Guidelines for the Award of

Research Grants

National Institute of Education

2017

1. **Objective of the Award of Research Grant**

   The National Institute of Education will pre-evaluate grant applications for research projects and decide on an appropriate allocation of funds.
   The main objectives of making these research grants available are to:
   1.1 encourage prospective researchers to identify issues in education and conduct research in the field of general education with a view to broadening the scope of knowledge and facilitating decision making.
   1.2 motivate researchers to conduct studies that contribute to policy making in relation to education in Sri Lanka.
   1.3 motivate NIE academic staff to undertake and conduct educational research contributing to their professional development.

2. **General Information**

   2.1 When selecting proposals for grants, priority will be given to those addressing the current issues in education that seek furtherance of existing knowledge which helps policy makers make informed decisions (Annex 1).

   2.2 The research topic should pertain to the Sri Lankan context (Annex 1).

   2.3 The period of completion of the study

   2.3.1 The grants will be given under the following categories from the date of signing the agreement

   Type 01 - Maximum up to Rs.200000

   Type 02 - Maximum up to Rs.500000

   Type 03 - Maximum up to Rs.1000000

   2.3.2 Grants are approved from 6 months to two years

   2.3.4 Progress reports must be submitted at the end of the following steps of the study

   Step 1 - Development of Instrument

   Step 2 - Collection of data

   Step 3 - Writing Draft report

   2.4 Dissemination of findings

   2.4.1 Research findings should be disseminated by all researchers at a seminar organized by the Department of Research & Development, NIE.
   2.4.2 Researchers have a requirement to submit an article on their research findings to Research Journals published by the NIE.
   2.4.3 Dissemination of the research findings in the form of National/International Conferences, Journals or online publications will not be permitted unless the NIE authorizes such publications.
   2.4.4 The research and any publications are the properties of NIE.

2.4.5 Any publication of the particular study should carry the name of NIE will, figure in all publication as the address where the work was primarily carried out.

- Grant from NIE should be acknowledged in all publications
- Reports of the publication issuing from the work should be filed with NIE
- The final report will be evaluated by the Research Committee

2.5 Research grants will not be provided for editing or publishing books and monographs etc.

2.6 If the Research Advisory Committee is of the view that the cost of the particular project is unwieldy, even though the project proposal deserves consideration, the Committee may request the prospective grantee to revise the cost component and resubmit the estimate.

2.7 The plan of the research should be submitted in the form of a *Gantt chart* with a stepwise breakdown of activities and the estimated time for each in months indicated on the ordinate axis.

2.8 Research grant will be given under the supervision of the Department of Research and Development. For each research one officer will be appointed as a coordinator.

3. **Eligibility for the Applicants**

3.1 The applicant should have a postgraduate degree and experience in the field of education / related field and should be,

I. A member of the academic staff of NIE

   Or

II. A member of the academic staff of a University or Higher Education Institute and National college of Education.

   Or

III. Member of SLAAD - Sri Lanka Association for Advancement of Education, SLIDA - Sri Lanka Institute of Development Administration and any other organization related to the field of education accept by the NIE.

4. **Submission of Proposals**

4.1 All applications for grants should be submitted in triplicate on the prescribed form.

4.2 Applications should be type written and should be submitted along with a soft copy (dilhaniebirder@yahoo.com).

4.3   The proposal should be submitted in Sinhala/Tamil/English language, typeset on one side of A4 sheets with 1.5 line spacing.

4.4   Depending on the category of the grant proposal should be more than five pages and less than ten pages in length.

4.5   Page set up -

Top	-	1"
Bottom	-	1"
Right	-	1"
Left	-	1.5"

4.6   Font type -

Sinhala	-	FM Abhaya
Tamil	-	Kalaham
English	-	Times New Roman

4.7   Font size -

Main topic 14 bold
Sub topics 12 bold
Text 12

4.8   Detailed organization of the Research Proposal should be as follows:

- Research Topic

- Introduction

- Literature review

  o This should include an overview of current status of research at national and international level

- Research methodology

- Budget - Give details of the budget for each stage

- Time frame - Give a summary of the time frame according to grant category.

