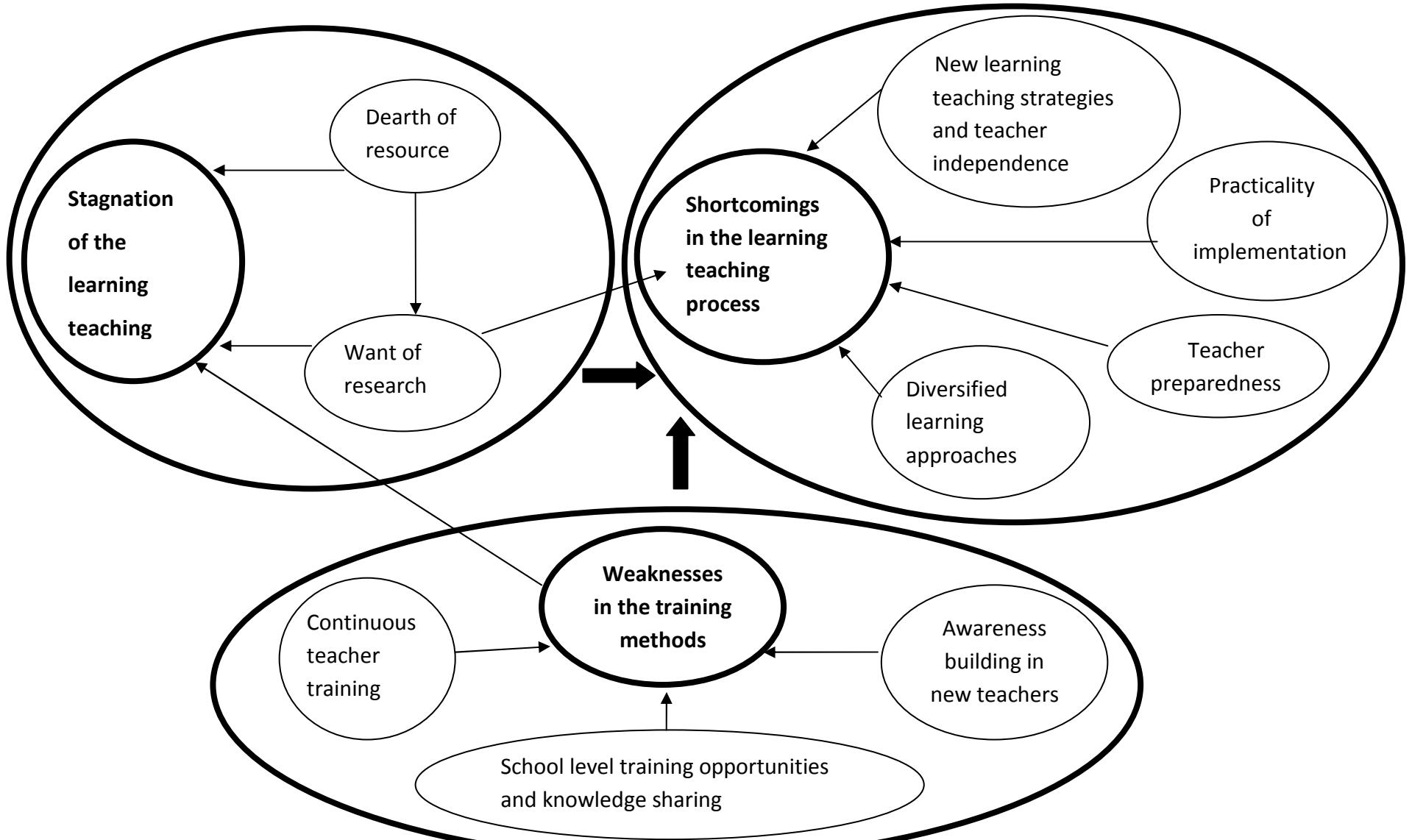


Figure 3 : Interrelationships among the themes related to the implementation of curriculum content (Learning teaching process)

Three central themes could be stemmed from the theme learning teaching process.

1. Updated nature of the learning teaching process related to subjects
2. Shortcomings in the learning teaching process related to subjects
3. Shortcomings in the training methodology relevant to the implementation of the subject content

It could be seen clearly that these three themes and the sub themes connected to them were interconnected. Dearth of resources entails paucity of research which in turn forbids updating of the learning teaching process in operation. Non – updated learning teaching process weakens the operational learning and teaching approaches. Inability to adopt diversified learning teaching approaches, lack of inclination of the practitioner sector towards new learning approaches and failure to prepare well are foremost factors that riddle the learning teaching process. Drawbacks in the training methodology directly and strongly impact the learning teaching process. Opportunities for newly recruited teachers to become aware of the learning teaching process, continuous teacher training opportunities and opportunities to exchange knowledge regarding the learning teaching process at the school level were the sub themes linked with the third central problem stated above (Figure 3).

The areas in which research can be launched in relation to the theme of implementation of curriculum content are as follows.

1. Scope for self – study
2. Teacher preparedness
3. Time allocated for the learning teaching process from the total school time
4. Use of other teaching methods in the classroom relative to lecture method
5. Scope for student – centred learning
6. Diversified learning teaching approaches in the classroom
7. Use of new learning teaching strategies according to teacher's choice
8. Learning teaching process and teacher independence
9. Learning teaching strategies connected with modern technology
10. Adoption of learning teaching strategies befitting the provincial and regional levels
11. Awareness building and training programmes for new graduates
12. Continuous teacher training opportunities
13. Scope for training opportunities and exchanging knowledge at school level
14. Implementation of awareness building and training programmes on time
15. Assessment, follow up and feedback regarding training

Some problems pointed out by the National Education Commission Report (2003) , that is lack of application of quality and effective learning teaching strategies and lack of commitment of some teachers and in – service advisers have again surfaced under 2, 6 and 9 of the present study as researchable problem areas. The study again emphasizes the need to seek solutions

for the low level of teacher commitment and the lack of accountability on the part of the teachers especially with regard findings of the study conducted by the National Institute of Education (2010) on grade 5 students scoring between 0-5 in their examination. The same study has also indicated the lack of self – study habits among students as a debatable problem.

iii.Training Methods Adopted during the Implementation of Curriculum Content

The third key theme that could be picked out by the study regarding the curriculum is connected with the training on subject content and continuous training methodologies. Figure 4 is founded on the open responses of curriculum designers, curriculum managers and curriculum implementers regarding that theme.

