A Study on Effectiveness of the Management of Primary Education Completion Examination, 2018

NATIONAL ACADEMY FOR PRIMARY EDUCATION
MYMENSINGH

শিক্ষা গবেষণা উন্নয়ন

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Preface

The Primary Education Completion Examination (PECE) was introduced by The Government of Bangladesh since 2009. The purpose of the PECE is to reward a certificate for the completion of grade 5 students as well as to identify the scorers who are scoring to receive the Primary Education Scholarship. The Grade 5 Completion Examination measures students' achievement in relation to the taught subject content (textbook topics) and curriculum competencies. It also measures students' ability to demonstrate their cognitive level of knowledge, understanding and application.

The Directorate of Primary Education (DPE) in association with the National Academy for Primary Education (NAPE) conducted nationwide Grade 5 Primary Education Completion Examination (PECE) in 2018 including 100% competency based test items.
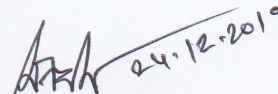
In April, 2018 NAPE finalized PECE question structure including 100% competency-based items through a national workshop. In this question structure MCQ type items were excluded according to the decision of the government. After finalizing the structure it was circulated in the NAPE website and sent to the related stake-holders. Question papers were prepared according to the question structure and executed in the PECE, 2018.

Before the PECE 2018, NAPE realized that it is necessary to know the effectiveness of the question structure (100% competency-based excluding MCQ type items). For this reason, NAPE Faculty members have conducted this study.

I would like to give my deepest thank to the NAPE faculty members who have been contributed to prepare this report with their meticulous help and assistance. I would like to acknowledge their contribution and heartiest thank especially to .Md.Mazaharul Islam Khan, Assistant Specialist and other faculty members for preparing the report.

NAPE also thanks PECE hall Supers, Invigilators and all the students for providing necessary information about quality of questions, question structure, management system etc.

My thanks to Mr. Md. Yousof Ali, Director, Deputy Director (Admin) and Mr. Mahbub Elahi, Senior Specialist for their dynamic leadership to collect the data from the centers and prepare the report. I would like to pay my heartiest thanks to the team members who provide required support to collect and process the data of PECE 2018 and prepare this report.

24.12.2019

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Summary of the Study

During the Primary Education Completion Examination (PECE) 2018, NAPE faculty members visited examination centers of six upazilas of six different districts. In Bangla, the total number of participated examinee were 4569 where 1994 were boys and 2575 were girls. In English, the total number of examinee were 5074 where 2298 boys and 2776 girls. In Mathematics, the total number of participated examinee were 3870 where 1791 boys and 2074 girls. In Bangladesh and Global Studies (BGS), the total number of participated examinee were 3744 where 1615 boys and 2129 girls. In Science, the total number of participated examinee were 2378 where 1049 boys and 1329 girls. In Religion and Moral Education, the total number of participated examinee were 2828 where 1285 boys and 1543 girls. In the visited centers, average percentage of absent students of six subjects was 5.23% where number of boys are more than girls.

The visited 36 examination centres used 1 bench for 2 students and 31 centres used 1 bench for 3 students and only one centre used table and chair for each student.

In Bangla, 357 students out of 425 answered all the questions where percentage of the students of answering all the questions is 84%.

In English, 344 students out of 498 answered all the questions where percentage of the students of answering all the question is 69.07%.

In Mathematics, 341 students out of 431 answered all the questions where percentage of the students of answering all the questions is 79.12%.

In Bangladesh and Global Studies (BGS), 236 students out of 301 answered all the questions where percentage of the students of answering all the questions is 78.41%.

In Primary Science, 156 students out of 195 answered all the questions where percentage of the students of answering all the questions is 80%.

In Religion and Moral Education 169 students out of 207 answered all the questions where percentage of the students of answering all the questions is 81.64%.

In Bangla, a small number of interviewed students faced difficulty almost all of the questions where percentage is below 5.

In English, a few percentage (below 5%) of interviewed students faced difficulty in question number 3, 4, 5, 6, 7, 10,11,12 and 13.

In Mathematics, a few percentage (below 5%) of interviewed students faced difficulty in question number 1, 2, 3, 4, 5, 6, 7, 10 and 11. 5.10% students faced difficulty in question number 8 and 6% in question number 9.

In BGS, 7.31% students faced difficulty in question number 1 and 6.64% in question number 4.

In Primary Science 15.38% interviewed students face difficulty in question number 1 and 11.79% in question number 4. A small percentage of students (2.56%) faced difficulty in question number 2.

In Religion and Moral Education 10.14% interviewed students face difficulty in question number 1, and 10.63% in question number 4.

In Bangla, 35.22% interviewed students could not answer all the questions because of some questions were difficult to answer and 21.59% of them could not answer all of the questions due to lack of time.

In English 46.34% interviewed students could not answer all the questions because some questions were difficult to answer, 17.07% mentioned that they could not answer all the questions due to lack of time.

In Mathematics, 33.72% interviewed students could not answer all the questions because some questions were difficult to answer, 17.44% students could not answer all the questions due to lack of time.

In Bangladesh and Global Studies (BGS), 36.36% interviewed students could not answer because some questions were difficult to answer and 15.15% students could not answer all the questions due to lack of time.

In Primary Science, 46.15% interviewed students could not answer all the questions because some questions were difficult to answer, 2.56% students could not answer all the questions due to lack of time, 2.56% mentioned due to lack of understanding and 30.77% mentioned they could not answer all the questions.

In Religion and Moral Education 53.13% interviewed students could not answer all the questions because some questions were difficult to answer, 3.13% students could not answer all the questions due to lack of time.

Data were collected from 23 male and 67 female invigilators through interview after the examination.