- References - References should be arranged in alphabetical order and must conform to the style, recommended by the Manual of American Psychological Association (APA).

4.9   When an application for a research grant is submitted jointly by more than one individual, one of them should be named as the principal researcher and he/she should be responsible for carrying out the project.

4.10 In the case of employees of institutions, applications must be submitted through the head of the relevant institution and should be supplemented with a background of the applicant or organization.

4.11 All applications should be addressed to the Director General, P.O. Box 21, NIE, Maharagama in registered cover with the caption 'Research Grants - 2016' written on its left hand side upper corner.

5. **Payment of Grants**

    5.1   Grant are payable in four installments as follows:

        I.   **15%** of the grant will be paid as an advance to commence the research at the point of approval of the proposal.

        II.   **25%** preparation of instruments and data collection.

        III.   **30%** preparation of findings and draft report.

        IV.   **30%** final Report

    5.2   10% of the installment will be deducted in case a delay in any of the steps mention in above I – IV. However a justification for the delay can be made to the research Advisory committee to be considered.

    5.3   All applications for advances except the first have to be supported by payment details accompanied by a P1 voucher recommended by the Head of the Research, NIE/Institution.

    5.4   All financial transactions of the grantee in respect of the project shall be in accordance with the financial regulations of the NIE.

    5.5   Funding specifications

        5.4.1   Funding will be considered for
- Minor equipment (project specific)
- Document required for the research
- Travelling
- Allowances for research assistants (when necessary)
- Any other relevant cost.

        5.4.2   Funds will not be available for the purchase of computers, printers, and other major equipment.

6. **Evaluation of the Proposal and Progress**

    The proposals presented are evaluated by a Research Advisory Committee on the basis of the following criteria.

    6.1   Clarity of the Proposal: The proposal is clear and well drafted. All aspects of the proposal conform to academic standards.

    6.2   Scientific significance of the proposal objectives: quality and feasibility of the proposed plans, importance of goals and objectives, research focus and themes, feasibility of the proposed approach and research methods.

    6.3   Research methodology.

    6.4   Applicability and relevance to the Sri Lankan system of Education.

    6.5   Budget estimation: Reasonable budget for the proposed goals and activities and proper budget breakdown.

6.6 The Research Advisory Committee has the discretion to accept, reject, or refer a proposal to an expert or a committee of experts to evaluate the project proposal before acceptance.

6.7 Evaluation of Progress
Grantees should submit in duplicate, a detailed progress report once each quarter on the prescribed format. Failure to submit such reports will lead to suspension/ cancellation of the grant.

7. Suspension or Cancellation of Grants

7.1 The grant is liable to cancellation for any breach of the conditions of the agreement.

7.2 In the event of a cancellation the grant already paid will have to be refunded.

7.3 Refund of any grant due to the NIE shall be made in one installment unless otherwise permitted by the Research Advisory Committee.

7.4 If the Research Advisory Committee has approved the project proposal and the estimated budget, the grantee should sign an agreement between the NIE and the applicant before commencing the research project.

8. Submission of the Final Report

8.1 The final report should be typed in 1.5 spaces on A4 size paper and properly bound. It should be in publishable form and three copies produced in the same manner should be submitted. All illustrations, maps, diagrams and graphs should be clearly drawn to enable reproduction (Report should follow the proposal guidelines detailed on page 2 and 3).

8.2 The length of the report should conform to the following:
Type 01 - not less than 20,000 words
Type 02 - not less than 30,000 words
Type 03 - not less than 40,000 words

Providing Research Grants-2017
Proposed Research Themes with Synopsis

1. Technology - integrated Education

2. Learning Design (LD) and Analysis

3. Thirteen year guaranteed Education

4. Inclusive Education

5. Curriculum and Curricular materials

6. Learning Teaching Process

7. Student Achievement in Education

8. School Dropouts

NIE-Res. Grants- Synopsis, 2017

1. Technology - integrated Education

Educational technology may be defined as the systematic way of designing, implementing and evaluating the total process of learning and teaching in terms of specific objectives, based on research in human learning and communication, and employing a combination of human and non human resources to bring about effective instruction (Tuijuman, 1996). Thus learning design should be informed by subject knowledge, pedagogical theory, technological knowhow and practical experience.

