

Survey on Whether the Sri Lankan Pre-Service National Diploma in Teaching Programme Addresses the Learning Needs of Diverse Learners

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Abstract

This study sought to identify the state of prospective teachers' knowledge about differentiated instruction; how often prospective teachers differentiate instruction in specific subject areas; and the differentiated instruction factors that are implemented during the internship practicum period in the pre-service National Diploma in teaching program in order to meet the needs of diverse learners in 8 National Colleges of Education in Sri Lanka. This study involved stratified sample of (three Tamil medium, three Sinhala medium and two English medium) 158 prospective teachers, 36 teacher educators from 8 National Colleges of Education in seven provinces and 8 different districts.

Data were collected using questionnaires for prospective teachers and teacher educators, interview schedules for prospective teachers and teacher educators; observation schedule for prospective teachers. In addition, differentiated instruction factors embedded in the syllabus of National Diploma in teaching (29 subjects) were analyzed using content analysis method. Chi square analyses and the descriptive analysis are used as major analysis techniques, and the qualitative data provided by prospective teachers and teacher educators were considered for a cross checking of the quantitative inferences.

The researcher concluded that differentiated instruction factors have to include in the theory and practice of the National Diploma in teaching syllabi and teaching practicum would result in improved better achievement in pre-service National Diploma in teaching diploma in teaching. Empowering the teacher educators in differentiated instruction concept and practice is a dire necessity for the successful implementation of this pre-service teacher training conducted in Sri Lankan National Colleges of Education.

Keywords: Learning needs, diverse learners, differentiated instruction, pre-service teacher education

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Introduction

The quality of a nation depends upon the quality of its citizens. The quality of its citizens depends on not exclusively, but in critical measure, upon the quality of their education, the quality of their education depends upon more than any single predominant factor, the quality of their teacher. According to Clinton (1996), every community should have a talented and a dedicated teacher in every classroom. We have enormous opportunities for ensuring teacher quality well into the 21st century if we recruit promising people into the teaching profession provide them with the highest quality preparation and training. It is common knowledge that the academic and professional standards of teachers constitute a critical component of the essential learning conditions for achieving the educational goals of a nation.

In recent years, rapid attention has been paid to the effectiveness of teacher training programs in producing skillful teachers. There are two types of teacher training programs, namely, pre- service and in- service conducted for the professional development of teachers in Sri Lanka. The National Colleges of Education (NCoE) play a major role in providing pre-service teacher education in Sri Lanka. However, the present general education system of Sri Lanka widely recognizes that today's classrooms are characterized by diverse students. Therefore, the teacher should be able to recognize and accommodate students' diverse needs. The ability to focus on students' diverse need is an important step in a teacher's professional development. This is not possible if teacher preparation is focused only on traditional training modalities. Holistic teacher development is the need of the hour and therefore teacher education involves and should involve more factors than mere training.

However, teaching processes of teachers are not based on or flexible enough to accommodate the large span of students with differences in mixed ability classrooms, such as student's readiness, interests and learning styles. Therefore, the needs of the under achievers and students with learning difficulty are not considered by the teacher. In addition, as mentioned by the teachers in the survey, the reality is that teachers mainly face difficulties in handling the diverse needs of students due to the lack of teaching skills which are required to identify and cater to diverse needs.

The aim of teacher training and institutions assigned with the task is to produce diverse pedagogically skilled teachers to cater diverse students in the classroom. But unfortunately in reality teacher professional development training has failed to produce a teacher with diverse skills' to cater diverse student's learning needs and styles. This shows that there is a mismatch between the training provided and the objective of catering to diverse students' learning needs.

Therefore, I paid special attention in my research regarding the factors of differentiated instruction such as content (Syllabi), Process (Individual differences, Instructional strategies and Classroom environment), Product (assessing the learner) influencing diverse students learning. It is necessary that the Pre- service teacher training programs have to address this burning issues and provide greater opportunities for pre-service teachers to develop their teaching skills by demonstrating differentiated instruction to meet the learning needs of diverse students in the classroom which the student can then use in his her practice.

Background of The Research Problem

In essence, schools always knew that there were certain student population was not making as much an achievement in terms of growth as others. These have been documented along with disadvantaged students for years. This achievement gap is argued to have lifetime consequences limiting opportunities for weak students in higher education and beyond. Educators who view classrooms as whole entities and do not account for the variances in the levels of readiness with which students enter the class room may be a significant challenge in creating change.

Nevertheless, up to now studies had not been done on the above topic in the particular NCoE's in Sri Lanka. Therefore, the researcher decided to conduct a study in the above – mentioned topic to fill the knowledge gap. The present study is an attempt to investigate the influence of the five dimensions of “differentiated instruction”; content (syllabi), Process (individual differences, instructional strategies, classroom environment,) and the influence of product (assessing the learner) in meeting the learning needs have within the National Diploma in teaching program.

Literature Review

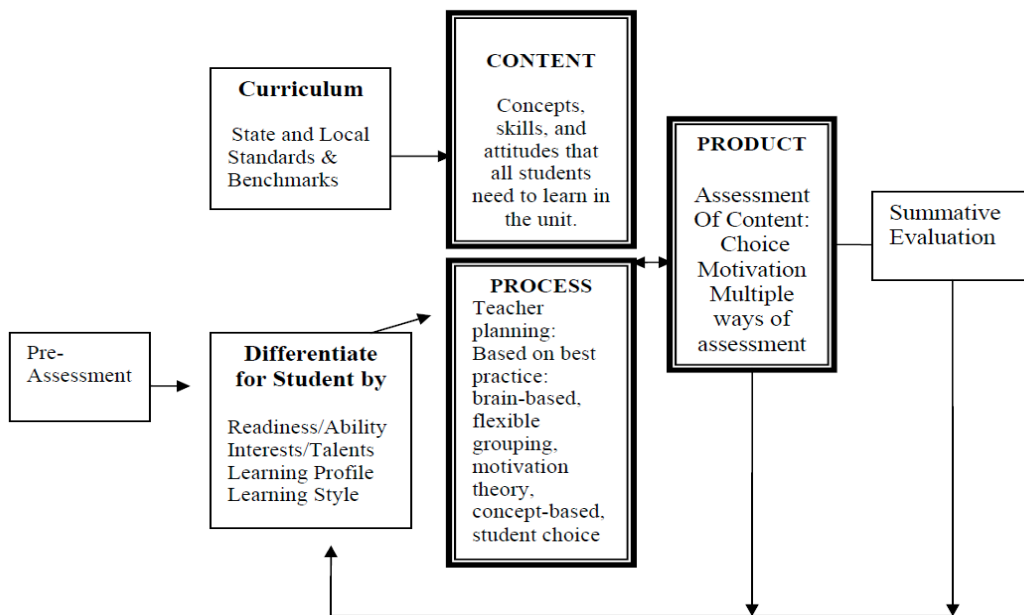


Figure 1: Conceptual framework of differentiation. (Adapted from Hall, 2004)

However, Hall (2004) mentioned that differentiation is flexible grouping, student centered, based on readiness, for all learners, changing all the time and meeting personal needs. Hall (On-line, 2004) stated “A differentiated classroom differs from a traditional classroom in many ways. Conceptual framework given above clearly shows the important of differentiated instruction factors. Most importantly, in a differentiated classroom more than one way to complete a lesson exists for any given topic. These lessons are designed around the diverse needs of the students. This framework is more relevant to this research and shows the need of the DI in classrooms.