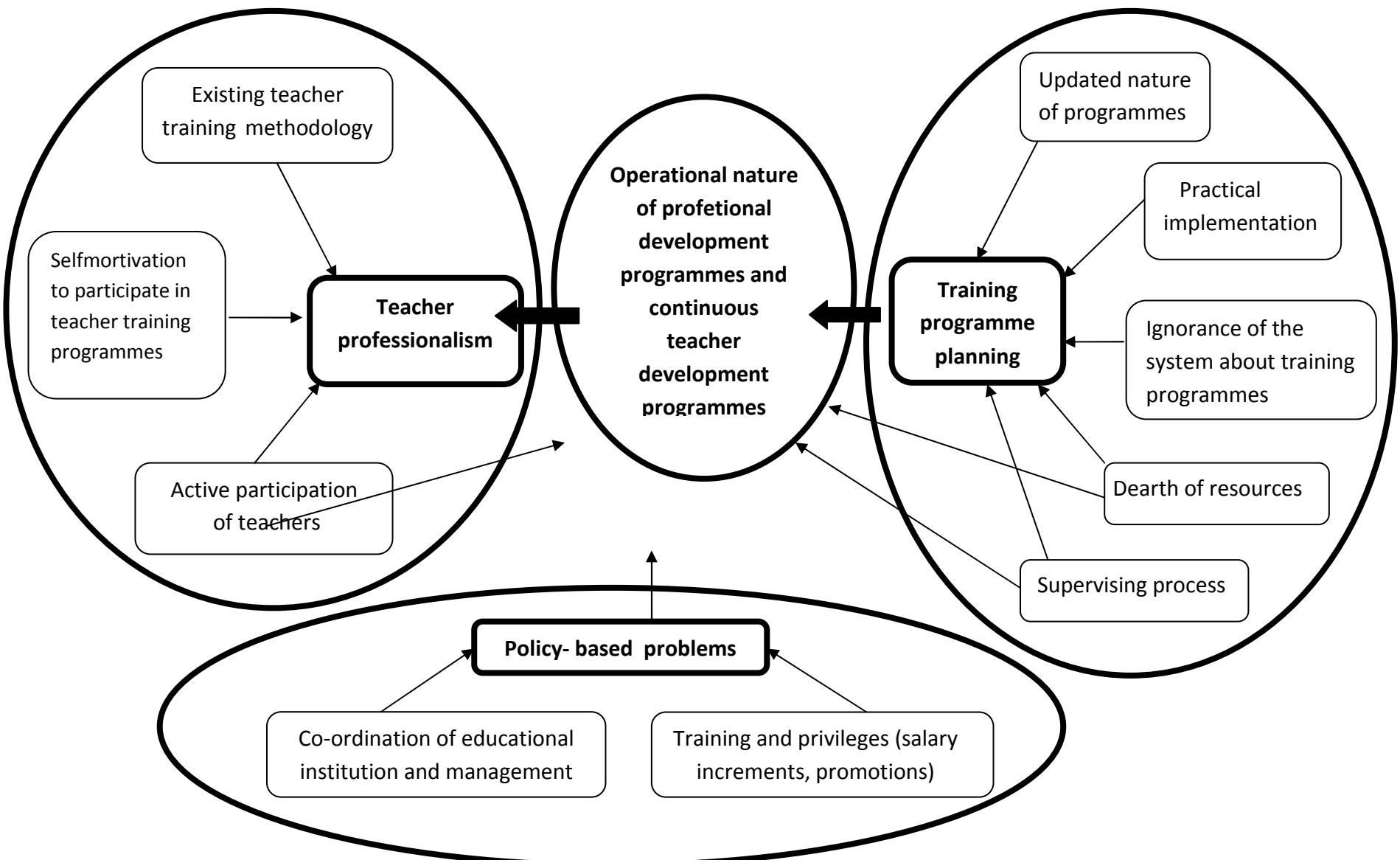


Figure 4 : Interrelationships among the themes related to training methods used for the implementation of curriculum content

Three broad themes based on teacher training and continuous teacher education programmes used during the implementation of the curriculum content would be identified. That is,

01. Operational nature of professional development programmes and continuous teacher development programmes
02. Planning of teacher training programmes
03. Policy – related problems in teacher training and continuous teacher education

The core problem that could be identified in relation to teacher training and continuous teacher development programmes was that professional development and continuous teacher training programmes are not systematically carried into effect. It could be clearly discerned that flaws in the planning of teacher training programmes have had their direct impact on them. In addition to that, two factors – policy – related problems and dearth of resources – had hampered the proper implementation of teacher learning programmes. The following could be identified as the weaknesses in training programme planning.

01. Non updating of teacher training programmes
02. Ignorance in the system about training programmes
03. Weaknesses in supervision
04. Shortcomings in the implementation of training activities practically
05. Dearth of resources

Problems cropped up in connection with policy – based factors and decisions could also be identified. Of them, the problems caused by not using the training as a requirement for salary increments and promotions and infirmities in coordination within and among institutions stand foremost.

Owing to lack of implementation of professional development programmes and continuous teacher development programmes in the entire educational process, the teachers do not become professionals. Meanwhile, the teachers who have acquired professionalism do not actively participate in teacher training programmes and do not show a self – motivation to take part in teacher training programmes. This has become a continuous and cyclic process in the system.

In affiliation to the training methodologies adopted in the implementation of the curriculum, following research areas could be identified.

1. Effectiveness of the professional development programmes for teachers
2. Operational nature and practical constraints in the continuous teacher training concept
3. Teacher training programmes and training methods
4. Teacher training and organization of in – service training sessions
5. Teacher training methodologies based on modern technology
6. Development of human and physical resources essential for teacher training
7. Teacher professionalism
8. Effectiveness of the training programmes for untrained amateur teachers in the field
9. Professional development and teacher motivation
10. School – based teacher development programmes
11. Role of National Colleges of Education, Teacher Colleges and Teachers' Centres
12. In – service training and orientation programmes

This research study found that, of the problems cited by the National Education Commission (2003) as the ones seeking solution, decline of knowledge and skills in some teachers and their advisers, lack of transformation of teaching methodologies in schools and inadequacy of the training of teachers have not been solved as yet. This was further confirmed by the fact that, of the above 12 problem areas of research , areas 3,5 and 8 which invite study were akin to those problems.

iv. Provision of Resources Essential for the Implementation of the Curriculum

The fourth among the key themes generated in relation to curriculum, was on the provision of resources for the implementation of the curriculum. The themes and sub themes surfaced through the open responses for the item on the problems that were thought to be studied relating to human and physical resources are presented in Figure 5.