The accelerated evolution of technology especially in areas relating to electronics while making a digital divide between the social sectors with and without e- knowhow has created new challenges in the field of education. Primarily it poses the question as to what extent we should incorporate technology in the classrooms to maximize the effectiveness of the learning teaching process which is ultimately measured by pupil achievement. Secondly, compromising the human factor for the sake of equipment – dependent strategies such as computer-assisted interactive learning may have negative effects on students which needs to be studied and evaluated. Thirdly, the construction of computer systems to orchestrate the delivery of learning resources and activities for computer-assisted learning is a costly matter.

Moreover, the production of software synchronizing with local syllabi imposes further cost. Hence, it is imperative that integration of technology for education is made cost-effective, if at all it is to be practiced island wide. So, investigating into these aspects through research is a timely welcome task.

2. Learning Design (LD) and Analysis

Design refers to the deliberate shape of form in response to function, so Learning Design (LD) is the act of devising new practices, plans of activity, resources and tools aimed at achieving particular educational aims in a given situation (Mor and Craft, 2012). Koper (2006) defines LD as the description of the teaching-learning process that takes place in a unit of learning. The key principle in LD is that it represents the learning activities and the support activities that are performed by different persons (learners, teachers) in the context of a unit of learning.

According to Canole LD, is a methodology for enabling teachers/designers to make more informed decisions on how they go about designing learning activities and interventions, which are pedagogically informed and makes effective use of appropriate resources and technologies.

Mor and Craft (2012) organise the issues related to LD as were addressed in a workshop (ASLD workshop, 2011) under three themes: (1) Practices, methods and methodologies (2) Tools and resources (3) Theories and frameworks.

Besides, the growing body of knowledge in relation to creative technologies calls for a re-conceptualisation of the role of educators: from providers of knowledge to designers of learning. Consequently, the role of educators need to adapt from distributors of knowledge to designers for learning. Educators may still provide access to information, but now they also need to craft the conditions for learners to enquire, explore, analyse, synthesise and collaboratively construct their knowledge from the variety of sources available to them. The call for such a repositioning is heard in the field of technology-enhanced learning (TEL) and conforms to design-based research in education.

`   LD as an area of research and development includes both gathering empirical evidence to understand the design process as well as the development of a range of LD resource, tools and activities. It is believed that a great deal of enthusiastic

research in LD will continue to be fruitful for the key recipients: other researchers, teachers and not least, learners.

3. Thirteen year guaranteed Education

Free and compulsory education is a fundamental right and it is also a constitutional right. Legislation to enforce compulsory education of children was enacted about a century ago by the Education Ordinance No. 31 of 1939 which laid down regulations to enforce compulsory education for the 5-14 age group. An amendment to the 1939 ordinance was made in 1947 to extend the compulsory education age to 16 years. However no efforts were made to formulate compulsory education regulations until the 1990s. Regulations related to compulsory education came into force only in January 1998 as a result of a recommendation by the National Education Commission on provision of education for all children enforced by the Gazette notification 1003/5 of 25 November 1997.

Since forties, the changes taken place in the social arena and in the field of education in Sri Lanka are remarkable. Provision of free education and other welfare measures such as free textbooks and uniforms, midday meals and subsidised transport for school children coupled with the enhanced health facilities have contributed to an increase in the rates of admissions and retention by leaps and bounds especially at primary and lower secondary levels during the second half of the past century. In the meantime, Sri Lanka, although at a slow pace have moved into the category of middle income level countries widening the affordability of parents to educate their children. These positive changes have made parents more ambitious of educating their children within their fullest potential, to ensure their social mobility through education pressing governments to increase the share of the GNP for education. This favorable platform has inspired the government to present the commendable proposal of 13 years of compulsory education under which it is intended to allow each learner to continue his/her school educating till the end of grade 13 without being dropped out after the G.C.E.(O/L).