In Bangla, English, Science and Religion and Moral Education all of participated students (100%) felt happy to answer the questions whole time and in Mathematics, and BGS most of the students (around 70%) felt happy to answer the questions whole time.

In Bangla, English, BGS and Primary Science, more than 50% interviewed invigilators felt that questions were easy for students to answer. In Mathematics, 31% interviewed invigilators felt that questions were easy for students to answer. In Religion and moral Education, 40% interviewed invigilators felt that questions were easy for students to answer. In Bangla 20%, in English 35%, in Mathematics 62.50%, in BGS 19%, in Science 75% and in Religion and moral Education 40% interviewed invigilators felt that some of the students feel difficulty in answering some of the questions.

In Bangla, English, BGS, Primary Science and Religion and Moral Education allocated time is sufficient for maximum number of students (more than 70% opined) and in accordance with them more than 60% interviewed invigilators opined that allocated time is sufficient for maximum number of students in Mathematics. On the other hand in Bangla, English, Mathematics and BGS time is not sufficient for few students in accordance with the opinion of interviewed invigilators.

Quality of Bangla question is very good (45% interviewed invigilators) and quality of Bangla question is good (45% interviewed invigilators). Quality of English question is very good (25% interviewed invigilators) and quality of English question is good. Quality of Mathematics question is very good (25% interviewed invigilators) and quality of Mathematics question is good (62.5% interviewed invigilators). Quality of BGS question is very good (31% interviewed invigilators) and quality of BGS question is good (50% interviewed invigilators). Quality of Science question is very good (25% interviewed invigilators) and quality of Science question is good (75% interviewed invigilators). Quality of Religion and Moral education question is very good (40% interviewed invigilators) and quality of Religion and Moral Education question is good (60% interviewed invigilators).

According to the opinion of some interviewed invigilators PECE venue should be in Primary School instead of High School, seating arrangement should be 2 instead of 3 in each bench, Bangla should be replaced instead of English on the first day, question should be easier, allocated time in Mathematics should be 3 hours instead of 2:30 hours, prefer MCQ to be included in the question paper.

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Acronyms

ADPEO	Assistant District Education Officer
AUEO	Assistant Upazila Education Officer
BGS	Bangladesh and Global Studies
CBTI	Competency Based Item
CRQ	Constructed Response Questions
DPE	Directorate of Primary Education
DD	Deputy Director
DPEO	District Primary Education Officer
GoB	Government of Bangladesh
MCQ	Multiple Choice Questions
MOPME	Ministry of Primary and Mass Education
NAPE	National Academy for Primary Education
NCTB	National Curriculum and Textbook Board
PECE	Primary Education Completion Examination
URC	Upazila resource center
TEO	Thana Education Officer

Introduction

The Primary Education Completion Examination (PECE) was introduced by the Government of Bangladesh in 2009, assists the purposes of providing school leavers with a certificate of achievement and proficiency and also identifies pupils who are eligible for receiving scholarships for entry into Grade 6. The Grade 5 Completion Examination will measure students' achievement in relation to the taught subject content (textbook topics) and curriculum competencies. It will also measure students' ability to demonstrate their knowledge of a subject and also their achievement of skills at different difficulty levels.

Assessment is seen as a key factor in the development of the improvements in the quality of education. Although Bangladesh Primary Curriculum is competency-based but its assessment system was traditional. Different survey results show that maximum part of the assessment tools was knowledge based.

But ensuring quality primary education; it is important to measure also students' understanding and application skills. The examination construct is also essential to take into account the following gradual assimilation of competency based items into the existing examination.

Table 1: Examination Construct

Year	% Competency Items to be included	% Traditional items to be included
2012	10%	90%
2013	25%	75%
2014	35%	64%
2015	50%	50%
2016	65%	35%
2017	80%	20%
2018	100%	0%

NAPE was responsible for finalizing the question structure based on the above agreed examination construct through organizing a National Workshop with different levels of stake-holders related to primary education. Participants of that workshop were teachers, AUEOs, URC Instructors, PTI Instructors and Superintendent, UEO/TEO, ADPEO, DPEO, DD, personnel from NCTB, DPE, and MOPME etc. In 2018 NAPE finalized PECE question structure including 100% competency-based items through a national workshop. In that question structure MCQ type items were excluded according to the decision of Government. After finalizing, the structure was circulated in the web-site and sent to related stake-holders. Question papers were prepared according to the finalized question structure and used in the PECE, 2018.

According to the agreed projection of including competency-based items year by year PECE 2019 and following year it will be held on according to the question structure which was finalized in 2018. But it is necessary to know how much the finalized question structure (100% competency-based) is effective for the students. For this reason NAPE has been taken initiative to conduct a study to meet the following objectives.

Objectives of the study

- To identify the effectiveness of the 100% competency-based question structure based on the allocated time.
- To know the quality of questions
- To analyze what initiative should be taken in future for PECE.
- To know the management system of PECE, 2018

Methodology

To meet the above objectives NAPE has developed tools for collecting data about general information about the centers, students' interview and invigilators' interview about the questions and examination.

Following table shows sample

Table 2 Subject, Study Area and number of respondents

Subject	Number of district	Number of Upazila	Number of interviewing students	Number of interviewing invigilators
Bangla	6	6	88	20
English	6	7	82	20
Mathematics	6	6	86	16
BGS	4	5	52	16
Science	2	3	39	8
Religion & moral education	3	4	44	10
Total	**27**	**31**	**391**	**90**

The survey covered the selected 7 upazilas of 6 districts in Bangladesh. It was decided that a form of purposive sampling has been used in selecting Upazilas and PECE centers schools from Mymensingh, Kishoregonj, Netrokona, Tangail, Gazipur and Jamalpur district taking into consideration of limited number of faculty members. Due to the unavailability and work-load of the faculty members of NAPE, they could not collect data from selected sample centers in all six subjects.