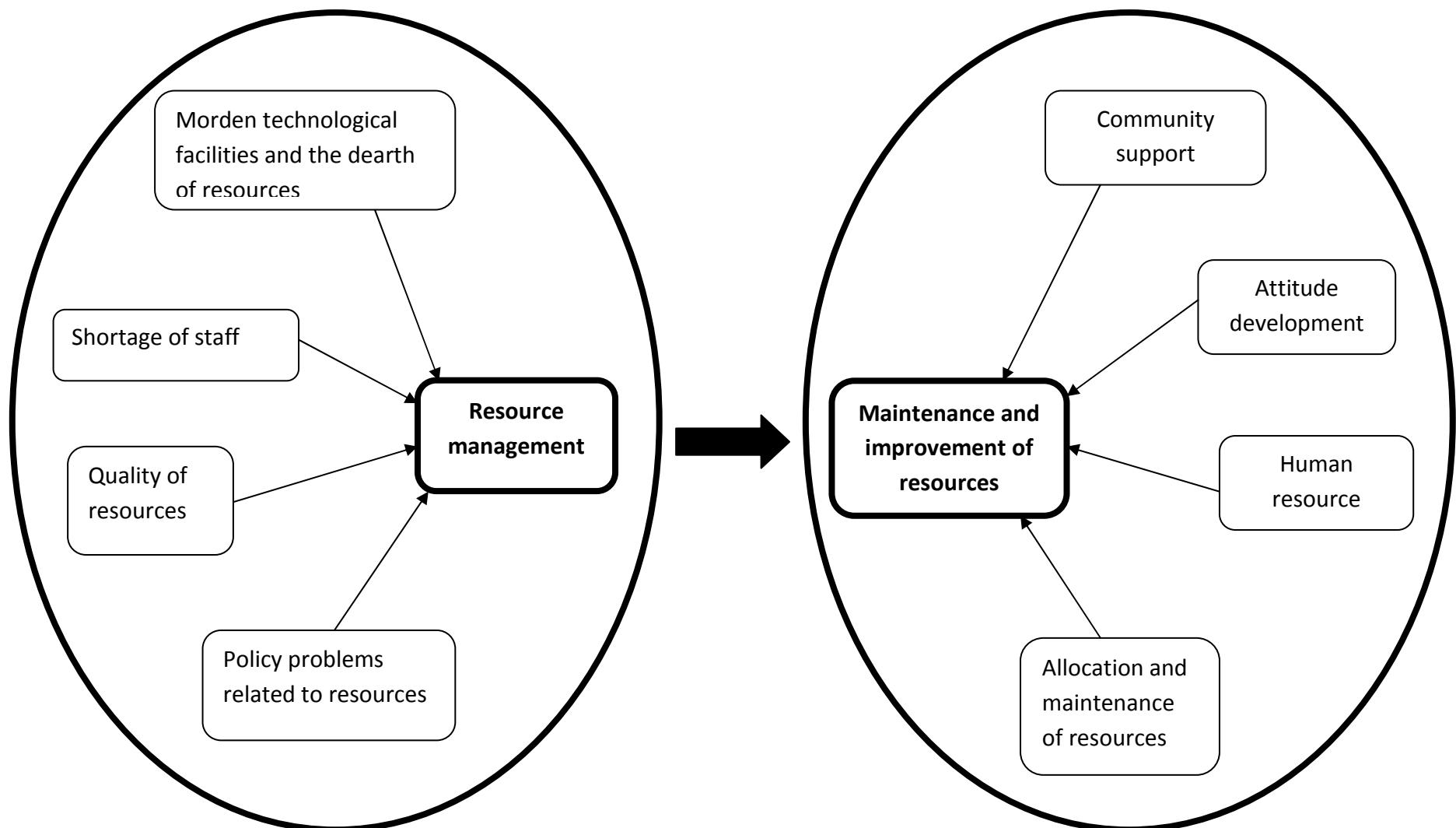


Figure 5 : Interrelationships among the themes related to the provision of resources essential for the implementation of curriculum

By the analysis of qualitative data received in relation to the above theme, two major areas and eight sub areas for undertaking research could be identified.

01. Resource management

This broad area comprises the following four sub themes.

- Policy problems related to resources
- Dearth of staff
- Quality of resources and modern technological resources
- Dearth of resources

02 Resource maintenance and improvement

- Obtaining community support for resource improvement
- Development of human resources and attitudes
- Human resource training needs
- Resource allocation and maintenance

It is clear that shortcomings in resource management can be overcome by resource improvement (Figure 5). Accordingly, as regards the provision of resources required to implement the curriculum, focusing future research on the following research areas would be productive.

1. Resource management mechanism in the education system
2. Alternative methods to ever come the dearth of resources
3. Modern technology and use of resources
4. Resources – related policy problems in the education system
5. Resource improving strategies
6. Community support for resource management
7. Training programmes on effective use of resources
8. Resource allocation process in the system

The problem areas 2 and 8 identified in the present study in relation to the theme provision of resources required to implement the curriculum have already been quoted under the findings put forward in the research reports of the National Education commission (2003) and the National Institute of Education (2008).

v. Evaluation and Assessment of the Curriculum (Evaluation of Learning Outcomes and Learning Process)

When inquiring into the direction of future research regarding the curriculum in Sri Lanka, the key theme emerging under the overarching theme of curriculum was evaluation and assessment. Under it, two sub themes could be detected from qualitative data.

1. Evaluation carried out in the learning teaching process
 2. Evaluation and assessment related to learning outcomes
1. Evaluation of learning teaching process
Under this, two sub themes could be identified.
1. Evaluation of the process of supervision
 2. Suggestions related to the evaluation of supervision

Figure 6 displays the relationships among these two themes and the sub themes related to them.

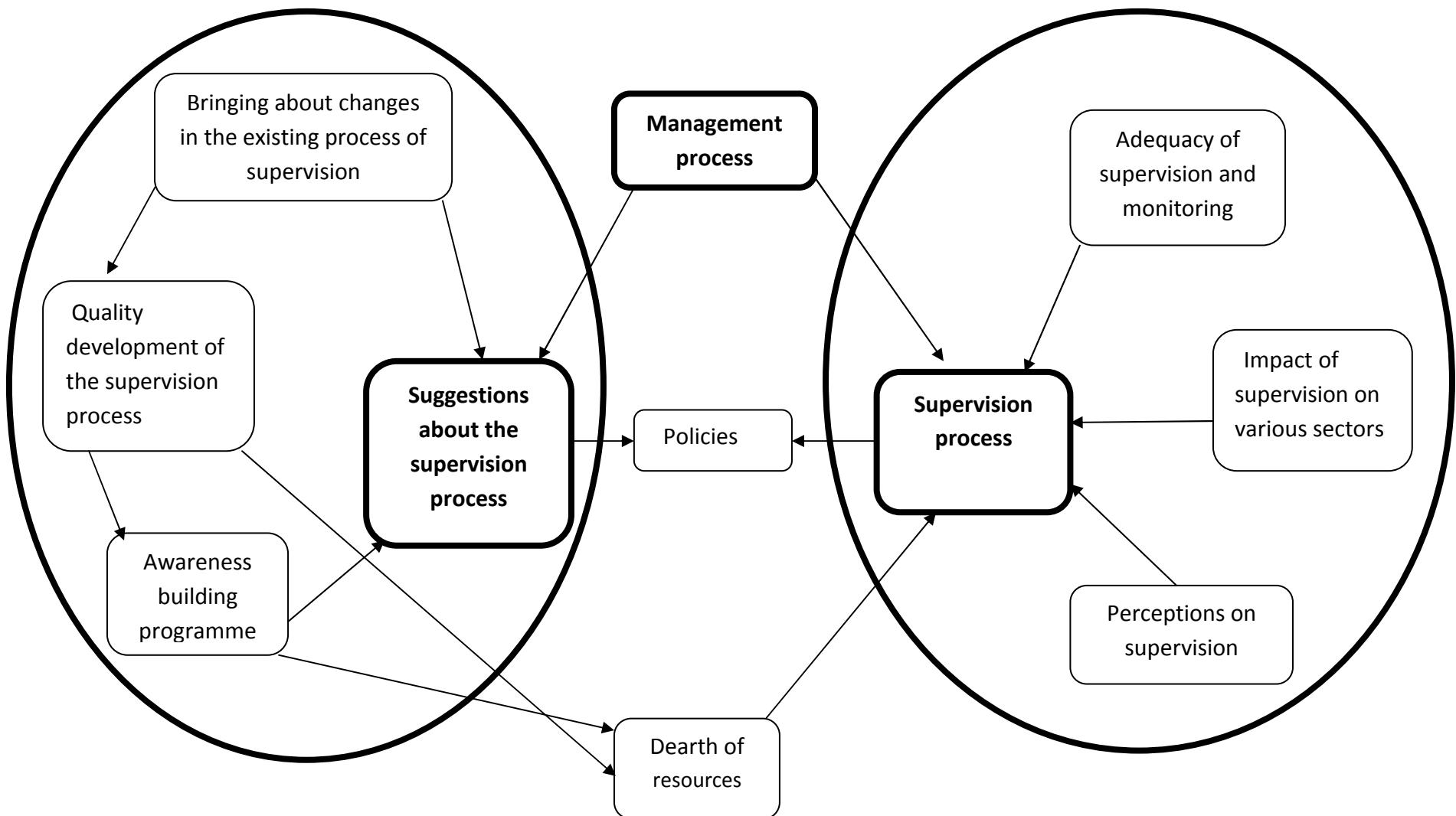


Figure 6 : Interrelationships among the themes related to the evaluation of learning teaching process

Of the two themes formulated using data received regarding the evaluation of the learning teaching process, the first theme was the process of supervision. Three sub themes are directly connected with this theme.