Notwithstanding the proposal deserving credit, it is not free from challenges. The high student population at senior secondary levels requires a qualified teacher force, more equipped infrastructure and recurrent expenditure. In addition, quality of education has to be assured and the long-standing criticisms of the school curriculum such as its high academic orientation and content-centeredness have to be remedied. It should cater not only to the students of high scholastic caliber seeking university

education but also to the sector equipped with manual and other generic skills transferable to the world of work. To ensure retention the curriculum and school environment should be conducive, congenial and interesting.

As one of the measures to meet these requirements a set of applied subjects have been proposed for which the curricular materials are being prepared. It is said that they aim at bridging the gap between the academic aspects of the curriculum and the pragmatic realities while incorporating tacit knowledge in addition to formal knowledge. They are linked to apprenticeship and novel assessment strategies such as portfolio assessments.

The more opens a wide avenue for research whose findings will ultimately enlighten the policy makers and curriculum designers.

4. Inclusive Education

The right of every child to an education is proclaimed in the universal declaration of Human Rights and was forcefully reaffirmed by the world Declaration of Education for All. The so called 'disabled children' now better referred to as 'differently able' children are no exception in third regard. The mode of educating these children had been an issue subject to debate especially after the sixties. The concept of integration (educating children with certain disabilities in normal schools) was given preference to their segregation which was the older practice. But with the spread of human right movements in sixties the concept of inclusive education gained ground which demands assigning all the children with special needs to learn with their normal peers in the schools regardless of their physical, intellectual, social, emotional, linguistic or other conditions. This includes disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalized areas or groups. Lo Paz (1995) defines inclusive education as the provision of educational children irrespective of their strengths and personal diversities and making schools effective to achieving this aim. The Salamanca statement and Framework for Action on special Needs Education (1994) (for which Sri Lanka is a ratifier) strongly recommends the adoption of inclusive education in schools for the benefit of children with special needs.

Since inclusive education is a relatively new concept and many challenges have to be overcome in its successful implementation, it sets a wide forum for

research. As still there are educationists who believe that complete inclusive education is a myth, it is worthwhile exploring the extent to which it has become successful in its implementation. Salamanca declaration points out that special needs education should be integrated into the research and development programmes of research institutions and curriculum development centers. Particular attention should be given in this area to action research focusing on innovative teaching learning strategies. Classroom teachers have the opportunities for action and reflection involved in inequalities. Pilot experiments and in-depth studies may assist in decision-making and in guiding future action in this area. Capability of using affordable technology should be built up and research has to be carried out at national and regional levels to develop appropriate support technology systems. Moreover dissemination of examples of good practices in inclusive education could help to improve teaching and learning. Few local studies undertaken in this area (Dias, 2012, 2009) will enlighten the prospective researchers addressing issues related to inclusive education.

5. Curriculum and Curricular materials

In education a curriculum is broadly defined as the totality of student experiences that occur in the educational process. The term often refers specifically to a planned sequence of instruction or to a view of the students' experiences in terms of the educator's instructional goals. Reys, Lapan, Holliday and Wasman (2003) refer to curriculum as a set of learning goals articulated across grades that outline the intended content and process goals at particular points in time throughout the school program. Kerr defines curriculum as all the learning which is planned and guided by the school where it is carried out in groups or individually inside or outside the school. Curriculum may incorporate the planned interaction of pupils with instructional content, materials, resources and processes for evaluating the attainment of educational objections.

Thus curriculum can be ordered into a procedure:

(1) Diagnosis of needs (2) Formulation of objectives (3) Selection of content (4) Organisation of content (5) Selection of learning experiences (6) Organisation of learning experiences (7) Determination of what to evaluate and the ways and means of doing it.

Teachers are expected to teach meaningful content that helps students to meet learning goals in the content of authentic activities, while addressing the needs of diverse learners and ensuring that all students are successful. To help teachers meet these high expectations and thus promote educational reform, curriculum materials might be designed to promote student learning as well as teacher learning.

Before adding educative elements to curricular materials, designers must ensure that the "base" curricular materials are accurate, complete and coherent in terms of content and effective in terms of pedagogy-with good representation of the content, a clear purpose of learning it and multiple opportunities for students to explain their ideas. Reviews of typical textbooks, which are the main curricular materials related to school curriculum, however have identified serious problems along both these dimensions.