As per, Anderson (2007) differentiation, stems from beliefs about differences among learners, how they learn, learning preferences and individual interests. Therefore, differentiation is an organized, yet flexible way of proactively adjusting teaching and learning methods to accommodate each child's learning needs and preferences in order to achieve his or her maximum growth as a learner. In order to understand how our students learn and what they know, pre-assessment and ongoing assessment is essential. This provides feedback for both the teacher and the student with the ultimate goal of improving student learning. The above literature would be a guidance to prepare the questionnaire and the observation schedule.

However, delivery of instruction in the past often followed a "one size fits all" approach. In contrast, differentiation is individually student centered, with focus on utilizing appropriate instructional and assessment tools that are fair, flexible, challenging, and engage students in the content in meaningful ways. Therefore, the present study has considered that these different previous literatures appropriate for the proposed objectives of the study.

Research Questions

As a next step, In order to get clear answers for this main purpose the researcher formulated the following research questions.

1. How does the syllabus of National Teaching Diploma program satisfying the diverse learners need?
2. How do the differentiated Instruction factors (content, individual differences, instructional strategies, classroom environment and assessing the learner) influence the fulfillment of diverse students need?
3. How knowledgeable and skillful are the prospective teachers in implementing differentiated instruction strategies to fulfill the diverse student's needs?

Statements of the Hypotheses

The list of hypotheses was designed to address the second research question is given below:

1. H_0 - There is no significant difference between content of NDT program and meeting the "*diverse needs of the learners*" at $\alpha = 0.05$ significant level.
2. H_0 - There is no significant difference between identifying individual differences of learners and meeting the "*diverse needs of the learners*" at $\alpha = 0.05$ significant level.
3. H_0 - There is no significant difference between *instructional strategies* of prospective teachers and teacher educators in meeting the "*diverse needs of the learners*" at $\alpha = 0.05$ significant level.
4. H_0 - There is no significant difference between classroom environment of learners and meeting the "*diverse needs of the learners*" at $\alpha = 0.05$ significant level.
5. H_0 - There is no significant relationship between assessing the learner and meeting the "*diverse needs of the students*" at $\alpha = 0.05$ significant level.

Methodology

This research makes use of naturalistic inquiry, personal contact and insight. In addition, this research consists of in-depth, open-ended interviews; direct observation and written documents, data collection methods for a quality approach. Further, the qualitative methods results in quantification (e.g., counting the number of occurrences of a particular behavior). And it represents negative connotation. Therefore, it comes under quantitative approach also. Therefore, with the above reasons this research falls under the mixed method research category.

Selecting a representative Sample

The sample of this study encompasses different teaching learning media (Tamil, Sinhala, and English), representation of different geographical areas and multi ethnicity of prospective teachers' communities. There are nineteen National colleges of Education established in Sri Lanka. 29 subject streams are distributed among those National Colleges of Education.

Sampling Techniques

| No | Name of the NCoEs | Medium | District | Province | Prospective teachers | | | | | | sample | | | | | |
|----|-------------------|----------------|------------|---------------|----------------------|-----|-----|-----|----|-----|--------|----|----|----|---|----|
| | | | | | T | | S | | E | | T | | S | | E | |
| | | | | | M | F | M | F | M | F | M | F | M | F | M | F |
| 01 | Nilwala | Sinhala | Akuressa | Southern | | | 37 | 167 | | | | | 4 | 16 | | |
| 02 | Sripada | Tamil& Sinhala | Hatton | Central | 28 | 105 | 12 | 42 | - | - | 3 | 10 | 1 | 4 | - | - |
| 03 | Addalachenai | Tamil | Ampara | Eastern | 32 | 166 | - | - | - | - | 3 | 16 | - | - | - | - |
| 04 | Jaffna | Tamil | Jaffna | Northern | 29 | 120 | - | - | 4 | 32 | 3 | 12 | | | | 3 |
| 05 | Pulathisipura | Sinhala | Polonaruwa | North Central | - | - | 07 | 152 | - | - | - | - | | 15 | | |
| 06 | Mahaweli | English | Kandy | Central | 10 | 25 | 12 | 30 | 27 | 139 | 1 | 3 | 1 | 3 | 4 | 14 |
| 07 | Siyane | English | Gampaha | Western | | | 22 | 129 | 22 | 47 | | | 2 | 13 | 2 | 5 |
| 08 | Wayamba | Sinhala | Bingiriya | North Western | | | 19 | 183 | | | | | 2 | 18 | | |
| | Total | | | | 99 | 416 | 109 | 703 | 53 | 218 | 10 | 41 | 10 | 69 | 6 | 22 |

Table No. 1: Selected stratified Samples -prospective teacher

Table No. 2: Teachers Educators

| No | Name of the NCoEs | Medim | District | Province | Teacher Educators | | | | | | sample | | | | | |
|----|-------------------|-----------------|------------|---------------|-------------------|----|----|----|---|----|--------|---|----|----|---|---|
| | | | | | T | | S | | E | | T | | S | | E | |
| | | | | | M | F | M | F | M | F | M | F | M | F | M | F |
| 01 | Nilwala | Sinhala | Akuressa | Southern | | | 16 | 13 | | | | | 2 | 2 | | |
| 02 | Sripada | Tamil & Sinhala | Hatton | Central | 5 | 13 | 8 | 3 | - | - | 1 | 2 | 1 | 1 | - | - |
| 03 | Addalachenai | Tamil | Ampara | Eastern | 22 | 2 | - | - | - | - | 4 | | - | - | - | - |
| 04 | Jaffna | Tamil | Jaffna | Northern | 13 | 24 | - | - | 2 | 6 | 1 | 2 | | | | 1 |
| 05 | Pulathisipura | Sinhala | Polonaruwa | North Central | - | - | 14 | 7 | - | - | - | - | 2 | 1 | | |
| 06 | Mahaweli | English | Kandy | Central | 2 | 3 | 12 | 12 | 5 | 15 | 1 | - | 1 | 1 | 1 | 2 |
| 07 | Siyane | English | Gampaha | Western | | | 14 | 25 | | | | | 2 | 4 | | |
| 08 | Wayamba | Sinhala | Bingiriya | North Western | | | 18 | 13 | | | | | 3 | 1 | | |
| | Total | | | | 42 | 42 | 82 | 73 | 7 | 21 | 7 | 4 | 11 | 10 | 1 | 3 |

FINDINGS AND DISCUSSION

Research Question 1: How does the Syllabi of National Teaching Diploma program cater to satisfying the diverse learners' need?

Professional Subjects: (Coding results)

Most of the Professional subjects did not contain any elements related to individual difference and instructional strategies and the subject "Educational Practice" (33%) seems to have ensured that it covered most elements while the other subjects did consider all the differentiated factors.