1. Adequacy of supervision and monitoring
2. Impact of supervision process on various stakeholders
3. Perceptions of different sectors on supervision

The proposal for the improvement of supervision process was the second major theme. Under that, three sub themes were identified.

1. Bringing about changes in the existing process of supervision
2. Quality improvement of the supervision process
3. Awareness building programmes

There was an inter play among those three sub themes. In addition to the above, three sub themes related to both of the aforementioned major themes could be discernible.

1. Management process
2. Policies regarding the evaluation of learning teaching process
3. Resources affecting the entire process

Of these, the sub theme management process is more strong (Figure 6).

In the analysis, seven areas of research which may be undertaken in the future emerged in relation to the theme 'evaluation of the learning teaching process'.

1. Learning teaching process and supervision-Under this, it is especially important to pay attention to internal and external supervision that is in progress in the education system
2. Impact of the supervision process on various stakeholders
3. Perceptions of various sectors in the education system about supervision
4. Adequacy of the current supervision and monitoring
5. Allocation and distribution of resources for evaluation of the learning teaching process
6. Policies regarding evaluation of the learning teaching process

The problem that the learning teaching process is not subject to supervision has also been highlighted in the study conducted by the National Institute of Education (2010) on the students scoring between 0 – 5 at the grade 5 scholarship examination.

02. Evaluation and assessment of learning outcomes

Under the theme of evaluation and assessment of learning outcomes, Figure 7 shows the relationships among the themes and sub themes identified by coding information elicited from the areas relating to Grade 5 Scholarship Examination, G.C.E. (O/L) Examination, G.C.E. (A/L) Examination and School – Based Assessment.

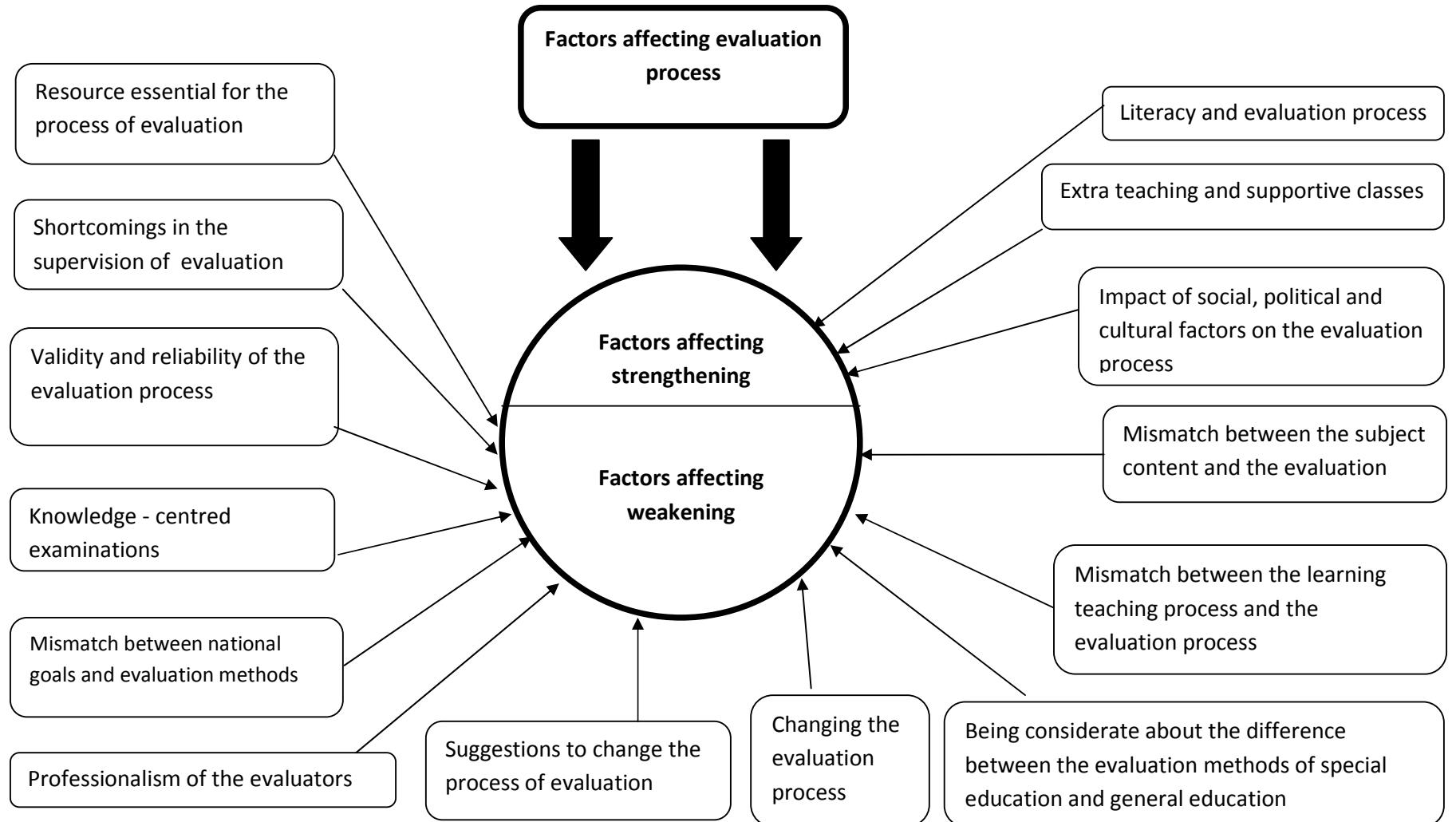


Figure 7 : interrelationships among the themes and sub themes related to evaluation of learning outcomes

Two central factors were identified relevant to evaluation and assessment of learning outcomes.

1. Factors that weaken the process of evaluation and assessment
2. Factors that strengthen the process of evaluation and assessment

1. Factors that weaken evaluation and assessment

The research areas identified in relation to the above factor to focus on in the future were as follows.

1. Shortcomings in the evaluation process
2. Changes that can be made in the evaluation process
3. Relationship between the subject content and evaluation process
4. Mismatch between the common national goals and evaluation methods
5. How current national level examinations should be changed
6. Supervision of the evaluation process
7. How evaluation methods should be changed
8. Maintaining validity and reliability of evaluation process
9. Mismatch between the learning teaching process and the evaluation process
10. Professionalism of the evaluators
11. Evaluation process and methodologies in the field of special education
12. Resources required to implement the evaluation process

The changes required to be made in the current national level examinations is a problem area identified even by the present study. From the literature survey also it is seen that this has been surfaced by the need survey conducted by the National Institute of Education (2006). The study conducted by the National Institute of Education (2010) on the students failing the grade 5 scholarship examination has identified the validity of that examination as a problem worth studying, inasmuch as the validity and reliability of the students' assessment reports were at a low level. It is analogous to the problem area - maintenance of validity and reliability in the evaluation process – identified by the current study also.