The NEC of Sri Lanka (2003) states that writing textbooks has become a problem for setting unrealistic targets as regards time and laments that the multiple book option has delivered minimum results. The National committee for formulating a New Education Act for General Education (2009) states that textbooks are not appropriate for age, cognitive attributes, personality development and experiences of students. It points out the need for improving the quality of textbooks by engaging competent persons as writers who need training. It also draws attention to the need of taking the multiplicity of Sri Lanka into consideration when writing textbooks. Oavis and Krajuk (2005) state that teachers learn from curricular materials by interaction among three components involved in any learners' interaction with text: the reader, the text and the context. Thus it is useful that all the present day curricular materials are evaluated, based and revised in the light of research conducted in contextual settings.

6. Learning Teaching Process

There are several issues that have to be addressed in relation to the teaching learning process at the primary and the secondary education levels. Quality of the learning-teaching process affects academic achievement. Students learn from involvement in real and meaningful activities. However, significant changes have not been occurred in the Sri Lankan secondary classroom. The majority of classroom time is spent on teachers lecturing or talking, students listening, students reading textbooks, or students filling out worksheets.

English is currently taught as a second language up to the GCE Advanced Level in all schools. However, the highest number of failure grades was for the English language examination at GCE OL. In 2015, 52.14% of school candidates who sat the O/L examination have failed the English language subject. As a result, "only 10 percent of the children achieve a targeted level of mastery in English language skills while English writing skills are virtually non-existent with only 1 percent of children exhibiting the required skills level. Additionally, these skills are largely restricted to urban areas where 23 percent of children master English compared to only 7 percent of rural children" (*Treasures of the Education System in Sri Lanka", World Bank 2005).* Several studies have been conducted in this field, but further research is needed, especially on methodology of learning and teaching English because proficiency in English has declined significantly in the last few decades. It is important to conduct studies in view of exploring causes and suggesting the adoption of new methods of teaching appropriate to the present classroom which is changing with the technological equipment that can be used in learning and teaching.

Teaching style is one of the areas that have to be researched. Teacher is the facilitator of learning. Do teachers focus on child centered methodology? Do teachers are focus on the quality of teaching and learning and not only on covering the required content? Over emphasis on lower-order mental skills, that can be tested at sit-in examinations is a common feature. Practical skills are not developed as they are not assessed in public examinations. Traditional approaches for imparting the content that is not in line with the needs of the information age are seen in most of the classrooms. Formative assessment procedures are not practiced properly. There are difficulties of coping with the mechanisms utilized for SBA.

It is important to see whether learning outcomes are validated. Validating learning outcomes means reviewing and understanding whether students have achieved competencies at the expected levels in their respective course of study.

Quality of the learning teaching process is highly dependent on the skills of teachers. Teachers in most of the schools are less motivated. Teacher attendance in school and classroom and teaching in classrooms are not happening as expected. This situation has to be researched. Studies have to be conducted to explore causes; whether it is due to poor leadership at school or lack of a performance monitoring system in place to recognize teacher effectiveness.

Quality of the learning teaching process depends on the quality of training. There are several issues that have to be addressed in relation to the major teacher training programme, teacher training conducted by NCOEs. Teaching methods and styles of NCOE lecturers, the programmes for the development of teacher personality and competence such as community project work are the important aspects that have to be reviewed.

7. Student Achievement in Education

Several issues related to student achievement in education have been identified. Of all the candidates who sat for the GCE OL in 2015 (314,635), 58.68% have qualified for admission to GCE AL classes. That indicates that 41.32 percent left the school system after appearing for their GCE OLs. Of 255,191 students who sat for GCE ALs in 2015 (including private candidates), 60.91 percent qualified for university entrance. 99,744 (39.09) left grade 13 without qualifying to enter the universities.