Results

Table 3: Subject-wise data about the visited centers of PECE 2018

Subject	Number of district	Number of Upazila	Number of Schools attend in the exam. center	Number of Examinee			Number of participated Examinee			Absent		
				Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Average
Bangla	6	6	178	2090	2672	4762	1994	2575	4569	4.64%	3.63%	4.07%
English	6	7	202	2430	2879	5309	2298	2776	5074	5.43%	3.58%	4,50%
Mathematics	6	6	155	1926	2173	4099	1791	2074	3870	7.01%	4.56%	5.78%
BGS	4	5	154	1689	2216	3905	1615	2129	3744	4.50%	3.93%	4.21%
Science	2	3	69	1125	1384	2509	1049	1329	2378	6.76%	3.97%	5.65%
Religions & moral education	3	4	92	1373	1608	2981	1285	1543	2828	6.41%	4.04%	5.23%

It is evident from the above table in Bangla, data were collected from six Upazilas of different six Districts where participating schools in the Primary Education Completion Examination (PECE) 2018 were 178. In Bangla, the total number of registered examinees were 4762 where 2090 boys and 2672 girls. But the number of participated examinees were 4569 where 1994 boys and 2575 girls. In this subject absent students were 4.07% where the ratio of the boys is more than the girls.

According to the above table in English data were collected from seven Upazilas of different six districts where participating schools were 202. In English the total number examinees were 5309, where 2430 boys and 2879 girls. but number of participated examinees were 5074 where 2298 boys and 2776 girls. In this subject absent students were 4.50% where the ratio of the boys is more than the girls.

In mathematics, it is found that data were collected from six Upazilas of different six districts where students of participating schools were155. In this subject, the total number of examinees were 4099 where 1926 boys and 2173 girls. The number of participated examinees were 3870 where 1791 boys and 2074girls. In this subject absent students were 4.78% where ratio of the boys is more than the girls.

On the examination day of Bangladesh and Global studies (BGS), data were collected from 5 Upazilas of different 4 districts where participating schools were 154. In the exam. of BGS, the total number of examinees were 3905 where 1689 boys and 2216 girls. But the number of participated examinees were 3744 where 1615 boys and 2129 girls. In this subject absent students were 4.21% where ratio of the boys is more than the girls.

It is also evident that after the exam. of Primary Science, data were collected from 3 Upazilas of different 2 districts where participating schools were 69. In this examination, the total number of examinees were 2509 where 1125 boys and 1385 girls. But the number of participated examinees were 2378 where 1049 boys and 1329 girls. It is also found that absent students of this subject was 4.21% where ratio of the boys is more than the girls.

It is also demonstrated from the above table that after the exam. of Religions and Moral Education, data were collected from 4 Upazilas of different 3 districts where participating schools were 92. In this subject, the total number of examinees were 2981 where 1373 boys and 1608 girls but number of participated examinees were 2828 where 1285 boys and 1543 girls. It is also found that absent students of this subject were 5.23% where the ratio of the boys is more than the girls.

Table 4: Seating arrangement of the visited centers of PECE 2018

Bench		table
2 in 1	3 in 1	
36	31	1

Table-4 shows that the visited 36 examination centres used 1 bench for 2 students and 31 centres used 1 bench for 3 students and only one centre used individual chair students.

Table 5: Subject-wise data about the students of one room in each center.

Subject	Number of District	Number of center	Number of room for Interviewing students	Number of students	Answered all questions within allocated times	Percentage of answer all the questions (%)	Could not answer all questions within the allocated times	interviewed students
Bangla	6	10	10	425	357	84%	16%	20.71%
English	6	10	10	498	344	69.07%	30.93%	16.47%
Math	5	8	8	431	341	79.12%	20.88%	19.95%
BGS	4	7	7	301	236	78.41%	21.59%	17.28%
Science	2	4	4	195	156	80%	20%	20%
Religion	3	5	5	207	169	81.64%	18.36%	21.26%
Total	**26**	**44**	**44**	**2057**	**1603**	**78.71%**	**21.30%**	**19.28**

According to the table-5, it is found that 425 students were asked about their moods of answering the questions after the exam. of Bangla from the 10 hall rooms of the10 centres under five districts. It is also found that 357 students out of 425 answered all the questions where the percentage is 84. While 16% students could not answer all the questions but interview was conducted for 20.71% students.

Table 3 shows that 498 students was asked about their moods of answering the questions after the exam. of English from the 10 hall rooms of 10 centres under five districts. It is also found that 344 students out of 498 answered all the questions where the percentage is 69.07. While 30.93% students could not answer all the questions but interview was conducted for 16.47% students.

It is evident that 431 students was asked about their moods of answering the questions after the examination of Mathematics from the 8 hall rooms of 8 centres under 5 districts. In this subject it is also found that 341 students out of 431 answered all the questions where the percentage is 79.12. While 20.88% students could not answer all the questions but interview was conducted for 19.95% students.

According to the above table It is evident that 301 students was asked about their moods of answering the questions after the examination of BGS from the 7 hall rooms of 7 centres under 4 districts. In this subject it is also found that 236 students out of 301 answered all the questions where the percentage is 78.41. While 21.59% students could not answer all the questions but interview was conducted for 17.28% students.

Table 3 also shows that 195 students were asked about their spirits of answering the questions after the examination of Science from the 4 hall rooms of 4 centres under 2 districts. In this subject it is also found that 156 students out of 195 answered all the questions where the percentage is 80. In science, interview was conducted 20% students who could not answer all the questions.