2. Factors affecting the strengthening of the evaluation and assessment process

In relation to the factors responsible for strengthening of the evaluation and assessment process, three researchable areas could be identified.

1. How extra teaching and support classes affect evaluation and assessment
2. Impact of literacy on the evaluation process
3. The influence of social, political and social factors on the evaluation process

In addition to the above themes that should be studied, there were three research areas requiring research in relation to the grade five scholarship examination.

1. Should the grade five scholarship examination be implemented in the education system or not?
2. The impact of the scholarship examination on the general learning teaching process
3. Influence of the scholarship examination on all stakeholders in education (students, parents, teachers and the community)

The report of the National Education Commission (2003) has stated that the scholarship examination has transformed into a competitive examination increasing the time for desk work in primary education and has turned out to be an awful experience loaded with mental stress. It was also revealed that, of the 29 research areas made known by the research need survey conducted by the National Institute of Education (2006), one was grade five scholarship examination. The problem areas identified in relation to the scholarship examination has recurred in the above literature review.

Specific identified areas in which research would be undertaken in relation to school – based assessment

1. How school – based assessment is implemented
2. Social attitudes about school – based assessment
3. Stakeholder awareness about school – based assessment
4. School – based assessment and student participation
5. Management of documents relevant to school – based assessment

In addition to the above findings, as the respondents opine, 13 problem areas that need to be studied promptly could be identified during the analysis of their open responses. They are shown in Figure 8.

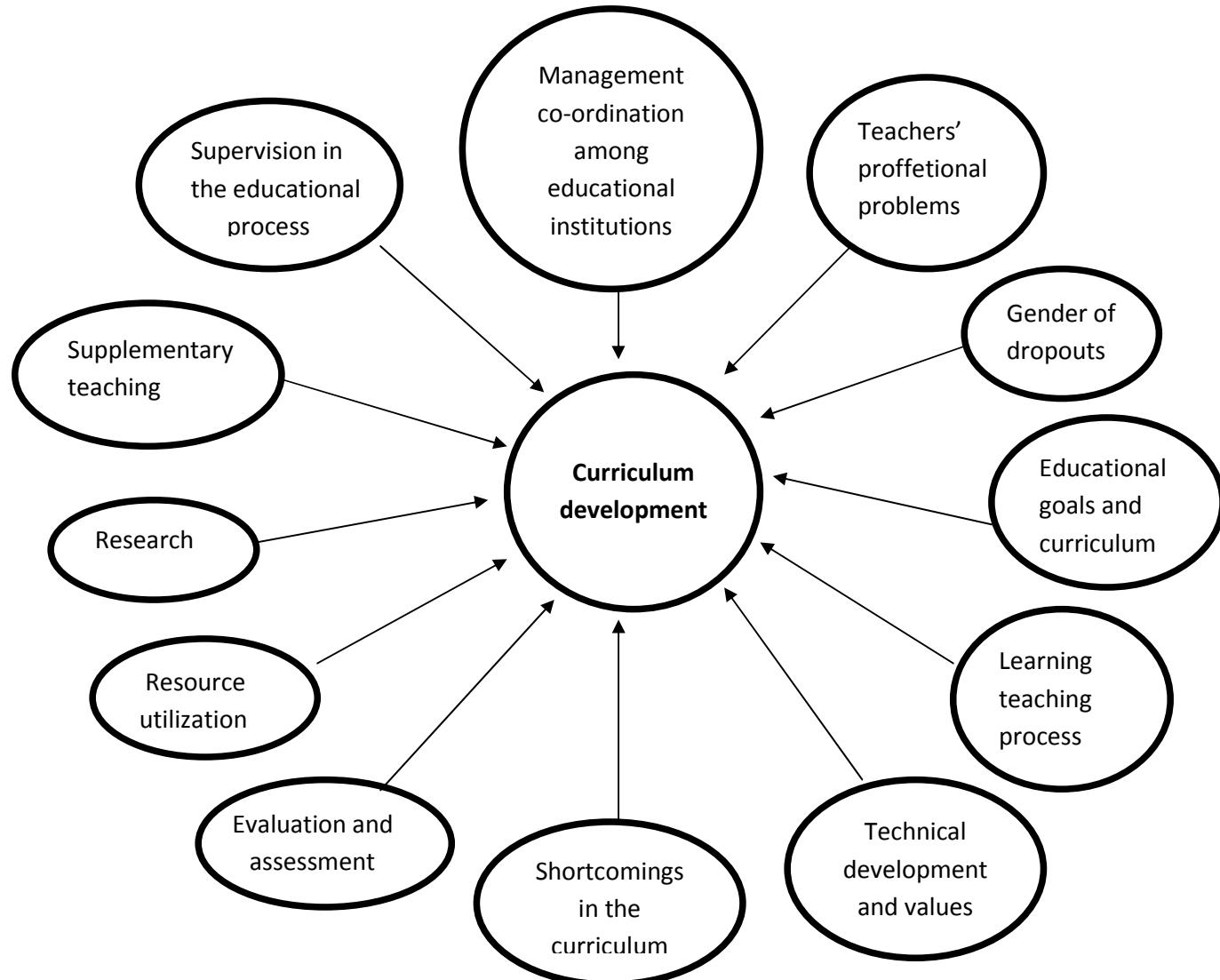


Figure 8 : Problem areas identified according to the responses

In addition to the above themes that should be studied, there were three research areas requiring research in relation to the grade five scholarship examination.

1. Should the grade five scholarship examination be implemented in the education system or not?
2. The impact of the scholarship examination on the general learning teaching process
3. Influence of the scholarship examination on all stakeholders in education (students, parents, teachers and the community)

The report of the National Education Commission (2003) has stated that the scholarship examination has transformed into a competitive examination increasing the time for desk work in primary education and has turned out to be an awful experience loaded with mental stress. It was also revealed that, of the 29 research areas made known by the research need survey conducted by the National Institute of Education (2006), one was grade five scholarship examination. The problem areas identified in relation to the scholarship examination has recurred in the above literature review.

Specific identified areas in which research would be undertaken in relation to school – based assessment

1. How school – based assessment is implemented
2. Social attitudes about school – based assessment
3. Stakeholder awareness about school – based assessment
4. School – based assessment and student participation
5. Management of documents relevant to school – based assessment

In addition to the above findings, as the respondents opine, 13 problem areas that need to be studied promptly could be identified during the analysis of their open responses. They are shown in Figure 8.