Special subjects like Food Technology (13%), Home Economical Science (15%), Buddhism (24%), Hinduism (13%), Special Education (20%) and Physical Education (20%) are considering key aspects of identifying individual differences but most of such positive feedback seems to be influenced by the fact that these subjects (Food technology and Home Economical Science) involved group work and practical sessions which may have been interpreted as practice. Further, mathematics and Science did not even feature among the subjects in which practice opportunities were provided.

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developing the ability of the prospective teachers to understand the readiness of the students, developing and using appropriate teaching methods assessing the learners for diverse learners were not part of any of these subjects according to the syllabus.

Table No. 3: Content analysis of General Subjects

| General Subjects (6) | Individual differences(22) | | Instructional strategies(7) | | Classroom environment(8) | | Assessing the learner (9) | | Total (46) | |
|----------------------------------|----------------------------|----|-----------------------------|----|--------------------------|----|---------------------------|----|------------|----|
| | | % | | % | | % | | % | | |
| Art | 3 | 15 | 4 | 57 | 1 | 13 | - | - | 8 | 17 |
| Kandyan Dance | 4 | 20 | 3 | 43 | 2 | 25 | - | - | 9 | 20 |
| Carnatic Music | 4 | 20 | 2 | 29 | 3 | 39 | - | - | 9 | 20 |
| Western Music | 4 | 20 | 3 | 43 | 2 | 25 | - | - | 9 | 20 |
| Drama & Theatre | 5 | 25 | 5 | 70 | 2 | 25 | - | - | 12 | 26 |
| Baratha naatiyam | 1 | 5 | 1 | 14 | 2 | 25 | - | - | 4 | 9 |
| Second National Language-Tamil | 5 | 25 | 2 | 29 | - | - | - | - | 7 | 15 |
| English | 3 | 15 | 1 | 14 | - | - | - | - | 4 | 9 |
| First Language Tamil | 4 | 20 | - | - | - | - | - | - | 4 | 9 |
| French. | 3 | 15 | 3 | 43 | - | - | - | - | 6 | 13 |
| Second National Language-Sinhala | 6 | 30 | 5 | 70 | 1 | 13 | - | - | 12 | 26 |
| First Language Sinhala | 2 | 10 | 1 | 14 | - | - | 1 | 11 | 4 | 9 |

General subjects have been identified to be analyzed separately as they showed a marked difference in terms of the relationship they have with individual differences and identifying the difference in instructional strategies required for successful teaching. General subjects by nature, need to be taught and practiced and require more personal involvement of the teacher with the student and allows the student to express himself physically as well. This may even pave the way for aesthetic subjects becoming a tool of successfully transmitting the idea of different instructional strategies for diverse students.

Demographic Information's of Teacher Educators

Demographic information about the teacher educators and the prospective teachers were obtained from the survey utilized in this study, including gender, years of teaching experience, teaching qualifications, and subject areas currently. The teacher educators recruited for professional subjects are teaching 100% professional subjects and 75% English appointments are teaching their own subject. But there is a remarkable difference between subject area one is recruited for and the subject taught when it comes to "Special subjects".

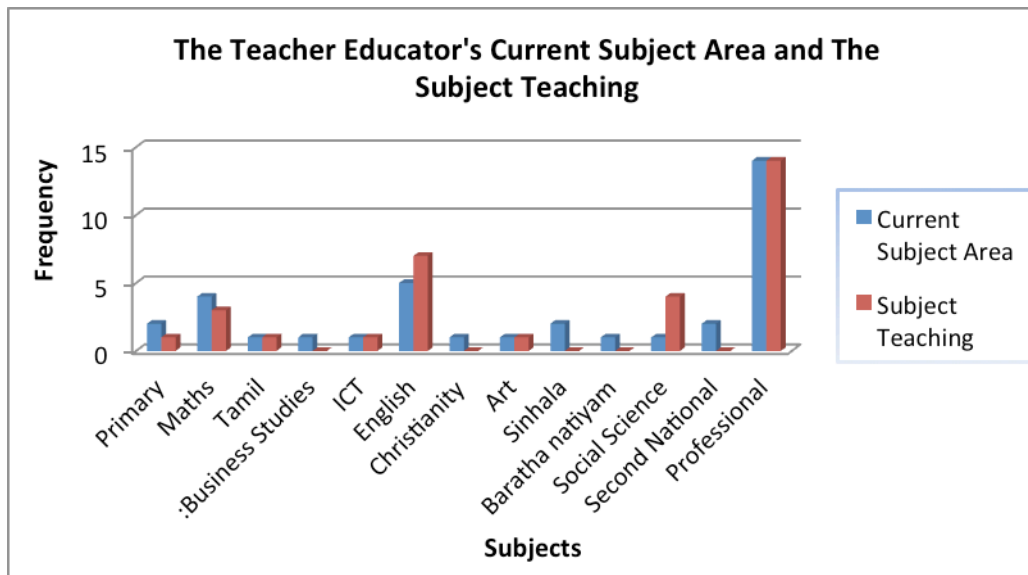


Figure 2: Teacher Educators Current Subject area

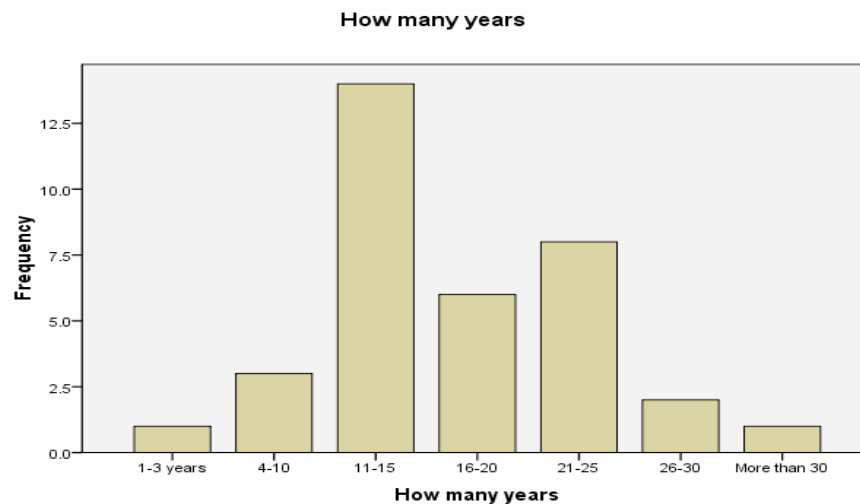


Figure 3: Teaching Experiences of Teacher Educators

The above graph indicates that all the teacher educators have had teaching experience during their careers. This is also a positive aspect for the teaching learning process. However, the number of years of experience is not an indicator for the measure the teaching talent. The recruitment policies have to consider their teaching ability and positive attitude towards diverse learners.

Second research Question:

Hypothesis 1: H_0 -There is no significant difference between **content** and meeting the diverse needs of the learners at $\alpha = 0.05$ significant level.

Chi-Square Tests- content – Teacher educators

| | Value | df | Asymp. Sig. (2-sided) |
|--------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 16.947 ^a | 9 | 0.05 |
| Likelihood Ratio | 16.924 | 9 | 0.05 |
| N of Valid Cases | 36 | | |

Table No. 4: Chi Square Table: Content- Teacher educators

a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is .20.