Table 3 also shows that 207 students were asked about their moods of answering the questions after the examination of Religion and Moral Education from the 5 hall rooms of 5 centres under 3 districts. In this subject it is also found that 169 students out of 207 answered all the questions where the percentage is 81.64%\. While 18.36% students could not answer all the questions but interview was conducted for 21.26% students.

Table 6: Subject and item-wise percentage of students who faced difficulty.

Subject	Percentages of students on different items													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Bangla	0	1.18%	0	2.59%	0	0.71%	0.71%	0.24%	0.47%	0.24%	0.94%	0	2%	4.71%
English	0	0	2.01%	1.81%	1.41%	2.01%	4.02%	5.22%	5.42%	2.41%	3.01%	1.20%	0.80%	
Math	1.62%	0.46%	1.86%	2%	1.62%	2.32%	4.41%	5.10%	6%	2.78%	2.78%			
BGS	7.31%	1.00%	0	6.64%										
Science	15.38	2.56	0	11.79										
Religion and moral Education	10.14%	0.48%	0	10.63%										
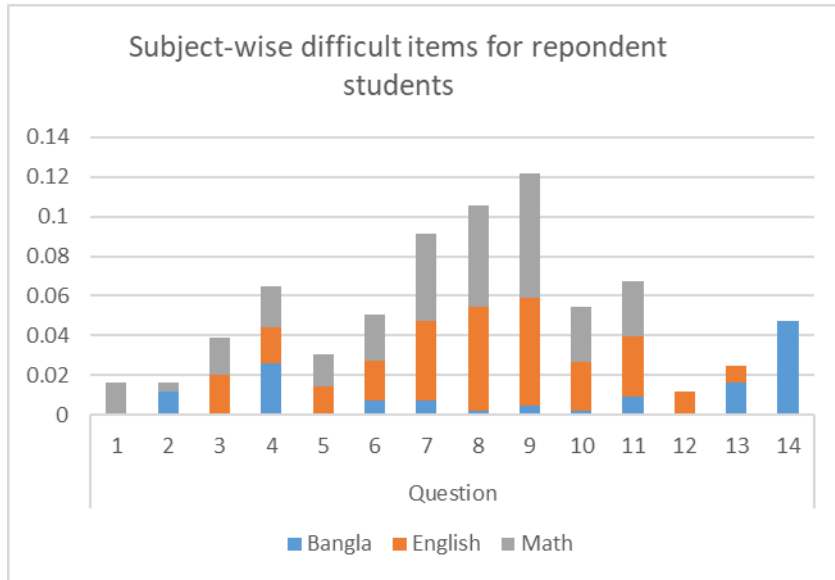
Graph 1: Subject-wise difficult items
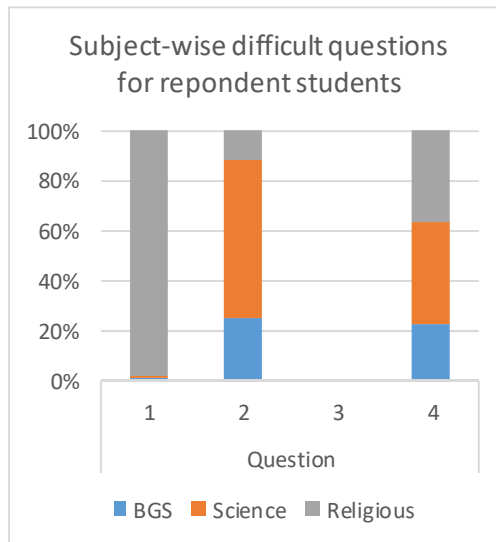
Graph 2: Subject-wise difficult items

Table 6 and graph 1 shows that in Bangla 1.18% students face difficulty in question number 2, 2.59% in question number 4, 0.71% in questions number 6 and 7, 0.24% in questions number 8 and 10, 0.47% in question number 9, 0.94% in question number 11, 2% in question number 13 and 4.71% in question number 14.

In English 2.01% students faced difficulty in question number 3and 6. 1.81% faced difficulty in question number 4, 1.41% in questions number 5, 4.02% in question number 7, 5.22% in questions number 8,

5.42% in question number 9, 2.41% in question number 10, 3.01% in question number 11, 1.20% in question number 12, and 0.80% in question number 13 respectively.

In Mathematics 1.62% students faced difficulty in question number 1and 5, 0.46% in question number 2, 1.86% in questions number 3, 2% in question number 4, 2.32% in questions number 6, 4.41% in question number 7, 5.10% in question number 8, 6% in question number 9, 2.78% in question number 10 and 11 respectively.

The above table 6 and graph 2 shows that in BGS 7.31% students faced difficulty in question number 1, 1.00% in question number 2 and 6.64% in question number 4.

In Science 15.38% students faced difficulty in question number 1, 2.56% in question number 2 and 11.79% in question number 4 respectively.

In Religions and Moral Education 10.14% students faced difficulty in question number 1, 0.48% in question number 2 and 10.63% in question number 4 respectively.

Table 7: Reasons for not answering all questions

Subject	Number of interviewed Students	Why students' didn't answer all the questions?				
		Some questions were difficult to answer	Due to lack of time	Can't understand the questions	Lack of preparation	No answer
Bangla	88	35.22%	21.59%	12.50%	1.14%	7.95%
English	82	46.34%	17.07%	31.71%	0%	3.66%
Mathematics	86	33.72%	17.44%	31.40%	10.47%	5.81%
BGS	66	36.36%	0%	15.15%	0%	6.06%
Science	39	46.15%	2.56%	2.56%	30.77%	5.13%
Religions and Moral Education	32	53.13%	3.13%	34.38%	6.25%	0%
Total	**393**	**41.82%**	**10.30%**	**21.29%**	**8.11%**	**4.77%**

The table 7 shows that in Bangla 35.22% interviewed students mentioned that some of the items were difficult to answer, 21.59% mentioned due to lack of time, 12.50% mentioned due to lack of understanding and 1.14% mention due to lack of preparation they could not answer all of the items.