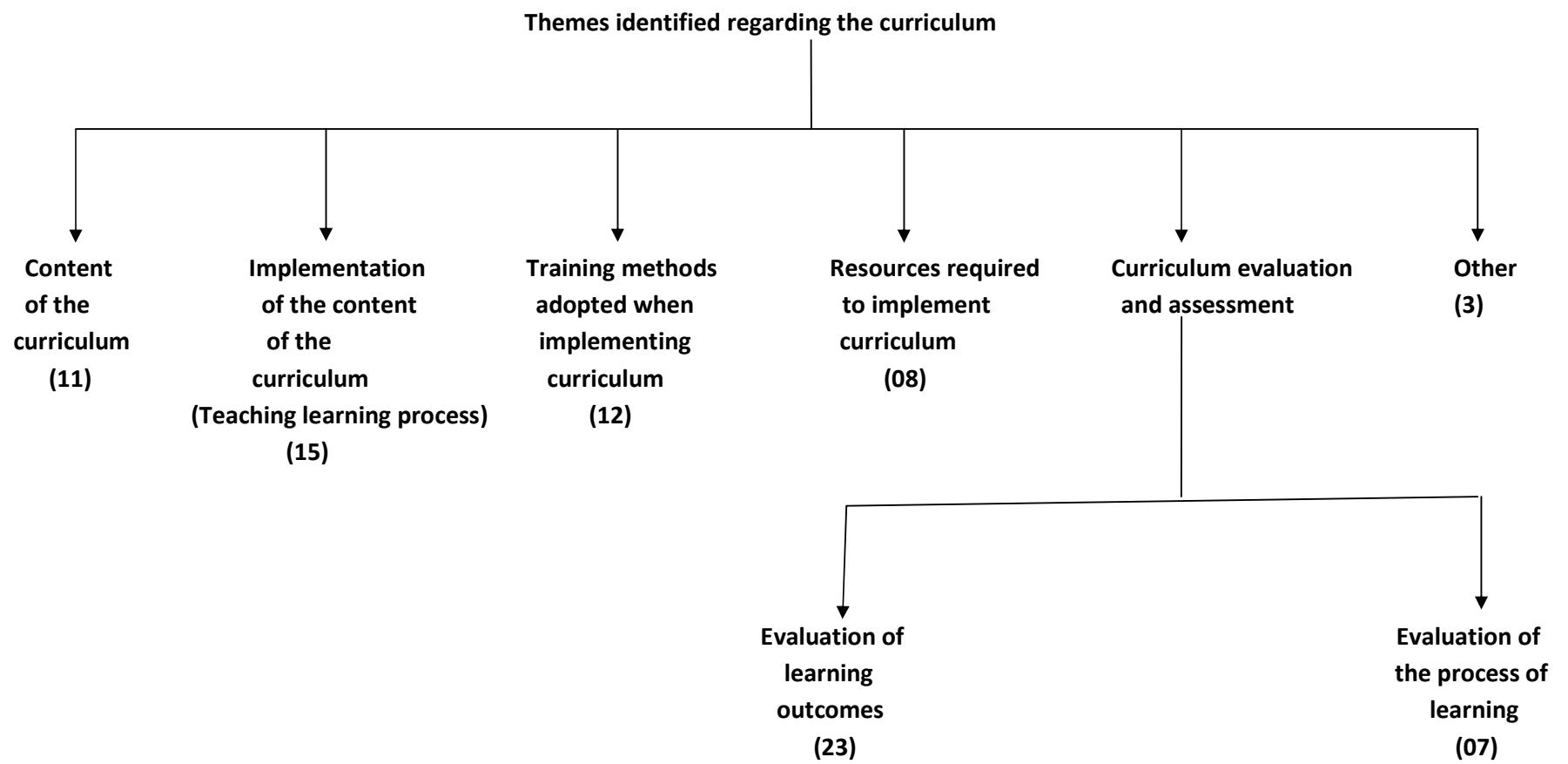


Figure 9 : Distribution of the number of research areas based on the findings of the entire research study by themes

Table 4 : Distribution of the number of responses in relation to the five major themes and sub themes identified on the study- subjectwise

Major themes identified in relation to the curriculum	Major sub themes	Mother tongue	English	Religion	Maths	Science	History	Other
1. Subject content	1.1 Problem in the content	22	39	11	30	24	12	38
	1.2 Updated nature	15	50	13	27	16	04	45
	1.3 Suggestions for updating	11	20	13	14	09	03	09
2. Implementation of subject content (learning teaching process)	2.1 Not updating the learning teaching process	08	12	07	16	14	06	19
	2.2 Shortcomings related to the learning teaching process of the subject	05	40	21	66	40	20	37
	2.3 Weaknesses of the training methodology relating to the implementation of the subject	04	04	10	18	07	04	11
3. Training methods adopted in the implementation of curriculum	3. 1 Policy problems related to teacher training and continuous teacher development	10	09	03	08	07	03	09
	3.2 Operational nature of teacher training programmes	02	17	08	09	07	-	17
	3.3 Planning of teacher training programmes	16	34	15	26	11	05	20
4. Resource management	4.1 Problem areas related to resource management	55	97	22	58	61	17	64
	4.2 Resource improvement	27	45	20	33	15	09	42
5 . Evaluation and assessment 5.1Evaluation of the process 5.2Evaluation of learning outcomes	5.1.1 Evaluation of the process of supervision	08	22	12	20	15	03	31
	5.1.2 Suggestions regarding evaluation of supervision (Analyzed in common irrespective of subject)	07	21	9	20	15	03	31

The sequel presents the problem areas in relation to the six core subjects and other subjects thought to be studied as identified by the analysis of responses.

Subject : Mother tongue

The main five problem areas identified as the ones that should be studied currently in relation to mother tongue are given below in the order of priority.

1. Resource management
2. Problems in subject content
3. Planning of teacher training programmes
4. Updated nature of subject content
5. Policy problems related to teacher training and continuous teacher education

The problem areas specifically identified under each of the above five areas

1. Resource management
 - Trained labour for physical resource utilization
 - Utilization and maintenance of physical resources
 - Supervision related to physical resource management
 - Strategies of physical resource management
 - Dearth of physical and human resources
 - Utility of resources
 - Quality of human resources
 - Cooperation of the school community
 - Development and empowerment of human resources according to timely needs
2. Subject content
 - Adequacy of subject content
 - Distribution of subject content
 - Vertical integration
 - Depth and complexity of subject matter
 - Subject content related to grammar
3. Planning of teacher training programmes
 - Scope for training opportunities
 - Relevance for training needs
 - Inclination and scope for professional development
 - Time management and examinations
 - Procedure for involvement of other sectors
 - Follow up and evaluation of the outcome of implemented programmes

4. Updated nature of subject content
 - Matching with current needs
 - Orientation towards new trends
 - Time ranges for updating
5. Policy problems related to teacher training and continuous teacher education
 - Training opportunities
 - Leave and release

Subject: English

Five main problem areas identified as the ones that should be studied currently in relation to the subject English are given below in the order of priority.

1. Resource management
2. How the subject content is updated
3. Problems related to the learning teaching process
4. Problems in subject content
5. Planning of teacher training programmes

The specific problem areas identified under each main area

1. Resource management

- Dearth of human and physical resources
- Resource loss (knowledge, causes, attitudes)
- Utility of resources
- Disparities in the distribution of resources
- Utilization of quality inputs
- Opportunities of evaluating human resources
- Implementation of education management information system (EMIS)
- Use of modern technology
- Training
- Knowledge
- Paucity
- Policy problems related to distribution of human resources

2. How the subject content is updated

- Timeline for updating
- Matching with the world of work
- Matching of the subject content with the present social needs

3. Problems related to the learning teaching process

- Practicality of the activities proposed by the syllabus
- Learning teaching process based on practical activities
- Support obtainable from the proposed learning teaching methods in the syllabus to acquire competencies
- Appropriateness of the adopted learning teaching approaches and methodologies
- Creative and innovative learning teaching techniques
- Utilization of modern technology
- Linking learning teaching process with the world of work
- Time allocated for the learning teaching process

4. Problems in subject content

- Adequacy and quality of the current subject content
- Subject content bent towards grammar
- Scope for joyful learning
- Physical and mental maturity of students and subject content

5. Planning of teacher training programmes

- Releasing teachers for teacher training programmes
- Directing for programmes and awareness building
- Follow up/ evaluation of outcomes
- Teacher training on modern technology
- Incentives/ motivation to participate in teacher training programmes
- Perceptions of different sectors about training programmes
- Personal problems and training programmes

Subject: Religion

The five main problem areas identified as the ones that should be studied currently in relation to the subject religion are given below in the order of priority.