There are regional disparities too. The Moneragala district has the highest failure rate among school students. 6.16 percent of the students who sat the 2013 GCE OL from the district have failed all subjects, there are also inequalities among the achievement levels of different subjects. It is important to investigate why students' failure rates are high in some subjects and not so high in some other popular subjects. According to statistics published by the MOE, 10,360 candidates failed all subjects in 2014. 9787 of them were school candidates. The highest failure rate among the school candidates was the English language examination. 52.14% of school candidates who sat for the examination have failed in English language. 42.77 percent of school candidates have failed Mathematics while 32.47 percent have failed Science and Technology. However, the failure rates are not so critical with Social Sciences and Languages. It's about 11 percent for Sinhala, 19 percent for Tamil and 12 percent for Geography.

Achievement depends on quality of education which is an outcome of many interactive factors. The curriculum, the instructional system, and assessment are among them. However, due to lack of opportunities for all students to continue on to the desired next stage of education, especially to the higher education level, a severe competition is seen at the entrance level. In order to face this competition parents prepare their children through coaching from primary level. The present examination

system, which serves as a summative evaluation is, loaded more with lower level cognitive ability testing, causes adverse effects on the learning behavior of the students. Therefore, it is necessary to change the present academic-biased, examination oriented system which is hindering the expected total personality development of the child.

Grade 5 Scholarship Examination has been transformed into a competitive examination with harmful consequences for the psychological and holistic development of young children. Validity of the examination is questioned by many. Although the compulsory education phase ends at Grade nine, students leaving at that stage leave with no assessment of their level of assessment. Attempts have been made several times to introduce formative assessment; Continuous Assessment in 1980s, SBA from 1990s, reforms introduced in 2007-Multiple Assessments with prominence given to Self-Assessment and Teacher Assessments, etc. However, there is very little attention given for proper implementation of formative assessments.

8. School Dropouts

According to Ruebel, Ruebel and O'Lenghlin (2001) school dropout is described as a process of disengagement in which students become more and more alienated from school and withdraw to the point of dropping out. The negative impact of high school dropout worsens the economy every time a student chooses to drop out of school. More often than not a high school dropout will earn less in a lifetime than an individual who has graduated high school and continued to further their education. School dropout is not only an individual problem but it is costly to society as a whole. High school dropout is of fundamental social, economic and political importance and has major implications for educational policy and practice patterns of economic and racial/ethnic inequality and the quality of a country's workforce.

Studies of dropout rates have identified three types of dropping out-event dropout rate (which reflects percentage dropout in a single year), status dropout rate (which reflects percentage dropout in a given age range) and cohort dropout rate (which reflects percentage dropout of a single group of students).

High school dropout has become a crisis even in developed countries. It is said that in UK it is continuously increasing. In USA it is decreasing but still persists. In Sri Lanka too it has decreased over time but the pattern seems to be an increase with the gradewise advancement spurting at the secondary level. Boys dropout more

than girls. In 2009, over 45,000 students dropped out of schooling. It is serious in the plantation sector as 20% per year (Perera).

In Sri Lanka five dimensions of educational exclusion has been noted (UNICEF, 2013).

- Attended but dropped out
- Will never enter
- Will enter late
- At risk of dropping out of primary school
- At risk of dropping out of secondary school

The reasons adduced for dropout are varied and multifaceted. Research conducted in UK have identified 42 reasons. In USA, the reasons are categorised as family - based or personal and academic. By and large, the studies conducted in the West highlight reasons such as bullying, language issues, peer pressure, poor parenting, life style, social background, parental misguidance, environmental and social changes, early pregnancy, students' attitudes, drug abuse and violence. In Sri Lanka oft-quoted reasons for dropout include income poverty, socio-economicdeprivation, child labour, teacher deficit, deficiencies in the learning teaching process, lack of facilities for disabled children, national disasters and hazards, lack of political will and commitment, politicization of the system, weak coordination and implementation of programs, problems with monitoring and data collection, inadequate budget allocation and resource distribution.

There are four main areas that are discussed by academics with regard to dropping out: (1) The personal and public affects of dropout (2) Educational equity (3) Dropout prevention and recovery efforts (4) The effect of high school dropouts not taking the advantage of second chance opportunities.

Informed decisions in relation to each of these dimensions can be made in the light of in-depth research conducted in the local context.