According to the chi square table of teacher educator responses given above the results indicate that there is a significant difference between degree of competence of teacher educators and the degree of the need in content. However, the teacher educators' perception favors the content of the NDT syllabi in terms of need their perception differs. This qualitative inference supports quantitative analysis of content that there is no significant difference between degree of competencies and the degree of need at $\alpha = 0.05$ level. However, the significant level of p value is 0.050. We can reject the null hypothesis that indicates that there is a strong difference between the degree of competence and the degree of needs based on the content of syllabi.

Content- degree of competencies and degree of need

| | Value | df | Asymp.Sig. (2-sided) |
|--------------------|---------------------|----|----------------------|
| Pearson Chi-Square | 12.832 ^a | 8 | .118 |
| Likelihood Ratio | 11.928 | 8 | .154 |
| No of Valid Cases | 158 | | |

Table No. 5: Chi square test – prospective teacher - content

a. 7 cells (46.7%) have expected count less than 5. The minimum expected count is .20.

According to the chi square table given above for the prospective teachers' questionnaire, the degree of competencies and the degree of need (at $\alpha = 0.05$ level) "p" value is 0.118. For the same hypothesis teacher educators' "p" value is 0.05. If we compare the value of "p", the prospective teacher's opinion differs from that of the teacher educators. The "p" value of prospective teacher's questionnaire indicates that there is no significant difference between content of the pre-service programme and meeting the diverse needs of learners. It indicates that the dependent variable and the independent variable are independent. The teacher educators on the NDT programme accepted that they did not consider the differentiated learning concept in their teaching and therefore, it can be assumed that the knowledge of the prospective

teachers will be relatively lower in the domain of differentiated learning in order to identify the differentiated factors in the questionnaire and to answer appropriately. The conclusion of the content area is that the competencies of the prospective teachers and teacher educators are not at the expected level and the need for this knowledge is greatly expected and required mostly by teacher educators than prospective teachers. This qualitative inference supports the quantitative analysis of content that there is no significant difference between degree of competencies and the degree of need at $\alpha = 0.05$ level. However, the significant level “p” value is 0.050 in the Chi-square test. We can reject the null hypothesis and predict that there is a strong difference indicated between degree of competence and degree of needs based on individual differences of teacher educators

| | Value | df | Asymp. Sig. (2-sided) |
|--------------------|--------------------|----|-----------------------|
| Pearson Chi-Square | 26.89 ^a | 9 | 0.001 |
| Likelihood Ratio | 22.93 | 9 | 0.006 |
| N of Valid Cases | 158 | | |

Table No. 6: Chi Square – Individual difference- Teacher Educators

Hypothesis: H_0 -There is no significant difference between **individual difference** and meeting the diverse needs of the students at $\alpha = 0.05$ significant level.

a. 8 cells (50.0%) have expected count less than 5. The minimum expected count is .09.

| | Value | df | Asymp. Sig. (2-sided) |
|--------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 20.526 ^a | 12 | 0.050 |
| Likelihood Ratio | 22.092 | 12 | 0.037 |
| N of Valid Cases | 36 | | |

Table No. 7: Chi Square – Individual difference- prospective teachers

a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .08.

The individual difference factor of differentiation instruction “p” value is 0.001 for the response of prospective teacher’s questionnaire. $\chi^2(9), n = (158) = 26.898, p \leq 0.05$. The p value is less than 0.005. The null hypothesis can be rejected. Therefore, there is a strong difference between individual difference factor of differentiation and meeting the needs of diverse learners. The prospective teachers feel that their degree of competencies in the individual difference factor is very low to compare with the degree of need. However, prospective teachers are not guided well enough to identify individual differences of learners. Further, the lack of knowledge individual difference leads them to prepare inappropriate lessons for the students they teach in the allocated school during the internship period.

When the chi-square tests were carried out to determine the difference between individual difference and meeting the needs of diverse learners, the results revealed the difference between individual difference and diverse need, with $\chi^2 (12), n = (36) = 20.526, p \leq 0.05$. The null hypothesis is rejected. Individual differences influence in meeting the needs of diverse learners. In other words, teacher educators were not very familiar with the knowledge of individual differences and diverse needs and they have not implemented them frequently in their classes. Therefore, the prospective teachers have not taken the above into consideration and do not have a great understanding of the individual difference concept. It has led to the prospective teachers not practicing it in their classrooms.

Hypothesis: H_0 -There is no significant difference between **instructional strategies** and meeting the diverse needs of the students *at $\alpha = 0.05$ significant level.*

The given below table indicates the “p” value $0.357, p \geq 0.05. \chi^2 (12) n = (36) = 20.526, p \geq 0.05$. The null hypothesis is retained. Instructional strategies and the meeting diverse needs are independent. There is no difference between instructional strategies and the diverse learners. Teacher educator’s competencies are equal to the needs or are independent. Teacher educators are confident of their instructional strategies related to the diverse learners. However, the teacher’s educators assume that they have inadequately covered the instructional strategies related to diverse learners to meeting the needs

| | Value | df | Asymp. Sig. (2-sided) |
|--------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 13.171 ^a | 12 | 0.357 |
| Likelihood Ratio | 15.931 | 12 | 0.194 |
| No of Valid Cases | 36 | | |

Table: No. 8: Chi square test – Instructional strategies – Teacher educators

- a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

| | Value | df | Asymp.Sig. (2-sided) |
|--------------------|---------------------|----|----------------------|
| Pearson Chi-Square | 28.791 ^a | 12 | .004 |
| Likelihood Ratio | 23.713 | 12 | .022 |
| N of Valid Cases | 158 | | |

Table No. 9: Chi square test Prospective teachers -- Instructional strategies

- a. 25 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

If we examine the prospective teachers questionnaire analysis, chi square p value is $\alpha = 0.004$ for instructional strategies factor of differentiated instruction. The table given above indicates

the “p” value of instructional strategies as 0.004, $p \leq 0.05$. $\chi^2 (12)$, $n = (158) = 28.791$, $p \leq 0.05$. However, the “p” value rejects the null hypothesis. Further, the chi square value proves that there is a strong difference between the prospective teacher’s degree of competencies and the degree of need of instructional strategies. The analysis indicates the degree of need is higher than the degree of competencies. However, teacher educator’s felt that the degree of competencies is not less than the degree of need. The teacher educators share their view on different instruction and they request training on differentiated instruction and suggested allocation more units for differentiated instruction in related subjects. Learning style has also been included in instructional strategies. Both parties agree that learning style which was not considered more in training programmes influences the in teaching learning process strongly.

Hypothesis: H_0 -There is no significant difference between **classroom environment** and meeting the diverse needs of the learners *at $\alpha = 0.05$ significant level.*

According to the chi square test table 21 p value is 0.006 ($p \leq 0.05$). However, it shows a strong difference between classroom environment and the diverse learners’ needs. We can reject the null hypothesis and accept that there is a strong difference indicated between degree of competence and degree of needs based on the classroom environment among the teacher educators and the prospective teachers. Both parties agreed in the interview that classroom environment which was not considered more in training programmes influences the teaching learning process strongly.