1. Resource management
2. Problems related to the learning teaching process of the subject
3. Management of teacher training programmes
4. Updatedness of the subject content
5. Suggestions to update subject content

The specific problem areas identified under each major area

1. Resource management
 - Paucity of resources
 - Utility of resources
 - Disparities in the distribution of resources
 - Utilization of physical resources
2. Problems related to the learning teaching process
 - Knowledge – centredness and examination - centredness of the learning teaching process
 - Attitude development and inclination for practical life
 - Student participation and learning teaching process
 - Teacher competencies and learning teaching process
 - Competency – based approach and learning teaching process
 - Continuum of learning teaching activities
 - Number of allocated periods and learning teaching process
3. Management of teacher training programmes
 - Orderliness and systematic nature in planning programmes
 - Developmental approaches for the programmes
 - Personal problems and participation of training programmes
 - Engagement of trainers for training programmes
4. Updatedness of subject content
 - Topics requiring current attention
 - Subject content paralleling a knowledge exploding society
 - Inclination towards practical life
 - Adequacy of subject content
5. Suggestions for updating
 - Subject content matching the student's mentality
 - Relating to day to day life

Subject : History

The five main problem areas identified as the ones that should be studied currently in relation to the subject History are given below in the order of priority.

1. Problems related to the learning teaching process
2. Resource management
3. Problems in subject content
4. Evaluation of the process of supervision
5. Updatedness of the learning teaching process

The specific problem areas identified under each major area

1. Problems related to the learning teaching process

- Surfacing challenging learning events related to the learning teaching process
- Learning teaching activity continuum (Practicability/ appropriateness)
- Remodeling the learning teaching process

2. Resource management

- Evaluation of human resources
- Monitoring and supervision of physical resources
- Disparity in the distribution of resources
- Trained human resource
- Dearth of human and physical resources
- Consumption of physical resources

3. Problems in subject content

- Adequacy of the subject content
- Complexity of the subject content
- Subject content bent towards practicability

4. Evaluation of supervision

- External monitoring and the orderliness of supervision
- Supervision criteria
- Supervisory process and reliability
- Supervisory process at the school level
- Stakeholder awareness about the need of supervision
- Updatedness of the learning teaching process
- Learning teaching methodologies used
- Use of modern technology for learning teaching activities

Subject: Mathematics

The five main problem areas identified as the ones that should be studied currently in relation to the subject Mathematics are given below in the order of priority.

1. Problems related to the learning teaching process
2. Resource management
3. Suggestions for evaluating the process of supervision
4. Problems in subject content
5. Updatedness in subject content

The specific problem areas identified under each major area

1. Problems related to the learning teaching process

- Learning teaching activity continuum and its practicality
- Scope for the use of creative and independent learning teaching methods
- Activity continuum and competencies
- Concept formation relevant to subject matter
- Learning teaching techniques
- Use of learning materials

2. Resource management

- Dearth of physical and human resources
- Disparities in the distribution of resources
- Trained human resource
- Quality of the human resource
- Wastage of human and physical resources
- Utilization and maintenance of physical resources
- Policy – related problems (human resources)
 - Placement
 - Transfers
- Supervision of existing resources
- Non reception of resources on time

3. Suggestions related to the evaluation of supervision

- Supervision and quality development in education
- Efficiency of the supervision process
- Establishment of supervisory boards
- Supervision and resource orientation
- Supervision and follow up
- Credibility of supervision and monitoring
- Quality of sectors involved in supervisory activities
- Mechanism of supervision
- Scope of interval supervision

4. Problems in subject content

- Practicability of subject matter
- Subject content
 - Breadth
 - Adequacy

- Vertical integration
- Limit of subject content related to subject themes
- Relationship between the syllabus and the textbook

5. Updatedness of subject content

- Updating relative to international level
- Match with current social needs
- Policy decisions for updating
- Timeline for updating

Subject : Science

The five main problem areas identified as the ones that should be studied currently in relation to the subject Science are given below in the order of priority.

1. Resource management
2. Problems related to the learning teaching process
3. Problems in the subject content
4. Updatedness in the subject content
5. Process of supervision

The specific problem areas identified under each major area

1. Resource management

- Provision and distribution of physical resources
 - Dearth of physical resources
 - Disparities in the distribution of resources
 - Quality of physical and human resources
 - Use and maintenance of physical resources
 - Resource utilization
 - Supervision of resource utilization
 - Use of resources
 - Knowledge
 - Attitudes
 - Trained labourers
 - Human resource balance
 - Practical activities and physical resources
- Problems related to the learning teaching process
 - Inclination towards practical activities in the learning teaching process
 - Practicability of the activity continuum relevant to the teaching learning process

- Management of practical activities
- New and creative learning approaches
- Utilization of available resources for learning teaching activities

3. Subject content

- Subject content
 - Complexity / Breadth
 - Adequacy
- Limits of subject content
- Trend for improvement of practical skills
- Physical and mental maturity of student and subject content
- Compatibility between the subject content of G.C.E. Ordinary Level and G.C.E Advance Level

4. Updateness in the subject content

- Change of subject content with modern technology
- Harmonizing with the present and the world of work
- Preparedness for local and global trends

5. Process of supervision

- Process of supervision
 - Orderliness
 - Quality
 - Adequacy
- School – based supervision
- Supervision criteria
- Impact of supervision on various stakeholders in the education system
- Professionalism of the supervision officers
- Teacher personality and supervision
- Supervision and educational development

Subject : Other

The five main problem areas identified as the ones that should be studied currently in relation to other subjects are given below in the order of priority.

1. Resource management
2. Updatedness of subject content
3. Problems in the subject content
4. Shortcomings in the learning teaching process
5. Process of supervision

The specific problem areas identified under each major area

1.Resource management

- Disparities in the distribution fo resources
- Dearth of physical resources
- Quality of physical and human resources
- Trained human resource
- Efficiency of the human resource
- Supervision and evaluation of the resource management process
- Development of attitudes about resource management in various sectors of the education system
- Human resource and community cooperation
- Distribution of resources according to needs
- Utilization of resources
- Acquisition of competencies and resource utilization
- Use and maintenance of resources
- Supervision fo resource utilization
- Knowledge about the usage of resources

2.Updatedness of subject content

- Linking school curriculum with the world of work
- Compatibility with nationality and present society
- Harmonization with modern technology and global development
- Timeline for updating
- Appropriateness of updating approaches
- Introducing new subjects and subject content suitable for the teacher education courses at present

3. Problems in the subject content

- Appropriateness of the subject content for the physical and mental maturity of student
- Adequacy of the content
- Practical learning teaching events (agriculture)
- The contribution of professional subjects in teacher training courses for the skill development of teachers
- Evaluation of the process of supervision
- Review and follow up of supervision
- Supervision and feedback programmes
- Supervision and quality development of the system
- Supervision and competency development in students

- Validity and reliability of the supervision process
- External monitoring and supervisory process
- Quality of the supervisory staff
- Supervision process and forms used
- Continuous monitoring

4. Learning teaching process

- Children's abilities, interest and intelligence levels and the learning teaching methods used
- Limitation of the teaching methods used at present
- The congruence of the learning teaching process and social phenomena
- Expected aims of education and the appropriateness of the learning teaching process adopted
- Scope to implement learning teaching activities with diversity
- Examination – centred learning teaching pattern
- Teacher's attention towards children with special needs in the learning teaching with process
- Organization of learning teaching activities and children with special needs

In this study launched with the aim of identifying the research needs, the conclusion arrived was that there are problems in the curriculum in relation to five themes namely subject content, implementation of subject content (learning teaching process), teacher training methodology adopted when implementing the curriculum, resources required to implement the curriculum and assessment and evaluation. Also, under each subject specific problems exist in relation to the aforementioned themes. The proposals listed below are presented with a view to undertaking research in relation to the problem areas identified.