In English 46.34% interviewed students mentioned that some of the items were difficult to answer, 17.07% mentioned due to lack of time and 31.71% mentioned due to lack of understanding they could not answer all of the items.

In Mathematics 33.72% interviewed students mentioned that some items were difficult to answer, 17.44% mentioned due to lack of time, 31.40% mentioned due to lack of understanding and 10.47% mentioned due to lack of preparation they could not answer all of the items.

In BGS 36.36% interviewed students mentioned that some items were difficult to answer and 15.15% mentioned due to lack of time they could not answer all of the items.

In Science 46.15% interviewed students mentioned that some items were difficult to answer, 2.56% mentioned due to lack of time, 2.56% mentioned due to lack of understanding and 30.77% mentioned they could not answer all of the items due to lack of preparation.

In Religions and Moral Education 53.13% interviewed students mentioned that some items were difficult to answer, 3.13% mentioned due to lack of time, 34.38% mentioned that due to lack of understanding and 6.25% mentioned they could not answer all of the items. It is also found that in all subject except Religions and Moral Education some of the interviewed students didn't response regarding reason for not answering all of the items.

Table 8: Subject-wise data about respondent invigilators

Subject	Number of Centre	Male	Female	Total
Bangla	10	2	18	20
English	10	7	13	20
Mathematics	8	7	9	16
BGS	9	4	12	16
Science	4	2	6	8
Religions and Moral Education	5	1	9	10
Total	**46**	**23**	**67**	**90**

Following table shows that NAPE Faculty members visited 46 examination centers for collecting data about PECE 2018. It is also evident that the total number of 23 male and 67 female invigilators were interviewed after the examination of 6 subjects.

Table 9: Students' reaction after getting the question

Subject	Feel happy to write the answer whole the time normally	Not whispering and trying to copy from other	Some of the students whispering	Not making a noise	Making a noise	Start writing answer
Bangla	100%	40%	0%	30%	0%	60%
English	100%	15%	10%	20%	0%	40%
Mathematics	68.75%	25%	25%	31%	0%	12.50%
BGS	69%	44%	0%	19%	0%	19%
Science	100%	25%	0%	25%	0%	25%
Religion and Moral Education	100%	0%	20%	30%	0%	0%

The above table shows that after the examination of Bangla 100% interviewed invigilators mentioned that students feel happy to answer the items of the question paper whole the time, 40% mentioned that students didn't whispering and trying to copy from others, 30% mentioned that students didn't make noise and 60% mentioned that students started writing after getting the question paper.
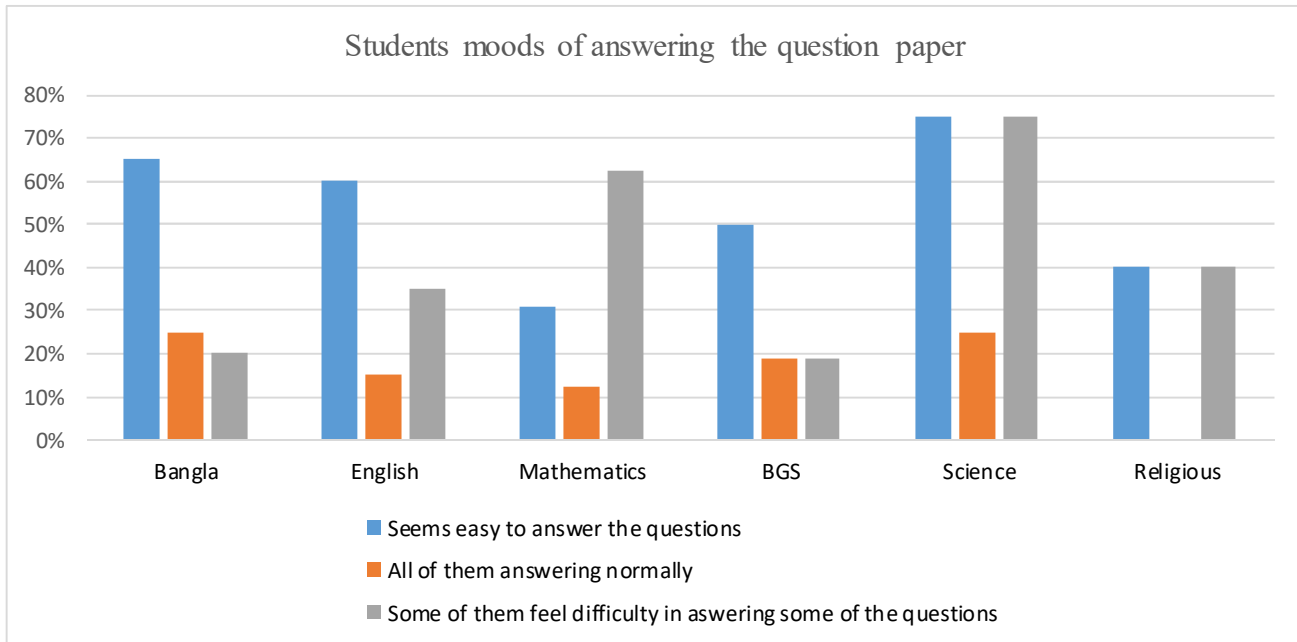
After the examination of English, 100% interviewed invigilators mentioned that students feel happy to answer the items of the question paper whole the time, 15% mentioned that students didn't whispering, 10% mentioned that some of the students whispering, 20% mentioned that students didn't make noise and 40% mentioned that students started writing after getting the question paper.