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|--------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 33.865 ^a | 16 | 0.006 |
| Likelihood Ratio | 39.82 | 16 | 0.001 |
| N of Valid Cases | 36 | | |

a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .03.

Table No. 10: Chi Square table for classroom environment – Teacher Educators

Chi-Square Tests

| | Value | df | Asymp. Sig. (2-sided) |
|--------------------|---------------------|----|-----------------------|
| Pearson Chi-Square | 37.637 ^a | 12 | 0.001 |
| Likelihood Ratio | 36.285 | 12 | 0.001 |
| N of Valid Cases | 158 | | |

a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .03.

Table No. 11: Chi Square table for classroom environment – Prospective teachers

The two grids above indicate that the p values are 0.006value and 0.001. Both values are less than the significant level 0.005. (0.006 ($p \leq 0.05$), is 0.001 $p \leq 0.05$). Therefore it's proven that the null hypothesis can be rejected. It indicates there is a strong difference between the degree of competencies and degree of needs classroom environment. The cross tabulation (see annexure vii) value shows that the degree of need is more than the degree of competencies. After a brief discussion they understood what classroom environment is and how it is important for a teacher to plan a lesson.

Hypothesis: H_0 -There is no significant difference between **assessing the learner** and meeting the diverse needs of the learners *at $\alpha = 0.05$ significant level.*

According to the chi square test table p value is 0.015($p \leq 0.05$). However, it shows a strong difference between assessing the learner and the diverse learners need. We can reject the null hypothesis that there is a strong difference indicated between the degree of competence and the degree of needs based on assessing the learner.

Furthermore, we can see that the largest difference is average and lower than average 38.90% between degree of competencies and degree of needs in assessing the learner occurs among those with of teacher educators (see annexure VII). 16.7% of teacher educators agree with assessing the learner.

| Chi-Square Tests | | | |
|---|---------------------|----|-----------------------|
| | Value | df | Asymp. Sig. (2-sided) |
| Pearson Chi-Square | 24.988 ^a | 12 | 0.015 |
| Likelihood Ratio | 29.766 | 12 | 0.003 |
| N of Valid Cases | 36 | | |
| a. 18 cells (90.0%) have expected count less than 5. The minimum expected count is .03. | | | |

Table No. 12: Teacher Educators - Assessing Learner

| | Value | df | Asymp. Sig. (2-sided) |
|--------------------|---------|----|-----------------------|
| Pearson Chi-Square | 29.785a | 12 | 0.003 |
| Likelihood Ratio | 20.065 | 12 | 0.066 |
| N of Valid Cases | 158 | | |

Table No. 13: Chi square test – Prospective teachers

a. 20 cells (100.0%) have expected count less than 5. The minimum expected count is .06.

The two grids above indicate that the p values are 0.015value and 0.003. Both values are less than the significant level 0.005. (0.015 ($p \leq 0.05$), is 0.003 $p \leq 0.05$). Therefore it's proven that the null hypothesis can be rejected. It indicates there is a strong difference between the degree of competencies and degree of needs in assessing the learner.. The teacher educators and the prospective teachers have accepted in the interview that they consider formative and summative assessment only. After a brief discussion they understood what assessing the learner is and how it is important for a teacher to plan a lesson.

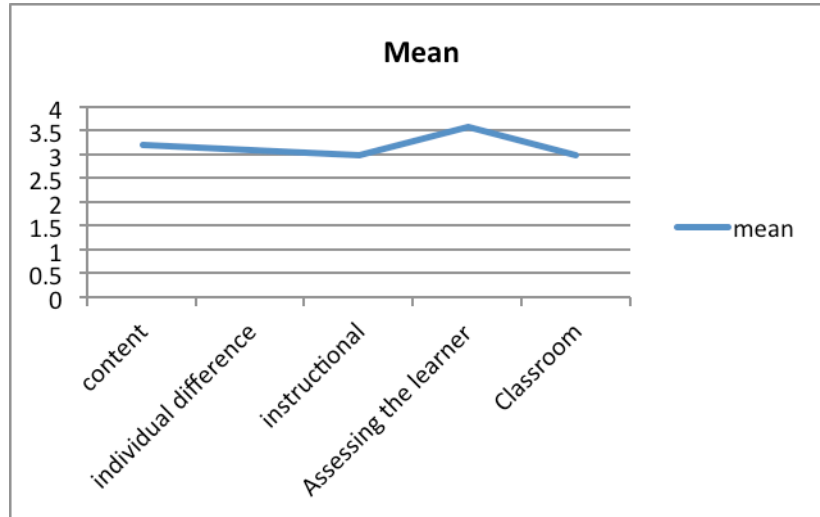
On the whole, the differentiated factors the researcher selected were not very familiar to prospective teachers and teacher educators. The analysis indicates that the differentiated instruction concept should be emphasized more in the pre – service National diploma in teaching programme.

Research Question 3: Is there a significant relationship between the knowledge of differentiated instruction and implementation in the classroom environment of the diverse needs learners?

Observation Schedule results and discussion

Integration of specific differentiated activities was evidenced throughout the observations as follows:

- The less use of hands-on activities was evident for all teachers, in each of the teaching practice.
- Video clips and music were not much incorporated into lessons for student engagements prescribed in classroom lessons.
- Pre assessment, readiness of learners and interest are merely consider in classroom teaching
- Worksheets that incorporated scaffold instruction were merely used in every classroom.
- Group activities were excessively used for individual instruction.
- Real-world scenarios were read to students in language classes and without allowing them to reflect on the situation presented.
- The critical thinking and brainstorming components of the lesson were omitted.
- Classroom games, intended for assessment review, were omitted.
- Class discussion and partner activities were lacking in the majority of classrooms.
- Physical layout of classroom only considered.
- The prospective teachers are not happily engaged in lesson
- Less usage of Teaching aids
- Mechanical and traditional teaching
- Majority prospective teachers used
- “One fits for all method” very less differentiated lessons



1-Strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly Disagree

Figure 4: Total mean of selected 5 differentiated factors

Conclusions And Recomendation

The researcher found out the above factors of differentiated instruction is not much emphasized in content analysis. However, these results indicate that there is adequate room to include the individual difference factor and learning style in the teaching and learning process of the NDT. The basic concept of differentiated instruction 'readiness' is lacking in the content of the NDT syllabi and it reflects in the teaching practice. Classroom environment also influences in the teaching and learning process in the classroom. Our schools classrooms are overcrowded to implement any kind of teaching strategies. Even though, a circular has been published regarding the square feet needed for a child, in reality it is not in practice. It shows that the democratic classroom concept is not much developed in Sri Lankan schools. The teacher educators, prospective teachers mostly consider the physical layout of classroom only. This factor also does not strongly agree or agree by the evaluators who observed the lessons.

Beyond the summative and formative evaluation assessing the learner is an important factor in teaching learning process in successful teaching. This concept also lacked in teaching learning process in the NDT program. In addition Observation of teaching practice also indicated the limited usage of assessing the learner in the classroom. Usage of multiple intelligence and tiered type assessment strategies are not evident in professional and general subjects. However this assessment method is used to some extent in aesthetic subjects and second National language only.

On the whole all factors are considered together, the common mean (see figures above) also falls three to four. It shows that the common mean also is in between neutral and disagree. Moreover, with the results of observation of lessons the conclusion that differentiated instruction factors are not much used in the teaching learning process of the NDT program. . Assessing the learner is the lowest mean and it indicates that the teaching is done on a 'one fits all' method. According to the teacher educators and the prospective teachers view the assessment part is considered only in formative and summative evaluation.

The major conclusions based on the statistical analysis, supported by qualitative data, are summed up here in relation to the hypotheses formulated in the previous chapters.

Content:Inappropriate teaching and learning approaches are used, with the consequence being, that the pre-service NDT training program becoming a relatively poor vehicle for delivering learning outcomes.

Further, the syllabi pointed out the main topics and the sub topics only of each unit In order to achieve similar targets in every College of Education the curriculum of NDT program has to be prepared in detail with competencies and learning outcomes for each topic specified for each unit for the benefit of prospective teachers and the teacher educators.

Theory – to practice and practice to theory relations was not addressed in all the syllabi

The researcher also suggests that theory-to-practice relations practice-to-theory-to-practice relations in the NDT program need to be given more thought and attention.

Individual difference

The findings reveals, teacher educators have to be empowered with required skills and knowledge, that a lesson can be differentiated in many ways to best meet the needs of all learners.

The most prevalent ways that differentiation occurs is by readiness, interest, and learning profile of each student. “Human judgment should be exercised in the way we provide services to a child who has a high degree of creativity and interest, even if “the scores” are below some arbitrarily set cutoff point.

Moreover, a lesson organized around interest gives students a choice on how they learn the lesson. Students may be placed into groups based on a variety of ways including learning styles, interests, or choice, or they may work independently to complete the assignment.

Further, the teacher would accommodate for differences in how students learn so that optimal learning can take place.

Instructional strategies

However, tiered lessons strategy is not used by the teacher educators and they are not aware of this important differentiated instruction strategy. Pre-assessments play an important role in the development of the lessons. The teacher decides what type of group, if any, will best meet the needs of the child. Teaching is considered to be a process to initiate, facilitate, and sustain students’ self – learning, self – exploration and self – actualization; therefore, prospective teachers and the teacher educators need to be facilitators and mentors who support students’ learning. The focus of teaching in the new paradigm is to arouse student’s curiosity and motivation to think, act and learn. Also teaching is an art of sharing with students the joy of the learning process and outcomes. In addition teaching is also a life - long learning process involving continuous discovery, experimentation, self- actualization, reflection, and professional development.

Classroom environment

The findings clearly indicated that a strong relationship exists between classroom environment and DI. As per the response from prospective teachers and teacher educators, classroom management part is the difficult part in their practicum teaching period.

Assessing the learner

In the syllabi there was some confusion about the distinction between formative and summative forms of assessment, or at least, the syllabi did not specify how the two assessments work in different ways, and how each is important in the pre-service curriculum. In addition, choosing the right people to be teacher educators and accrediting or licensing those who subsequently become teachers are important issues. Some of the syllabuses of the NDT program gave prominence to forms of assessment (i.e. examinations) which are not suitable for assessing many of the knowledge constructs, skills and dispositions associated with teacher training.

Implications and suggestions

Through localization and globalization, there are multiple sources of learning, for example, there are self-learning programs and packages, web-based learning, outside experts, and community experiential programs inside and outside their institutions, locally and globally. Teachers can encourage local and global networking and exposure through the internet, web-based teaching, video-conferencing, cross cultural sharing, and different types of interactive and multi-media materials.

Recommendation for Further Research Studies

1. More comprehensive studies may be undertaken to include teacher attitude, curriculum standard, and cultural background, learning approaches and other variables influencing differentiated instruction, to arrive at a comprehensive model for differentiated instruction.
2. Studies on how differences impact time table at different levels could have a positive effect on differentiated instruction in primary and secondary time table concerns
3. Future studies could be conducted that would utilize an instrument during a classroom observation through mentors for a longer period to identify the strategies teachers are implementing in the classroom.

Acknowledgement

There are several individuals that I would like to thank for their contribution along the way. Prof. P.C.P. Jaufar, my advisor and reader challenged, guided, inspired and supported, gave his insights and assistance along the way me throughout this process.

Appendix A

Questionnaire For Teacher Educators Of The National Diploma In Teaching Pre – Service Teacher Training Program

The purpose of this questionnaire is to collect data to identify the degree of usage of differentiated instructions in the pre- service National Diploma in teaching teacher training program conducted at National Colleges of Education. Please read each response carefully and accurately answer the following items by circling the number in the left and right column indicating the level of competence for each item. All individual responses will be kept strictly confidential. Therefore, I would be grateful if you would give sincere and detailed responses to all of the questions. Thank you very much in advance for your time and patience. Your participation is voluntary, confidential and greatly appreciated.

I.Selvaranee
Lecturer
Department of Teacher Education

Part I

Background Demographic Data

Please complete the following questions:

01. Current subject area (according to your appointment):

.....

02. Gender: Male/ Female

03. Your age range is:

| | |
|--------------|--|
| 20 - 25 | |
| 26 - 30 | |
| 31 - 35 | |
| 36 - 40 | |
| 41 - 45 | |
| 46 - 50 | |
| 51 - 55 | |
| 56 - 60 | |
| More than 60 | |

04. Education Level

| | |
|----------------------|--|
| Bachelor's Degree | |
| Master's Degree | |
| Doctoral Degree | |
| Other please specify | |

05. How many years have you been teaching?

| | |
|--------------|--|
| 1-3 years | |
| 4-10 | |
| 11-15 | |
| 16-20 | |
| 21-25 | |
| 26-30 | |
| More than 30 | |

06. How many years have you been a teacher Educator?

| | |
|--------------|--|
| 1-3 years | |
| 4-10 | |
| 11-15 | |
| 16-20 | |
| 21-25 | |
| 26-30 | |
| More than 30 | |

07. Your working place:..... National Colleges of Education

08. Subjects you are teaching:
.....

09. Are you stay at the college quarters:.....

10. Is there a Library available in your college:

Part II

Below is a list of skills and abilities related to teaching academically diverse learners. On the left hand column could you rate **how competent you consider yourself** in each skill and ability? On the right hand column could you rate **your need** for these skills and abilities as a teacher? (Could you respond by putting a circle around the appropriate number in each column)

Key: Not At all, Lower than average, Average, High, Very high

Degree of Competence

Degree of Need

| Degree of Competence | | | | | Degree of Need | | | | | |
|----------------------|------------|---------|------|-----------|---|------------|------------|---------|------|-----------|
| Not At all | Lower Than | Average | high | Very high | | Not At All | Lower Than | average | high | Very high |
| | | | | | A. Content of syllabi | | | | | |
| 1 | 2 | 3 | 4 | 5 | The content of the syllabi is interesting | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The curriculum is based on competencies | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Reasonable balance exists between theory and practice | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi pay enough attention to challenging learning processes to accommodate diverse learners in the classroom | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Incorporates appropriate technology for teaching according to individual differences | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi pay attention to different instructional strategies to deliver different subjects | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi incorporate teaching and learning methods to cater each child's learning needs. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi is designed to suit high expectations for each child's learning needs | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Syllabi utilizing appropriate instructional and assessment tools engage student in meaningful ways | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Attention paid to the distinction between pre assessment and ongoing assessments | 1 | 2 | 3 | 4 | 5 |
| | | | | | B. Process | | | | | |
| | | | | | B1. Student individual differences | | | | | |
| 1 | 2 | 3 | 4 | 5 | Able to understand the learning needs of individual students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Able to understand the readiness of the students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Learning profiles of students help in the teacher in the preparation the lesson according to their interest. | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Able to understand the social and emotional problems of students in the diverse classroom | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided opportunities for independent or group learning to promote depth in understanding content. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing sufficient practice opportunities for students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Being able to use classroom materials Appropriately for diverse learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Allowed students to discover key ideas individually through structured activities and / or questions? | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Able to engage the students in peer supported learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Able to consider student choices in their learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provide different fun learning approaches for disengaged students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Feel free to accommodate specialist support for learning difficulties among children | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Accommodated individual or subgroup differences (e.g., through individual conferencing, student or teacher choice in material selection and task assignments) | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Encouraged multiple interpretations of events and situations | 1 | 2 | 3 | 4 | 5 |
| B2- Identifying the learning style | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | To be able to identify the potentials of each learner | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Able to create fun learning activities to suit student's learning styles.; | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Small group techniques can be used to teach difficult concepts | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Activity Packages will be of benefit to cater diverse learners learning styles | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Students active participation in redesigning the classroom encourage the learners in their learning style | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|-------------------------------------|---|---|---|---|--|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Allows students to designate how they like to learn | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Able to use teaching materials effectively for visual learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Discussion, debate, oral interpretation and listening activities are included in classroom activities for the benefit of auditory learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing experiments, projects, visual aids, role play and field trips to explain the concept clearly. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Being able to understand that the learning style and thinking style knowledge is essential for a teacher to teach a diverse class | 1 | 2 | 3 | 4 | 5 |
| B3. Instructional strategies | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | Able to understand the concept of Different strategies to different learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing tiered assignments to cater academically diverse students in the classroom | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing Project based learning experiences | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing Mini lessons | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Activities consists of Corporative learning attractive to students | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing problem solving activities | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Being able to use novelty in teaching | 1 | 2 | 3 | 4 | 5 |
| Product | | | | | | | | | | |
| C. Assessing the learner | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | Being able to understand the concept of assessing the learner. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Being able to understand how pre assessment is important to plan the lesson for diverse learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Able to identify the readiness of the students to adjust the lesson | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Successful teachers can assess how students learn best | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Monitoring students' progress is an essential type of assessment | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Use multiple (oral/written/graphic or collage) type of formative assessments | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Summative evaluation should be | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|
| | | | | | set to cater to diverse learning needs | | | | | |
| 1 | 2 | 3 | 4 | 5 | Assessments help the teacher to modify instruction to focus on each and every individual student. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Ongoing assessments have to be of tier type | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Consider Multiple Intelligence of students in the preparation of the summative evaluation | 1 | 2 | 3 | 4 | 5 |
| B4. Classroom environment | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | Being able to understand the concept of classroom environment | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Physical layout of the classroom is essential for learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Seating arrangements influence the learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Sound system and lighting help visual and auditory learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Area for group work provides a good learning environment for diverse learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Safe and comfortable classroom environment provides a positive attitude towards learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The teacher and the student mutual respect is necessary to have a friendly classroom environment | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Create rules and encourage sprit to maintain classroom discipline. | 1 | 2 | 3 | 4 | 5 |

Appendix B

Questionnaire For Prospective Teachers Of The National Diploma In Pre – Service Teacher Training Program

The purpose of this questionnaire is to collect data to identify the degree of usage of differentiated instructions in the pre- service National Diploma in teaching teacher training program conducted at National Colleges of Education. Please read each response carefully and accurately answer the following items by circling the number in the left and right column indicating the level of competence for each item. All individual responses will be kept strictly confidential. Therefore, I would be grateful if you would give sincere and detailed responses to all of the questions. Thank you very much in advance for your time and patience. Your participation is voluntary, confidential and greatly appreciated.

I.Selvaranee
Lecturer
Department of Teacher Education

Part I

Background Demographics Data

Please complete the following questions:

01. Current subject area (according to your appointment):

.....

02. Gender: Male/ Female

03. Your age range is:

| | |
|--------------|--|
| 20 - 22 | |
| 23 - 25 | |
| More than 30 | |

04. Subject you learnt at G.C.E (A/L)

| | |
|-------------|--|
| Science | |
| Maths | |
| Arts | |
| commerce | |
| Languages | |
| technology; | |
| others | |

05. Your National Colleges of Education

.....

06. Your favorite Subjects:

.....

07. Is there a Library available in your college:

.....

Part II

Below is a list of skills and abilities related to teaching academically diverse learners. On the left hand column could you rate **how competent you consider yourself** in each skill and ability? On the right hand column could you rate **your need** for these skills and abilities as a teacher? (Could you respond by putting a circle around the appropriate number in each column).

Key: Not At all, lower than average, Average, High, very high

**Degree of Competence
Need**

Degree of

| Not At all | Lower Than | Average | high | Very high | | Not At All | Lower Than | average | high | Very high |
|------------|------------|---------|------|-----------|---|------------|------------|---------|------|-----------|
| | | | | | A. Content of syllabi | | | | | |
| 1 | 2 | 3 | 4 | 5 | The content of the syllabi is interesting | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi pay enough attention to challenging learning processes to accommodate diverse learners in the classroom | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Incorporates appropriate technology for teaching according to individual differences | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi pay attention to different instructional strategies to deliver different subjects | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi incorporate teaching and learning methods to cater each child's learning needs. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The syllabi is designed to suit high expectations for each child's learning needs | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Syllabi utilizing appropriate instructional and assessment tools engage us in meaningful ways | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Attention paid to the distinction between pre assessment and ongoing assessments | 1 | 2 | 3 | 4 | 5 |
| | | | | | B. Process | | | | | |
| | | | | | B1. Student individual | | | | | |

| | | | | | differences | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Provided knowledge and skill to understand the learning needs of individual students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Able to understand the readiness of the students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | We learnt that Learning profiles of students help in the teacher in the preparation the lesson according to their interest. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Made us to understand the social and emotional problems of students in the diverse classroom | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided opportunities for independent or group learning to promote depth in understanding content. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided sufficient classroom practice opportunities for us | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided opportunities to use classroom materials Appropriately for diverse learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Allowed us to discover key ideas individually through structured activities and / or questions? | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Engage us in peer supported learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided knowledge to consider student choices in their learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provide us knowledge to cater different fun learning approaches for disengaged students. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Lecturer Feel free to accommodate specialist support for learning difficulties among children in our classroom | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Accommodated individual or subgroup differences (e.g., through individual conferencing, student or teacher choice in material selection and task assignments) | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Encouraged us to use multiple interpretations of events and situations | 1 | 2 | 3 | 4 | 5 |
| B2- Identifying the learning style | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | Provided practice to identify the potentials of each learner | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided in create fun learning activities to suit student's learning | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|---|---|---|---|---|--|---|---|---|---|---|
| | | | | | styles.; | | | | | |
| 1 | 2 | 3 | 4 | 5 | Small group techniques used to teach difficult concepts | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provide opportunities to use Activity Packages of benefit to cater diverse learners learning styles | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Prospective teachers actively participated in redesigning the classroom to encourage the learners in their learning style | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Allows prospective teachers to designate how they like to learn | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided practice in use teaching materials effectively for visual learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Conducted discussion, debate, oral interpretation and listening activities are included in classroom activities for the benefit of auditory learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing experiments, projects, visual aids, role play and field trips to explain the concept clearly. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided experiences to understand that the learning style and thinking style knowledge is essential for a teacher to teach a diverse class | 1 | 2 | 3 | 4 | 5 |
| | | | | | B3. Instructional strategies | | | | | |
| 1 | 2 | 3 | 4 | 5 | Provided experiences to understand the concept of Different strategies to different learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing tiered assignments to cater academically diverse students in the classroom | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing Project based learning experiences | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing Mini lessons | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Practiced with activities consists of Corporative learning attractive to students | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Providing problem solving activities | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|----------------------------------|---|---|---|---|--|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Provided classroom practice in use of novelty in teaching | 1 | 2 | 3 | 4 | 5 |
| Product | | | | | | | | | | |
| C. Assessing the learner | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | Provided knowledge to understand the concept of assessing the learner. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided classroom practices to understand how pre assessment is important to plan the lesson for diverse learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Provided knowledge and skill to identify the readiness of the students to adjust the lesson | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Successful teachers can assess how students learn best | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Monitoring students' progress is an essential type of assessment | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Used multiple (oral/written/graphic or collage) type of formative assessments | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Prepared Summative evaluation suitable to cater to diverse learning needs | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | We understood that assessments help the teacher to modify instruction to focus on each and every individual student. | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Ongoing assessments have to be of tier type | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | It is necessary to consider Multiple Intelligence of students in the preparation of the summative evaluation | 1 | 2 | 3 | 4 | 5 |
| C4. Classroom environment | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | Provided knowledge to understand the concept of classroom environment | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Physical layout of the classroom is essential for learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Seating arrangements influence the learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Sound system and lighting help visual and auditory learners | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Area for group work provides a good learning environment for diverse learners | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | | | | |
|---|---|---|---|---|--|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | Safe and comfortable classroom environment provides a positive attitude towards learning | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | The teacher and the student mutual respect is necessary to have a friendly classroom environment | 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 | Create rules and encourage sprit to maintain classroom discipline. | 1 | 2 | 3 | 4 | 5 |

Appendix C

OBSERVATION SCHEDULE FOR THE SELECTED PROSPECTIVE TEACHERS OF THE NATIONAL DIPLOMA IN PRESERVICE TEACHER TRAINING PROGRAM

The purpose of this questionnaire is to collect data for the evaluation of the pre-service teacher training program at National Colleges of Education. All individual responses will be kept strictly confidential. Therefore, Could you respond by putting a circle around the appropriate number in each column?

I.Selvaranee
Lecturer
Department of Teacher Education
National Institute of Education, Maharagama.

SA – Strongly Agree A- Agree N- Neutral D- Disagree SD- Strongly Disagree

| S.N | Content | SA | A | N | D | SD |
|-----|--|----|---|---|---|----|
| 01 | The teacher assessed the pre-knowledge of the diverse students | | | | | |
| 02 | Exhibited good knowledge of the subject matter | | | | | |
| 03 | Presented the subject matter clearly to cater diverse learners | | | | | |
| 04 | Possible to explain the concept clearly to diverse learners | | | | | |
| 05 | Used attractive teaching aids to cater diverse learners. | | | | | |
| 06 | Showed enthusiasm for the subject and commitment to the job | | | | | |
| 07 | Assessed the readiness of the diverse students | | | | | |
| | Process - Individual differences Identify the learning style | | | | | |
| 08 | Considered the learning styles of the student (visual, auditory, kinesthetic) | | | | | |
| 09 | Used different strategies with different learners | | | | | |
| 10 | Used authentic materials effectively to diverse learners | | | | | |
| 11 | Incorporated the use of computers effectively in the presentation for visual learners | | | | | |
| 12 | Introduced Project based learning based on diverse students interest | | | | | |
| 13 | Knows how diverse students learn best individually | | | | | |
| 14 | Considered the individual learning needs of children and showed a sensitivity to individual interests and abilities | | | | | |
| | Process - Instructional strategies | | | | | |
| 15 | This teacher made the diverse children ready to learn through engagement and stimulated interest in the subject with an activity | | | | | |

| | | | | | | |
|----|--|--|--|--|--|--|
| 16 | Kept diverse students active participation | | | | | |
| 17 | Treated students with respect | | | | | |
| 18 | Kept eye contact with all students | | | | | |
| 19 | Knows the potential of each student | | | | | |
| 20 | Engaged the diverse students in peer supporting learning | | | | | |
| 21 | Used fun approaches to disengaged students | | | | | |
| 22 | Drills and questioning techniques used by the teacher to evoke the diverse students' interest. | | | | | |
| 23 | Successfully handled the social and emotional problems of diverse learners | | | | | |
| 24 | Knows the name of the students | | | | | |
| 25 | Small group technique used by the teacher and allowed flexible grouping for activities | | | | | |
| 26 | Did not discriminate students on the basis of personal attributes e.g. gender, race etc. | | | | | |
| 27 | Gave additional support for underachievers | | | | | |
| 28 | Provided student centered and fun learning | | | | | |
| 29 | Guides with mini lesson to help the diversity of learners | | | | | |
| 30 | Shows individual interest in each student | | | | | |
| | Assessing the learner | | | | | |
| 31 | Used multiple type of (oral/written/ graphic/collage) assessments | | | | | |
| 32 | Used tiered assessment to cater to diverse needs | | | | | |
| 33 | Used ongoing assessments methods for diverse learners | | | | | |
| 34 | Prepared the summative evaluation based on multiple intelligence | | | | | |
| | Classroom environment | | | | | |
| 35 | Classroom environment is clean and beautiful | | | | | |
| 36 | Displayed duty chart, rules and regulation formulated by the students and decorated by students' performances in the classroom | | | | | |
| 37 | Classroom Lighting and sound system are favorable for divers students learning | | | | | |
| 38 | Physical layout of the classroom is suitable for group work | | | | | |
| 39 | Seating arrangements organized according to the needs of students | | | | | |
| 40 | The classroom environment is set for Optimal condition for diverse students learning | | | | | |
| 41 | Effectively maintained the classroom area safe for the children | | | | | |
| 42 | Discipline of the students maintained well | | | | | |
| 43 | Encouraged students to participate in class room activities | | | | | |
| 44 | Student – teacher relationship is commendable | | | | | |

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|----|--|--|--|--|--|--|
| 45 | maintains a democratic environment in the classroom while teaching | | | | | |
| 46 | Manages the class well | | | | | |
| 47 | Good time management | | | | | |

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