Conclusion and Suggestions

Suggestions related to curriculum and the learning teaching process

01. When considering the subject content, research could be undertaken on the problems in the content, problems in the updatedness of the content and suggestions fitting for updating.
02. Launching research is essential on identifying shortcomings in the learning teaching process and weaknesses in implementation of subject content. As per the findings related of teacher training methodologies, research should be conducted on policy problems related of teacher training, dynamism of teacher training programmes and planning of teacher training programmes.
03. Under the resources essential for the implementation of the curriculum, management of human and physical resources and improvement of resources should be subject to research

Suggestions related to process of evaluation and assessment

04. As regards the process of evaluation and assessment, research needs to be conducted on the existing process of supervision and issues giving rise to proposals in evaluation of supervision.
 - 4.1 It is necessary to launch research studies on the foremost problems related to the factors that impede and support evaluation and assessment.
 - 4.2 It is important that studies be undertaken on two specific problem areas, impact of grade five scholarship examination on the normal learning teaching process and the influence of the scholarship examination on all stakeholders in education.
 - 4.3 Implementation of school-based assessment and student participation, knowledgeability of stakeholders about school – based assessment and maintenance of documents and social attitudes should be the subject of study as current problematic areas.

Suggestions related to teacher training process

05. Research should be conducted on the problems related to the policies of teacher training, operation of teacher training programmes and planning of teacher training programmes.

Other Suggestions

06. Development in technology, values and discipline are current problem areas seeking prompt attention.
07. Management of educational institutions, coordination among them.

08. Gender of school dropouts are proposed as current researchable themes.

Suggestions by subject

09. When conducting research on history and mathematics it is suggested that preference be given to studies related to the learning teaching process.
10. When conducting research on core subject and other subject except history and mathematics, it is more appropriate to give priority to the problems related to human and physical resource management.
11. It is appropriate that research be undertaken in the following order of priority from level two to level five by subject.

Mother tongue

- Shortcomings in the subject content
- Planning of teacher training programmes
- Updated nature of subject content
- Policy problems related to teacher training and continuous teacher education

English

- Updatedness of subject content
- Problems related to the implementation of subject content (learning teaching process)
- Shortcoming in the subject content
- Planning of teacher training programmes

Religion

- Learning teaching process
- Planning of teacher training programmes
- Updatedness of the subject content
- Suggestions to update subject content

Mathematics

- Resource required to implement the subject content
- Suggestions for evaluating the process of supervision
- Shortcomings in the subject content
- Updatedness in subject content

Science

- Learning teaching process
- Shortcomings in the subject content
- Updatedness in the subject content

- Process of supervision

History

- Resource management
- Shortcomings in the subject content
- Evaluation of the process of supervision
- Updatedness of the learning teaching process

Other

- Updatedness of subject content
- Problems in the subject content
- Shortcomings in the learning teaching process
- Process of supervision

Reference

1. Dewey, J. (1938). *Experience and Education*. New York: Macmillon
2. Ragam,W. B., & Mordern, D. S.(1971). *Elementry Curriculum (4th ed.)*. New York: Holt. Rinehart
3. Gaylen, S. J., William, A. M., and Arthur, L. J.(1981). *Curriculum Planning for better Teaching and Learning (4th ed.)*. New York: Holt Renehart
4. Miller D. C. (1991). *Handbook of Research Design and Social Measurement*. California:Sage, Beverly Hills.
5. National Institute of Education. (2009). *The Process of Development and Implementation of the New Curriculum in grades 7 and 11*. Maharagama: Department of Research and Developoment, National Institute of Education.
6. <http://extension.arizone.education/evaluation/sites/evaluation/files/doce/needs.pdf>
7. http://Novascotia.ca/psc/pdf/employee_center/organition/too_it/steps/3/step_in_conducting_a_need/assessment/pay
8. ජාතික අධ්‍යාපන කොමිෂන් සභාව. (2003). ශ්‍රී ලංකාවේ සාමාන්‍ය අධ්‍යාපනය පිළිබඳ ජාතික ප්‍රතිපත්ති රාමුවක් සඳහා යෝජනය.
9. ජාතික අධ්‍යාපන කොමිෂන් සභාව. (2006). පර්යේෂණ අවස්ථා සමික්ෂණය. මහරගම: පර්යේෂණ සහ සංවර්ධන දෙපාර්තමේන්තුව, ජාතික අධ්‍යාපන ආයතනය
10. ජාතික අධ්‍යාපන ආයතනය. (2008). 2007 වර්ෂයේ දී 6 සහ 10 ග්‍රෑනී සඳහා හදුන්වා දුන් නව විෂයමාලාව පිළිබඳ ජාතික මට්ටමේ පර්යේෂණය. මහරගම: පර්යේෂණ සහ සංවර්ධන දෙපාර්තමේන්තුව, ජාතික අධ්‍යාපන ආයතනය
11. ජාතික අධ්‍යාපන ආයතනය. (2010). පාසල්වලට සිසුන් තෙර්ඩා ගැනීම සහ ශිෂ්‍යාධාර ප්‍රදානය කිරීමට පස්වැනී ග්‍රෑනීයේ සිසුන් සඳහා පැවැත්වන විභාගයේ දී 0 - 5 අතර ලකුණු ප්‍රමාණයක් ලැබූ සිසුන් පිළිබඳ පර්යේෂණය. මහරගම: පර්යේෂණ සහ සංවර්ධන දෙපාර්තමේන්තුව, ජාතික අධ්‍යාපන ආයතනය.
12. ජාතික කුමසම්පාදන දෙපාර්තමේන්තුව, මුදල් හා කුමසම්පාදන අමාත්‍යාංශය. (2011). ශ්‍රී ලංකාව ආසියාවේ නැගී එන ආක්ලරයය: මහින්ද වින්තනය ඉදිරි දැක්ම. කොළඹ: මුදල් හා කුමසම්පාදන අමාත්‍යාංශය.

13. සෙනවිරත්න, එච්. එම්. (2007). ශ්‍රී ලංකාවේ පාසල් විෂයමාලාවේ සාර්ධිරම
අවධාරණය වී ඇති අපුරු පිළිබඳ අධ්‍යාපනයක්. මහරගම: පර්යේෂණ සහ
සංවර්ධන දෙපාර්තමේන්තුව, ජාතික අධ්‍යාපන ආයතනය.