In Mathematics, 68.75% interviewed invigilators mentioned that students feel happy to answer the items of the question paper whole the time, 25% mentioned that students didn't whispering, 25% mentioned that some of the students whispering, 31% mentioned that students didn't make a noise and 12.5% mentioned that students started writing after getting the question paper.

In BGS, 69% interviewed invigilators mentioned that students feel happy to answer the items of the question paper whole the time, 44% mentioned that students didn't whispering, 19% mentioned that students didn't make noise and 19% mentioned that students started writing after getting the question paper.

In Science, 100% interviewed invigilators mentioned that students feel happy to answer the items of the question paper whole the time, 25% mentioned that students didn't whispering, 25% mentioned that students didn't make noise and 25% mentioned that students started writing after getting the question paper.

In Religions and Moral Education, 100% interviewed invigilators mentioned that students feel happy to answer the items of the question paper whole the time, 20% mentioned that some students whispering and 30% mentioned that students didn't make a noise.

Graph 3: Students moods of answering all the items of the question paper

The graph-3 shows that after the examination of Bangla 65% interviewed invigilators mentioned that it seems easy for the students to answer the questions, 25% mentioned that all of the answering normally and 20% mentioned that some of the students feel difficulty in answering some of the items.

In English, 60% interviewed invigilators mentioned that it seems easy for the students to answer the items of questions, 15% mentioned that all of them answering normally and 35% mentioned that some of the students feel difficulty in answering some of the items.

In Mathematics, 31% interviewed invigilators mentioned that it seems easy for the students to answer the items of the question paper, 12.50% mentioned that all of them answering normally and 62.50% mentioned that some of the students feel difficulty in answering some of the items.

In BGS, 50% interviewed invigilators mentioned that it seems easy for the students to answer the items of the question paper, 19% mentioned that all of the answering normally and 19% mentioned that some of the students feel difficulty in answering some of the items.

In Science, 75% interviewed invigilators mentioned that it seems easy for the students to answer the items of the question paper, 25% mentioned that all of them answering normally and 75% mentioned that some of the students feel difficulty in answering some of the items..

In Religion and oral Education, 40% interviewed invigilators mentioned that it seems easy for the students to answer the items of the question paper, and 40% mentioned that some of the students feel difficulty in answering some of the items.

Table 10: Was the allocated time is sufficient for answering all questions?

Subject	Time is enough for some of the students	Time is sufficient for all students	Sufficient for maximum number of students	Not sufficient for few number students
Bangla	25%	70%	25%	25%
English	20%	60%	20%	10%
Mathematics	6%	56%	19%	19%
BGS	25%	50%	25%	69%
Science	0%	75%	25%	0%
Religion	20%	80%	0%	0%

According the above table, in Bangla 25% interviewed invigilators mentioned that the allocated time is enough for some of the students, 70% mentioned that time is sufficient for all of the students, 25% mentioned that time is sufficient for the maximum number of students and 25% mentioned that time is not sufficient for the few number of students.

In English, 20% interviewed invigilators mentioned that allocated time is enough for some of the students, 60% mentioned that time is sufficient for all of the students, 20% mentioned that time is sufficient for the maximum number of students and 10% mentioned that time is not sufficient for the few number of students.

In Mathematics, 6% interviewed invigilators mentioned that allocated time is enough for some of the students, 56% mentioned that time is sufficient for all of the students, 19% mentioned that time is sufficient for the maximum number of students and 19% mentioned that time is not sufficient for the few number of students.
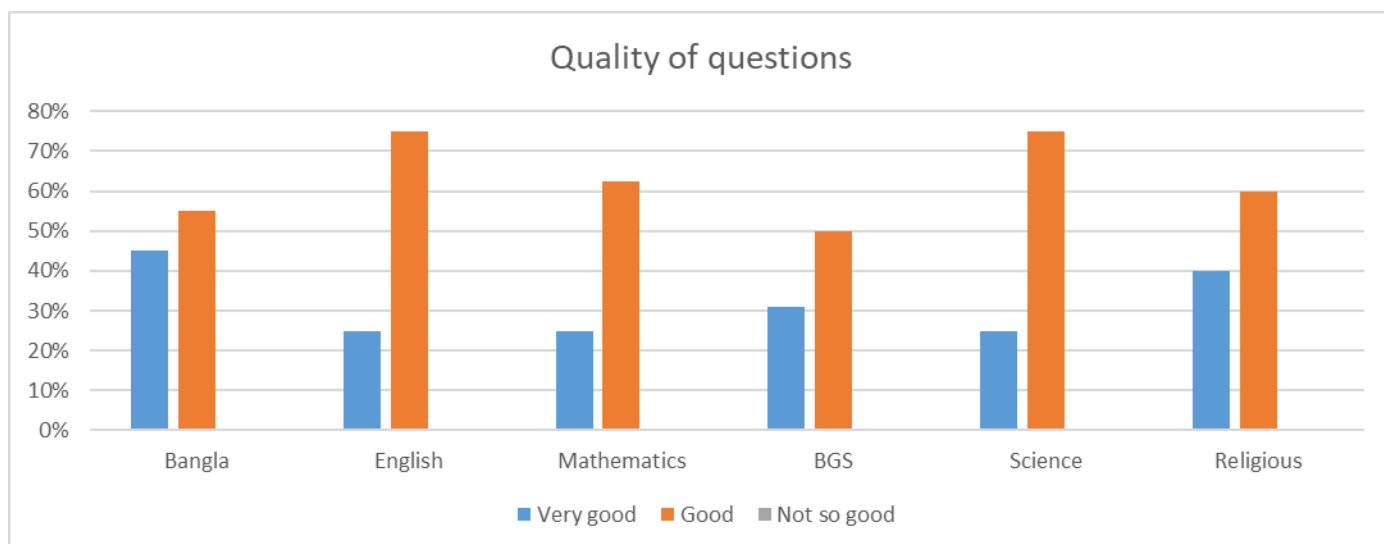
In BGS, 25% interviewed invigilators mentioned that allocated time is enough for some of the students, 50% mentioned that time is sufficient for all of the students, 25% mentioned that time is sufficient for the maximum number of students and 69% mentioned that time is not sufficient for the few number of students.

In Science, 75% interviewed invigilators mentioned that allocated time is sufficient for all of the students and 25% mentioned time is sufficient for the maximum number of students.

In Religion and Moral Education, 20% interviewed invigilators mentioned that allocated time is enough for some of the students and 80% mentioned time is sufficient for the maximum number of students.

Graph 4: Invigilators opinion about the quality of the questions

The above graph shows that in Bangla 45% interviewed invigilators mentioned that the quality of question paper is very good and 55% mentioned that the quality of question paper is good. In English 25% interviewed invigilators mentioned that the quality of question paper is very good and 75% mentioned that the quality of question paper is good. In Mathematics 25% interviewed invigilators mentioned that the quality of question paper is very good and 62.50% mentioned that the quality of question paper is good. In BGS 31% interviewed invigilators mentioned that the quality of question paper is very good and 50% mentioned that the quality of question paper is good. In Science 25% interviewed invigilators mentioned that the quality of question paper is very good and 75% mentioned that the quality of question paper is good. In Religions and Moral Education 40% interviewed invigilators mentioned that the quality of question paper is very good and 60% mentioned that the quality of question paper is good.

Table 11: Suggestions for overall improvement of the examination

Subject	Bangla should be replaced instead of English at the 1st day	Venue should be in Primary school	Question should be more easier	Seating arrangement should be 2 instead of 3 students in each bench	Time should be 3 hours instead of 2:30 hours	MCQ should be included
Bangla	0%	5%	0%	5%	0%	0%
English	5%	0%	5%	5%	0%	0%
Mathematics	0%	0%	0%	0%	19%	0%
BGS	0%	0%	12.50%	0%	0%	25%
Science	0%	0%	20%	0%	0%	0%
Religions and Moral Education			20%			

According to the above table it is found that after the Bangla examination 5% respondent invigilators mentioned that the examination venue should be in Primary School instead of High School 5% mentioned seating arrangement should be 2 instead of 3 in each bench. After the English examination 5% invigilators mentioned that Bangla should be replaced instead of English at the first day, 5% mentioned that the question should be easier and 5% mentioned that seating arrangement should be 2 instead of 3 in each bench. After Mathematics Examination 19% respondent invigilators mentioned that allocated time should be 3 hours instead of 2:30 hours. After BGS Examination 12.5% respondent invigilators mentioned that question should be easier and 25% mentioned MCQ should be included in the question paper. After Science Examination 20% respondent invigilators mentioned that question should be easier and after Religions and Moral Education examination 20% respondent invigilators mentioned that question should be easier.

Findings

- ❖ In all subjects (Bangla, English, Mathematics, BGS, Science and Religions & Moral Education) number of girls' students is more than boys in the visited centers. In the examination of every subject the percentages of absent boys is more than girls.
- ❖ Visited 36 examination centres used 1 bench for 2 students and 31 centres used 1 bench for 3 students and only one centre used table and chair for each students.
- ❖ In Bangla 357 students out of 425 answered all the items where percentage of the students is 84.
- ❖ In English 344 students out of 498 answered all the items where percentage of the students is 69.07.
- ❖ In Mathematics 341 students out of 431 answered all the items where percentage of the students is 79.12.
- ❖ In BGS 236 students out of 301 answered all the items where the percentage of the students is 78.41%.
- ❖ In Science 156 students out of 195 answered all the items where the percentage of the students of is 80%.
- ❖ In Religions and Moral education 169 students out of 207 answered all the questions where the percentage of the students is 81.64%.
- ❖ In Bangla a very small number of interviewed students faced difficulty in item number 2, 6, 7, 8, 9, 11 and 13. In item number 14 comparatively more students faced difficulty than the other items.
- ❖ In English a very small number of interviewed students faced difficulty in item number 2, 6, 7, 8, 9, 11 and 13. In the item number 14 comparatively more students faced difficulty than the other items.
- ❖ In Mathematics less than 5% interviewed students faced difficulty in the item number 1, 2, 3, 4, 5, 6, 7 and 11 but 5.10% faced difficulty in item number 8 and 6% in the item number 9.
- ❖ In BGS 7.31% students face difficulty in the item number 1and 6.64% in the item number 4.
- ❖ In Science 15.38% students face difficulty in item number 1 and 11.79% in the item number 4.
- ❖ In Religions and Moral Education 10.14% students face difficulty in the item number 1 and 10.63% in the item number 4.

- In Bangla 35.22%, 21.59% and 12.50% interviewed students could not answered all the items due to some of the items were difficult to answer.
- In English 46.34%, 17.07% and 31.71% interviewed students could not answer all the items due to some the items were difficult to answer, lack of time and lack of understanding.
- In Mathematics more than 30% interviewed students could not answer all the items due to some of the questions were difficult and lack of understanding. 17.44% students could not answer all the items due to lack of time they,
- In BGS more than 36% interviewed students could not answer all of the items due to some of the questions were difficult to answer and 15.15% could not answer all of the items due to lack of time.
- In Science 46.15% interviewed students could not answer all the items due to some of the items were difficult to answer, 2.56% could not answer all of the items due to lack of time
- In Religions and Moral Education 53.13% interviewed students could not answer all of the items due to some questions were difficult to answer 34.38% could not answer all of the items due to lack of understanding.
- All of the interviewed invigilators stated that in Bangla, English, Science and Religions and Moral Education students feel happy to answer the question paper whole the time and around 70% stated in Mathematics and BGS students feel happy to answer the question paper whole the time.
- After the examination of Bangla, English and Science more than 60% interviewed invigilators stated that it seems easy for the students to answer the question papers. But after the examination of Mathematics, BGS and Religions and Moral Education 31%, 50% and 40% interviewed invigilators stated that it seems easy for the students to answer the question papers respectively.
- More than 60% interviewed invigilators stated that in mathematics and Science some of the students feel difficulty in answering some of the items. Less than 40% interviewed invigilators stated that in Bangla, English, BGS and Religions and Moral Education some of the students feel difficulty in answering some of the items.
- More than 20% interviewed invigilators of Bangla, English, BGS and Religions and moral Education stated that time is enough for some students. More than 50% interviewed invigilators of all subjects stated that time is sufficient for all of the students and around 20% invigilators of all subjects except Religions and Moral Education stated that time is sufficient for all of the students. In Religions and Moral Education 80% interviewed invigilators mentioned that time is sufficient for maximum number of students. On the other hand in all subjects except BGS some interviewed invigilators mentioned that time is not sufficient for few number of students. In BGS Maximum number of interviewed invigilators stated that time is not sufficient for few numbers of students.
- Most of the interviewed invigilators in all subjects commented that the quality of question paper is good and some them commented that the quality of questions is very good.
- Some of the interviewed invigilators suggested that seating arrangement should be 2 students instead of 3 in 1 bench, examination venue should be in Primary School instead of High School and Bangla should be replaced instead of English at the first day.
- Around 20% interviewed invigilators of Science and Religions and Moral education suggested that question should be easier and some of the interviewed invigilators of BGS suggested that question should be easier.

- ❖ Some of the interviewed invigilators of Mathematics suggested that time should be 3 hours instead of 2:30 hours.
- ❖ 25% interviewed invigilators of BGS suggested that MCQ should be included in the question paper.

Recommendations

On the basis of the discussion of the findings following recommendations are suggested in order to ensure the effective management of PECE.

1. Seating of 2 students per bench is more rational rather than 3 students
2. It is significant to replace Bangla instead of English at the first day of the examination, so that students may be adapt with examination environment easily.
3. Examination venue is more significant at Primary School rather than High School. As the seating arrangement is suitable for high school students but in some cases not suitable for primary school students. Besides, some of the students don't feel comfort in new place and environment. In addition to that the center as well as exam management is suitable in primary school in comparison to high school.
4. It is rational to include MCQ in the question paper of all subjects. Properly constructed MCQs can assess higher cognitive processing of Bloom's taxonomy such as understanding, application and higher cognitive of skill, instead of just testing recall of isolated facts.

Many other issues are also related with effectiveness of PECE. But according to response of the examinees and invigilators it is revealed that the quality of the questions of PECE 2018 is good and allocated time is sufficient for every student to answer all the items which was 100% competency-based except BGS and Mathematics.

This study concludes that PECE question structure and quality of the question paper is good for maximum number of students. The quality of PCEE will be ensured if necessary support is provided in the management system according to the recommendations of this study.

Properly constructed MCQs can assess higher Cognitive processing of Bloom's taxonomy such as understanding, application and higher cognitive of skill, instead of just testing recall of isolated facts.

National Academy for Primary Education (NAPE)

Mymensingh

Primary Education Completion Examination, 2018

Subject-wise data collection format

Subject:

Center: Upazila: District:

Set (region):

1. Data about the examinee of the center

Total number of school in the center	Number of examinee			Number of participated examinee		
	Boys	Girls	Total	Boys	Girls	

2.1 Number of used rooms in the center;

2.2 Seating arrangement of examinee: bench/desk

2.3 Number of examinee in each bench:

3. Ratio of examinee and invigilator in each of the center:

Room number	Number of examinee	Number invigilators	Ratio

4. Before the end of the examination data collector will select a room of the center consulting with hall super and after the end of the examination and all the students of the selected room were asked to wait in a few minutes in that room. Data collector enter the room while the invigilators left the room with answer scripts and then filling the following the table by asking the following questions

Room no.	Total number of students	number of students	
		Answer all the questions	Did not answer all the questions

5. The students who did not answer all the items in that selected room asked them one by one and complete the following table. Put tick (√) marks where necessary.

Sl. no.	Name	School	Class roll	How many questions were answered?	Why did not answer all the items? Insert tick (√) and write if the answer is different.	Which of the items were difficult?
					-Item were difficult -Insufficient time -Didn't understand the items -No answer	
					-Item were difficult -Insufficient time -Didn't understand the items -No answer	
					-Item were difficult -Insufficient time -Didn't understand the items -No answer	
					-Item were difficult -Insufficient time -Didn't understand the items -No answer	
					-Item were difficult -Insufficient time -Didn't understand the items -No answer	

(Use additional paper if necessary)

Interview of invigilators: Data will be collected through the following questions from the two invigilators of that room at the end of the exam.

Invigilator-1:

a)   Name:
b)   Room no.

c)   What was the reactions of the students of that room after getting the question? Were they answer normally? Were they feel difficulty in answering? Was the allocated time sufficient for students to answer all the question?

Write down if any other comments of the invigilators:

Invigilator-2:

a)   Name:
b)   Room no.
c)   What was the reactions of the students of that room after getting the question? Were they answer normally? Were they feel difficulty in answering? Was the allocated time sufficient for students to answer all the question

d)   Write down if any other comments of the invigilators:

Signature of data collector

Name:

Designation:

Date: