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Effectiveness of Single National Curriculum (SNC) on the Learning Outcomes of Students: Group Comparison of the Average Scores of SNC and Non-SNC Students

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***Abstract*:** This paper evaluates the efficiency of the Pakistan SNC introduced in the academic year 2018-19 by Imran Khan's government. The research will seek to establish the raw scores of SNC learners and those who are not in SNC, as well as to establish questionnaires on primary teachers' views about the curriculum and their professional development needs in its implementation. The methodology uses standard Urdu, English, Math, and Science tests and close-ended interviews with selected teachers. The population includes 160 students and 16 teachers of District Kotli selected from four different tehsils, the probationary population of which is present. Findings show no significant difference between the performance of learners in SNC Schools and those in non-SNC Schools. Age and gender predictably exhibit little influence on the performance of the subject. Overall, teachers embrace the SNC with equality when applied across the schools, agreeing with the policy's possibility of raising the bar of educational achievement. As for the teachers involved in the SNC, all of them consolidated specific SNC training. The report also demonstrates the need for proper planning for curriculum implementation and proper preparation of the teachers. It adds useful information to Pakistan's current state of educational change, stressing proper planning and services for implementing any curriculum changes. These findings could be useful in future policy-making and policy execution in Pakistan's education sphere.

Key words: Single National Curriculum, Effectiveness, Learning outcomes, Reversion, Teachers' training

1. Introduction

The curriculum is of essential significance for the teachers and trainers. In the past, the study of the curriculum has become an established part of teacher training programs, and teachers in their service have acquired some familiarity with the term in one way or another. Besides, teachers who have opted for postgraduate research professional development programs have had a chance to unravel the concepts related to the curriculum. The media and the community have gotten used to the term "curriculum" in recent years (Shahid, 2020). The former Prime Minister, Mr. Imran Khan, and his political party pledged a series of educational reforms to improve school performance and narrow the educational achievement gap in the nation. The new Single National Curriculum (SNC), like the previous core curriculum from 2006, is assumed to establish the minimal proficiency standards that each child should achieve in a specific topic at a given grade. The SNC's first phase, geared toward elementary college students, started in March 2021. By 2023, the second and third tiers, which were planned to cover grades 6

through 12, might be put into use (Patel, 2021).
On the launch of SNC dated August 16, 2021, the former prime minister Mr. Imran Khan declared that the SNC would "unify the country, abolish class divisions, and eliminate the "mental enslavement" that the British colonial system of education had imposed when it was formally introduced (Vinayak, 2021). The following are salient features of SNC.

1.1 Salient Features for SNC

a) As opposed to the 2006 curriculum, where standards, benchmarks, and learning outcomes were not defined for each topic of the curricula, the SNC is based on standards, benchmarks, and outcomes across all subjects.
b) Islamiyat was introduced as a separate subject in Grade 3 after being integrated with General Knowledge up until Grade 2 in 2006. Islamiyat is taught as a separate subject in grades 1 through 12 of the SNC.
c) In the past, non-Muslim students were required to take Ethics in instead of Islamiyat beginning in third grade. Since first grade, a new topic called Religious Education has been made available to non-Muslim pupils from Pakistan's five minority groups.
d) The information is in line with international agreements like SDG 4 which aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UN, 2015).
e) The SNC focuses on providing students with values and skills like honesty, tolerance, respect, and peaceful relations as well as concepts and skills like environmental awareness and care, democracy, human rights, sustainable growth, global citizenship, and personal hygiene and safety.
f) The SNC focuses on the development of analytical, critical, and creative thinking, instead of focusing on teacher-centric learning that is static.
g) For the first time, ICT (information communication technology) use is included in the curriculum.
h) Only public schools and a few inexpensive private institutions used the 2006 curriculum. All Pakistani schools, including government and private schools as well as Deeni Madaris, would adopt the SNC uniformly (Federal Eduation Department, 2021).

The former prime minister, Imran Khan, envisioned that the SNC would promote unity, eliminate social disparities in school curricula, and end the "mental servitude" that the British imposed. The essential objective of a curriculum is to educate individuals who can truly innovate and develop ideas in a dynamic economic and intellectual environment, enabling their nation to compete successfully in the international arena. A curriculum is necessary to support individuals in maintaining their long-term strategic goals. But it can't have this as its major objective. The previous prime minister claimed that the new curriculum strongly emphasizes the teachings of the Holy Prophet Muhammad (Peace Be Upon Him). Shafqat Mahmood, the former education minister, regarded the SNC as a watershed event in Pakistan's educational history and noted that, except in Sindh, basic schools and religious institutions nationwide had already adopted the new curriculum. He believed Sindh would adopt the SNC (Abbas, 2021).
Educationist Amjad Nazeer, who also serves as the head of the Institute of Development Research and related capabilities, believes that "The Single National Curriculum (SNC) has been chaotic, self-contradictory, and dishonest." He spoke in Multan on the launch of the booklet Single National Curriculum: Critical Examination and Policy Recommendation. Citing the inadequate conception of public educational standards, he emphasized that imposing the so-called SNC is far less important than ensuring adequate budgeting, the structure of the required number of new schools, the provision of lacking facilities, the removal of dead schools and teachers, and the extension of modern educational materials as well as labs and research labs. He believes that the program has already lost its "national" identity because of the significant silence of Baluchistan and Sindh's regret regarding the implementation of SNC. Although private publishers in Punjab are now permitted to print their books after acquiring an NOC from the federal and provincial governments, several administrative obstacles and costs are still involved in upgrading textbooks (TFT, 2021).
Since assuming power in the 2018 general elections, PTI has worked on a comprehensive plan to create a uniform educational system and curriculum to provide an equal education to all students, whether they attend madrassah, public schools, or private schools. The work on homogenizing the curriculum was done under the National Curriculum Council for two years, and it was finally approved for execution from pre-I to Grade V starting in August 2021 (Chaudhry, 2021).

1.2 Key Goals of SNC

SNC is an initiative to achieve three key goals:

a) One 'system' of education
b) Emphasis on national identity that looks upon religion as the unifying factor and
c) Desire to modernize learning with progressive elements, global citizenship, and 21st-century skills (Chaudhry, 2021).

It is, however, purported by the critics of the SNC that one of the main disadvantages of the single national curriculum is its lack of flexibility. It can be extremely prescriptive and act as a change limit. This one education system could stifle educational innovation. These two disadvantages may limit the instructor's independence. The government has simply established the outline of the sections that must be included in the curricula; schools can add additional items if necessary (Awais, 2021).

Thus, primary school teachers in Pakistan are optimistic about the implementation of the SNC. According to public school instructors, the previous government's decision to introduce SNC was a wonderful plan for building a strong state. "It is better to introduce things gradually because forcing them all at once is unhealthy for anyone," said private school teachers. "SNC is very important to establishing a state and will contribute to a prosperous nation in the future." Teachers believed that SNC would promote equity among students by providing equal access to learning resources no matter where they went to school or their socioeconomic status (Zaman et al., 2021).

1.3 Objectives of the Study

a) To assess the performance by comparing two groups of students of a Single National Curriculum and a non-single National Curriculum regarding the distribution of Marks Obtained in Urdu.
b) To assess the performance by comparing two groups of students of a Single National Curriculum and a non-single National Curriculum regarding the distribution of Marks Obtained in English.
c) To assess the performance by comparing two groups of students of a Single National Curriculum and a non-single National Curriculum regarding the distribution of Marks Obtained in Math.
d) To assess the performance by comparing two groups of students of a Single National Curriculum and a non-single National Curriculum regarding the distribution of Marks Obtained in Science.

1.3 Significance of the Study

a) This study will be beneficial for policymakers involved in educational planning and policies.
b) It will identify the challenges teachers face in implementing a single national curriculum.
c) The study will also serve as a Training Needs Assessment (TNA) for teachers to implement SNC.
d) To compare the learning outcomes of two groups (non-SNS) and (SNC students) of grade 5.
e) This study will also identify the causes of reversing a single national curriculum.

2. Literature Review

The absence of coherence in Pakistan's education systems has resulted in large learning gaps, resulting in socioeconomic inequality. The educational system in Pakistan is divided into three types: public schools, selective schools, and Madaris. There are huge discrepancies in the education delivered in these three components, resulting in a substantial disparity in the students taught in these schools. Promoting socioeconomic equality is one of the most significant advantages of having a single national curriculum. When completely implemented, all children would have the same opportunity to receive an excellent education. He added that every succeeding administration since Pakistan's establishment in 1947 has made a concerted effort to use textbooks and curricula to advance and instill Islamic ideology and values in the minds of future generations to promote a sense of national identity in a nation with a diverse range of cultural traditions. Pakistan's national educational strategy has existed for roughly 70 to 80 years since the National Education Conference was established in 1947. Several Pakistani governments established eight five-year plans, six commissions and committees, and more than one hundred conferences, seminars, and gatherings on educational advancement. Any curriculum change must involve teachers, particularly during the execution phase, because teachers' application of the curriculum is affected by their perceptions and opinions, the formation of a sense of national identity, the promotion of good citizenship, and the development of interpersonal or coexistence skills (Muhammad, 2019).

When implementing a positive alignment strategy, start by thinking about the outcome when creating a curriculum.

To put it another way, what do we want our students to be able to do once they have finished their research courses? When academic peers view the project as a team effort, it can also result in unanimity and synchronization among the relevant teaching staff members toward the curriculum's purpose. It is also evident that doing so necessitates that faculty members receive a sizable amount of professional training in both the more complex aspects of curriculum design and the concepts of connectivism (Hrivnak, 2019). To give all children an equal chance to receive a high-quality education, the government proposed a single national curriculum (SNC), establishing a standard system "in terms of curriculum, teaching method, and a uniform evaluation platform." Like the previous national curriculum from 2006, the SNC merely establishes the minimum learned standards that each student should be capable of meeting in a given subject at a given grade level. The education ministry and the confederation of religious schools had agreed in principle to incorporate madrassas into the regular school system under the SNC. According to their deal, this would result in the registration of thousands of madrassas as formal schools, allowing millions of youngsters to acquire a regular education and sit board exams. However, detractors of the SNC argued that rather than integrating religious schools, the SNC would require that educational approaches used in madrassas be implemented in primary and secondary schools (Patel, 2021).

Government school responders observed that a single national curriculum would unite the country. A nation can be formed when all educational systems accept a unified national curriculum. If all educational systems adhere to it in its purest form, it will establish a single nation. SNC is a crucial step in building a united state. Another respondent stated that "learning a single national curriculum and having equal systems will assist in developing one nation." SNC's principal objective is to unite individuals from all around the country. If carried out honestly, it will help bring the nation together. A private school teacher stated that SNC would alter society and build a single nation. (Zaman et al., 2021). The child's native language must be used to teach language and literacy skills, with a gradual switch to Urdu and English. The SNC, however, still emphasizes Urdu and English as the two languages that a child must eventually switch to. Using one's native language to create and recognize text is not specifically advised. There are only two available languages: English and Urdu. Despite the overall prominence of English and the local value of Urdu as a language of communication, this prioritization seems logical. Nevertheless, this seems to go against the consensus across nations regarding the value of the mother tongue in a child's early development (Sarfraz, 2020).

Ahsan (2021) explained that the Single National Curriculum (SNC) was a step forward in addressing this fundamental issue, indicating that, in addition to attempts to expand child enrolment, the government was now concerned about improving the education given. The SNC government had established some minimum learning criteria for pupils of all grades. At the same time, private schools, except for a few books like Islamiyat and Urdu, were free to develop their books while adhering to the minimum learning standard (Ahsan, 2021). One of the important key goals of SNC is to develop twenty-first-century skills among students. These skills have been focused on in different studies in national contexts like the development of critical thinking among students concerning teachers' perceptions and practices (Jamil et al., 2023; Jamil et al., 2021a, 2021b; Muhammad & Qureshi, 2021); education policy and curriculum documents' focus on developing critical thinking (Jamil, 2021; Jamil, Bokhari, & Iqbal, 2024; Jamil, Bokhari, & Rafiq, 2024; Jamil, Bokhari, & Zia, 2024; Jamil, Hafeez, et al., 2024; Jamil et al., 2020); textbooks analysis focusing on the development of critical thinking skills (Jamil, Bibi, et al., 2024; Jamil, Bokhari, & Ahmad, 2024; Mehmood & Saleem, 2024; Naseer et al., 2021). In the same way, life skills that are also the focus of current education are also focused in current literature, like the incorporation of different textbooks in the Pakistani context for Biology textbook for grade IX (Jamil et al.), Physics textbook for grade X (Jamil, Ain, et al., 2024); Pakistan studies textbook for grade IX (Jamila et al., 2024).

The gap between curriculum and learning outcomes standards led to a single national curriculum. The curriculum includes all the child's learning experiences throughout the educational process, whereas learning standards are internationally intended and necessary for effective learning. It includes infrastructure, texts, evaluation tools, extracurricular activities, and teaching strategies. The minimum learning requirements that the government recently released are an improvement over those included in the 2006 curriculum. The curriculum must be changed periodically to solve the difficulties presented by shifting societal needs; a complete overhaul is unnecessary. It might be updated in part. A few subjects need to be updated more frequently as new information, such as Science or early education, becomes available. Pakistan's curriculum has not been revised since 2011 (PIDE, 2021). In the Pakistani context, the Single National Curriculum (SNC) has been focused on through different perspectives. The development of critical thinking skills was explored in Social Studies among students at the primary level (Jamil, Aslam, et al., 2024); sustainability education in English textbook grade VIII based on the single national curriculum

(SNC) (Jamil, Rasool, et al., 2024). Moreover, different current textbooks based on SNC regarding critical thinking skills have been analyzed. For example, an English textbook for grade 5 based on a Single National Curriculum (SNC) regarding education for sustainable development (Jamil, Khalil, et al., 2024). Problems and practices were explored in a study about implementing SNC at the primary level (Dilshad & Rehmat Shah, 2023). SNC was analyzed regarding the General Science book at the primary level with the lens of the twenty-first century.

3. Research Methodology

A mixed method approach was used where structured exams/tests for four subjects, i.e., English, Math, Science, and Urdu from students, were administered by the school management as part of their promotional activity for the next grade. The results for these subjects were recorded against each randomly selected student. The semi-structured interviews, using teachers' questionnaires, were conducted by primary teachers in both public and private schools. Secondary data on subject scores available from the schools was used to determine the impact of SNC. The following variables were used for each student.

Tehsil
The school (Administration and Type)
Student age
Student Gender
Student scores (English, Urdu, Maths & Science, and Total)

Sample students from primary schooling age and teachers teaching primary age group in Tehsil Kotli and Nakial of District Kotli. The total population of teachers constituted 7,686 teachers in both public and private schools of District Kotli. The total district schools were 784, of which 414 were boys' schools, 317 were girls' schools, and 53 were mixed schools. The population of class 5 students was 45,866 for the education year 2020-21. To calculate the sample for this study, a 90% confidence level was used along with a margin of error at 6.5%, leading to a sample of 160 students from 8 (4 public and four private) schools in randomly two selected tehsils and 16 teachers of District Kotli. To cater to the respondents' non-response, the sample of 160 students was inflated at a rate of 10% to ensure that all 160 students participated in the research process. The complete list of teachers teaching in the selected tehsils shall form our sampling frame from which teachers were randomly selected. Since all the teachers teaching primary groups and students of class five in all schools of District Kotli were the subject populations of the study, sampled teachers and students were selected from 8 schools of tehsil Kotli and Nakial. A multi-stage Simple Random Sampling Technique (SRS) was used for that matter. At stage one, two tehsils were randomly selected from already District Kotli. At stage two, eight schools were selected from the list of the selected tehsils. At stage three, 160 students from selected eight schools were selected. Initially, the number of students in each group was determined to be 80, and the actual number of students in each group also happened to be 80 students in the control (non-SNC) group and 80 students in the intervention (SNC) group. At stage four, 16 teachers were selected from two tehsils. To acquire the responses from both genders interviewing, eight female and eight male teachers were to be selected, and the actual numbers for both genders also appeared to be eight male teachers and eight female teachers.

A sample of 160 students from 8 (4 public and four private) schools randomly drew two selected tehsils and 16 teachers from two separate populations. Two groups were used: control and intervention. The intervention group is a group of students in class 5 who studied English, Math, Science, and Urdu under SNC. Control Group is a group of students from class 5 of the latest academic year who studied English, Math, Science, and Urdu under a curriculum different from SNC.

Structured English, Math, Urdu, and Science tests for students in grade 5.

To ensure the validity of the research instrument, the semi-structured questionnaire was developed in a manner that corresponds to the research objective. Changes were incorporated, and the questionnaire was finalized in consultation with the research supervisor.

To develop the research instrument, preliminary discussions were held with subject specialists and teachers teaching SNC, and the discussions were translated into a semi-structured interview. The test results for students were taken as is and were conducted by the school management from previous (SNC) and current (non-SNC) primary-grade students. Four teachers piloted the draft semi-structured questionnaire for teachers to ensure that similar answers are obtained each time the questionnaire is administered. Cronbach's Alpha value for subject exams (English, Urdu, Math & Science) was calculated to be 0.650, which shows that the examinations for the subjects above are within the acceptable range.

4. Data Analysis

MS Excel and SPSS software were used for data analysis and results preparation during this research study. The following research analysis and data visualization techniques were used to obtain the results.

a) Description analyses, i.e., average, minimum, and maximum scores, and the dispersion among scores, i.e., standard deviation (SD), were calculated,

b) To ascertain the relationships among variables and their significance, Pearson's Coefficient of Correlation was calculated,

c) To ascertain the impact of SNC and non-SNC curricula, an independent sample t-test was calculated, and the significance was determined,

4.1 Results and Discussion

The results of this research reflect two distinct aspects, i.e., the learning outcomes of students concerning SNC and non-SNC curricula and the comparison between both. To this end, the research feeds into the first objective of the study, i.e.,

1. The performance was assessed by comparing two groups of SNC and non-SNC curriculum students.

To gauge students' learning outcomes, the researcher compared two groups of students, and one group of students was considered the intervention group that was taught SNC. The other group of students was comprised of students who were taught non-SNC syllabi and were considered a non-intervention group. Learning outcomes of four subjects between intervention and control groups were compared. Since the two groups are independently sampled, the students' average scores (marks) for each of the four subjects are compared to understand if there is any significant difference between the scores obtained by both groups. Average scores were compared using independent sample T statistic in SPSS.

Performance Comparison of SNC and Non-SNC Students

This part focuses on the first objective of the research and discusses the results obtained from the marks data of two groups of students, i.e., SNC and non-SNC students. Each group contains 80 students, i.e., 160 students were randomly selected from 8 schools in Kotli and Nakial tehsils of District Kotli.

Results of marks data of four subjects

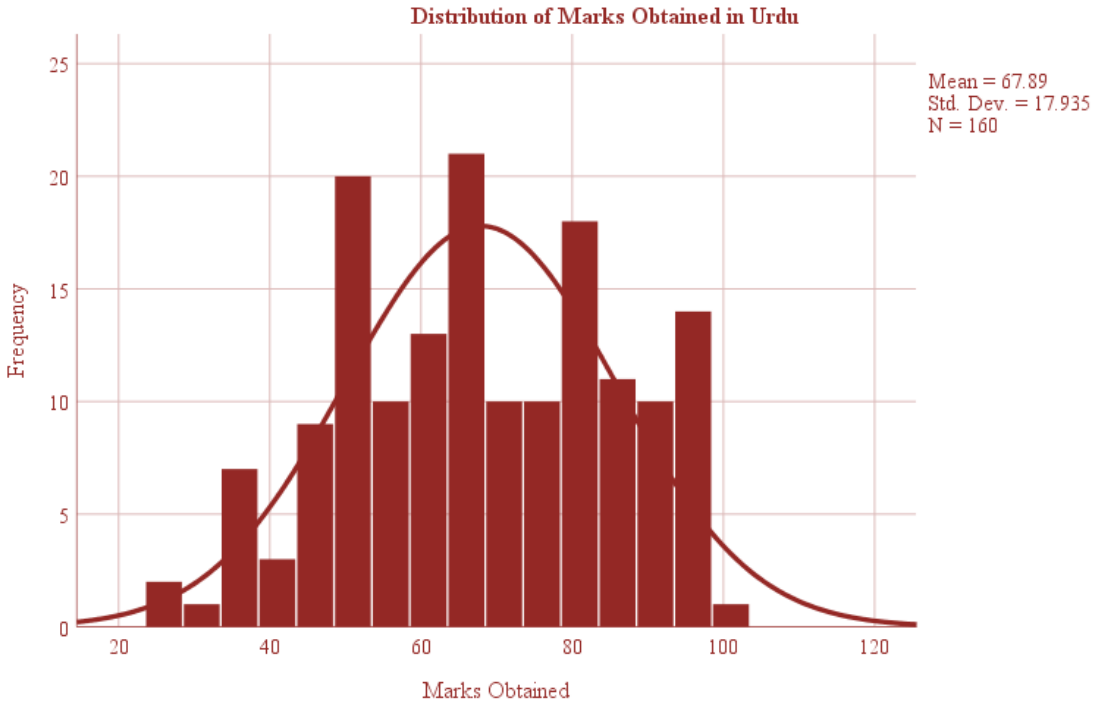

Figure 1: Distribution of Marks Obtained in Urdu

Note. The figure above shows the histogram of the marks obtained by the sampled students in Urdu. The average

marks in Urdu obtained by sampled students were 67.89 points with 80 points as mode, meaning that, i.e. nine sampled students obtained 80 marks. The standard deviation of marks obtained in Urdu is 17.94 points, i.e., students' marks in Urdu subject disperse from the mean marks of 67.89 points by 17.94 points on average.

The histogram of the marks in Urdu subjects shows that the marks of all 160 sampled students are normally distributed with mean scores of 67.89. The skewness value is -0.105, meaning that the marks distribution is slightly larger on the left side; however, the value is so small and negligible that the distribution is away from normality. The value of Kurtosis, i.e., peakedness of the distribution, is -.884, which shows that the distribution is platykurtic, i.e., a flatter distribution with large tails (platykurtic distributions have large variances).

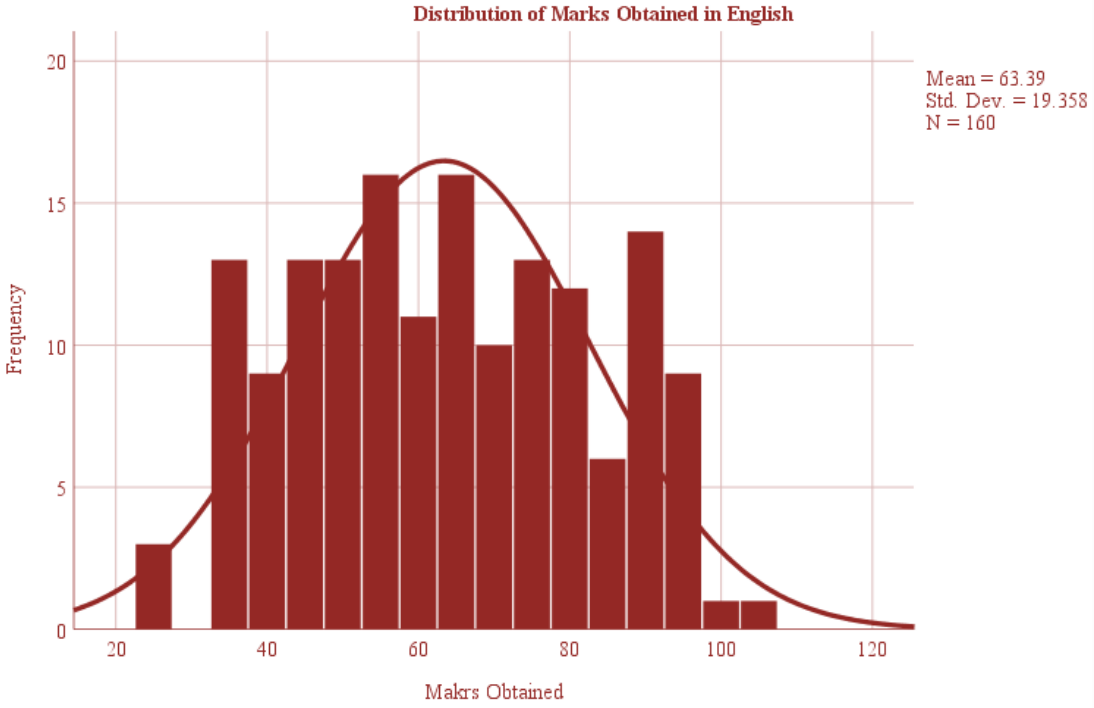

Figure 2: Distribution of Marks Obtained in English

Note. The average marks in English obtained by sampled students were 63.39 points with 80 points as mode, meaning i.e. seven sampled students obtained 33 marks. It is pertinent to mention that more than one mode was observed in English marks. However, the smallest value taken in the standard deviation of marks obtained in English is 19.36 points, i.e., students' marks in English subject disperse from the mean marks of 63.39 points by 19.36 points on average.

The histogram of the marks in English subjects shows that the marks of all 160 sampled students are normally distributed with mean scores of 63.39. The skewness value is 0.07, meaning that the marks distribution is slightly larger on the right side; however, the value is so small and negligible that a distribution is away from normality. Hence, distribution is normal. The value of Kurtosis, i.e., peakedness of the distribution, is -0.9, which shows that the distribution is platykurtic, i.e., a flatter distribution with large tails (platykurtic distributions have large variances).

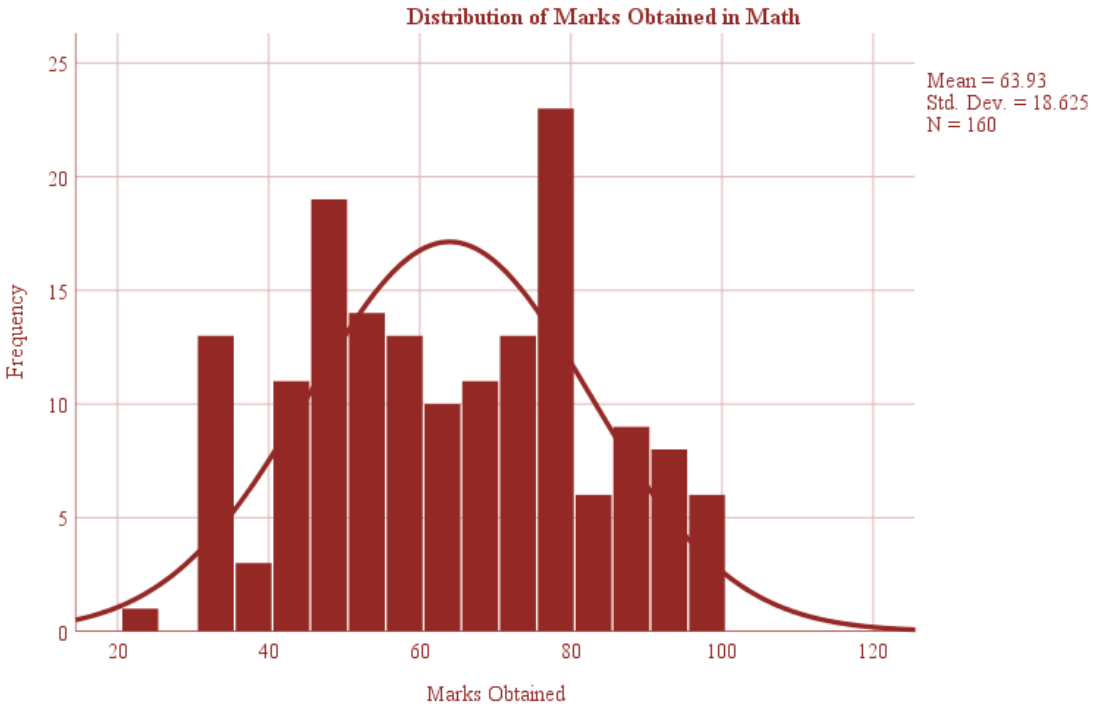

Figure 3: Distribution of Marks Obtained in Math

Note. The average marks in Math obtained by sampled students were observed to be 63.93 points with 80 points as mode, meaning that, i.e. 12 sampled students obtained 80 marks. The standard deviation of marks obtained in Math is 18.625 points, i.e., students' marks in Math subject disperse from the mean marks of 63.93 points by 18.625 points on average.

The histogram of the marks in the Math subject shows that the marks of all 160 sampled students are normally distributed with mean scores of 63.93. The skewness value is 0.032, meaning that the marks distribution is so small and negligible for a distribution to be away from normality; hence, the distribution is normal. The value of Kurtosis, i.e., peakedness of the distribution, is -0.971, which shows that the distribution is platykurtic, i.e., a flatter distribution with large tails (platykurtic distributions have large variances).

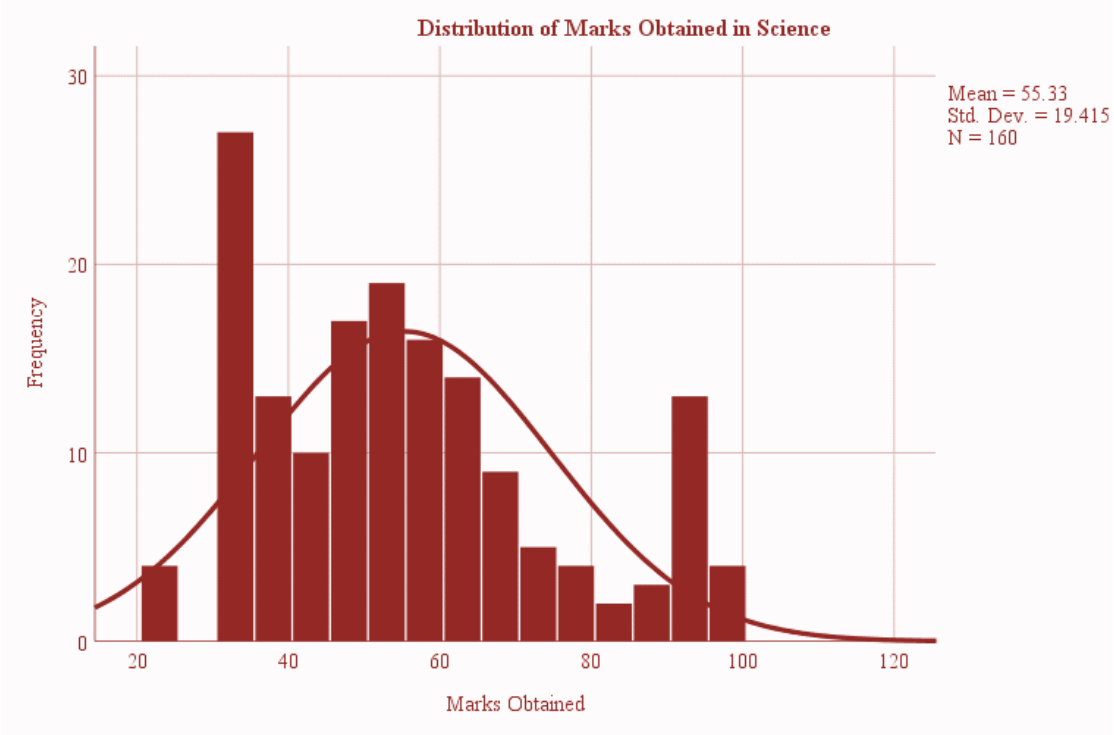

Figure 4: Distribution of Marks Obtained in Science

Note. The average marks in science obtained by sampled students were 55.33 points with 33 points as mode, meaning that i.e. 22 sampled students obtained 33 marks. The standard deviation of marks obtained in science is 19.415 points, i.e., students' marks in science subjects disperse from the mean marks of 55.33 points by 19.415 points on average.

The histogram of the marks in science subjects shows that the marks of all 160 sampled students are normally distributed with mean scores of 55.33. The skewness value is 0.590, meaning that the marks distribution is slightly larger on the right side; however, the value is so small and negligible that the distribution is away from normality. The value of Kurtosis, i.e., peakedness of the distribution, is -0.480, which shows that the distribution is platykurtic, i.e., a flatter distribution with large tails (platykurtic distributions have large variances).

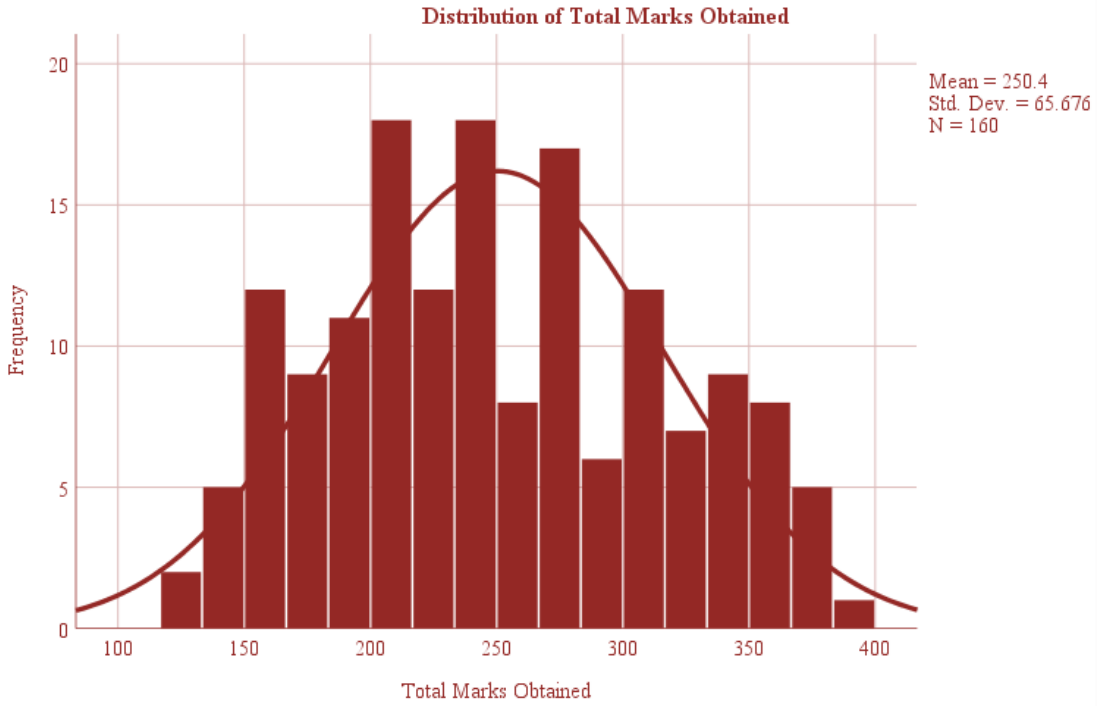

Figure 5:

Distribution of Overall Obtained Marks

Note. The average overall marks of all four subjects obtained by sampled students were 250.4 points with 194 points as mode, meaning that, i.e. three sampled students obtained 194 marks. The standard deviation of marks obtained is 65.676 points, i.e., students' marks in all subjects disperse from the mean marks of 250.4 points by 65.676 points on average.

The histogram of the overall marks in all subjects shows that the marks of all 160 sampled students are normally distributed with mean scores of 250.4. The skewness value is 0.200, meaning that the mark distribution is normal.

Table 1: Group Comparison of Marks in Urdu by Study Group

	Intervention group	N	Mean	Std. Deviation	Std. Error Mean
Obtained marks in Urdu	SNC	80	59.49	14.448	1.615
	Non-SNC	80	76.29	17.197	1.923

To compare the marks of two groups of students, i.e., SNC and non-SNC, an independent sample t-test was used with the assumption that there is no difference between average scores of Urdu obtained by both SNC and non-SNC students. The results of the t-test are given below. The average Urdu scores obtained by SNC and non-SNC are 59.49 and 76.29 points, respectively, with a standard deviation of 14.448 and 17.197 marks, for SNC and non-SNC students.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
Obtained marks in Urdu	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	3.863	.051	-6.69	158	.000	-16.800	2.511	-21.76	-11.84

Equal variances are not assumed.	-6.69	153.435	.000	-16.800	2.511	-21.76	-11.83

The t-test shows that the difference between the average scores of both groups is 16.8 points. With an assumption of equal variance for both SNC and non-SNC populations, this 16.8-point difference is highly significant at a 95% confidence interval with a p-value of 0.000. The lower and upper values of the 95% confidence interval are -21.76 and -11.84, respectively, and the interval does not contain a "0" value, meaning that the average scores of both groups are not equal even within the interval and, therefore, the difference is highly significant. Based on the results of the independent sample t-test, it can be inferred that non-SNC students studying in private schools, on average, score significantly higher marks in Urdu compared to SNC students in public schools.

Table 2: Group Comparison of Marks in English by Study Group

	Intervention group	N	Mean	Std. Deviation	Std. Error Mean
Obtained marks in English	SNC	80	51.33	13.669	1.528
	Non-SNC	80	75.45	16.512	1.846

The average English obtained by SNC and non-SNC is 51.33 and 75.45 points, respectively, with a standard deviation of 13.669 and 16.512 marks, for SNC and non-SNC students.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
Obtained marks in English	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	3.394	.067	-10.0	158	.000	-24.125	2.397	-28.85	-19.39
Equal variances are not assumed.			-10.0	152.673	.000	-24.125	2.397	-28.86	-19.39

The t-test shows that the difference between the average scores of both groups is -24.125 points. With an assumption of equal variance for both SNC and non-SNC populations, these -24.125 points differences are highly significant at a 95% confidence interval with a p-value of 0.000. The lower and upper values of the 95% confidence interval are -28.85 and -19.39, respectively, and the interval does not contain a "0" value, meaning that the average scores of both groups are not equal even within the interval and, therefore, the difference is highly significant. Based on the results of the independent sample t-test, it can be inferred that non-SNC students studying in private schools, on average, score significantly higher marks in English compared to SNC students in public schools.

Table 3: Group Comparison of Marks in Math by Study Group

	Intervention group	N	Mean	Std. Deviation	Std. Error Mean
Obtained marks in Math	SNC	80	55.75	14.435	1.614
	Non-SNC	80	72.10	18.827	2.105

The average Math scores obtained by SNC and non-SNC are 55.75 and 72.10 points, respectively, with a standard deviation of 14.435 and 18.827 marks, for SNC and non-SNC students.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
Obtained marks in Math	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	6.744	.010	-6.16	158	.000	-16.35	2.652	-21.59	-11.11
Equal variances are not assumed.			-6.16	148.03	.000	-16.35	2.652	-21.59	-11.11

The t-test shows that the difference between the average scores of both groups is -16.35 points. With an assumption of equal variance for both SNC and non-SNC populations, these -16.35 points differences are highly significant at a 95% confidence interval with a p-value of 0.000. The lower and upper values of the 95% confidence interval are -21.59 and -11.11, respectively, and the interval does not contain a "0" value, meaning that the average scores of both groups are not equal even within the interval and, therefore, the difference is highly significant. Based on the results of the independent sample t-test, it can be inferred that non-SNC students studying in private schools, on average, score significantly higher marks in Math compared to SNC students in public schools.

Table 4: Group Comparison of Marks in Science by Study Group

	Intervention group	N	Mean	Std. Deviation	Std. Error Mean
Marks obtained in Science	SNC	80	42.46	11.107	1.242
	Non-SNC	80	68.20	17.316	1.936

The average scores of Science obtained by SNC and non-SNC are 42.46 and 68.20 points, respectively, with a standard deviation of 11.107 and 17.316 marks, for SNC and non-SNC students.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
Obtained marks in Science	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	18.877	.000	-11.19	158	.000	-25.74	2.300	-30.28	-21.19
Equal variances not assumed			-11.1	134.59	.000	-25.74	2.300	-30.28	-21.18

The t-test shows that the difference between the average scores of both groups is -25.74 points. With an assumption of equal variance for both SNC and non-SNC populations, these -25.74 points differences are highly significant at a 95% confidence interval with a p-value of 0.000. The lower and upper values of the 95% confidence interval are -30.28 and -21.19, respectively, and the interval does not contain a "0" value, meaning that the average scores of both groups are not equal even within the interval and, therefore, the difference is highly significant. Based on the results of the independent sample t-test, it can be inferred that non-SNC students studying in private schools, on average, score significantly higher marks in Science compared to SNC students in public schools.

Table 5: Group Comparison of Overall Marks Obtained by Study Group

Intervention group	N	Mean	Std. Deviation	Std. Error Mean

Total marks obtained	SNC	80	209.03	41.720	4.664
	Non-SNC	80	291.78	58.937	6.589

The average scores of overall marks obtained by SNC and non-SNC are 209.03 and 291.78 points, respectively, with a standard deviation of 41.720 and 58.937 marks, for SNC and non-SNC students.

Independent Samples Test

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
Overall Marks Obtained	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	10.145	.002	-10.2	158	.000	-82.750	8.073	-98.69	-66.80
Equal variances not assumed			-10.2	142.282	.000	-82.750	8.073	-98.70	-66.79

The t-test shows that the difference between the average scores of both groups is -82.750 points. With an assumption of equal variance for both SNC and non-SNC populations, these -82.750 points differences are highly significant at a 95% confidence interval with a p-value of 0.000. The lower and upper values of the 95% confidence interval are -98.69 and -66.80, respectively, and the interval does not contain a "0" value, meaning that the average scores of both groups are not equal even within the interval and, therefore, the difference is highly significant. Based on the independent sample t-test results, it can be inferred that non-SNC students studying in private schools, on average, score significantly higher overall marks compared to SNC students in public schools.

5. Conclusion

a) Eight schools were randomly selected, including four public and four private schools with male and female students. Several male and female students were sampled from public schools, and there were forty for each gender. The same goes for private schools, i.e., forty male and forty female students. Hence, 80 (50%) male and 80 (50%) female students were sampled.

b) The students that were sampled have completed their primary grade exams. It is also worth mentioning that public schools have taught a Single National Curriculum (SNC), whereas private schools have taught a curriculum other than SNC.

c) Out of the total of 160 sampled students, 50.6% of students were sampled from Kotli, and 49.4% of students were sampled from Nakial. However, it is pertinent to note that an equal percentage of students sampled from male and female students were elicited.

d) Overall, an equal percentage of students were sampled from public and private schools to gauge inferences on the first objective of the research, i.e., to assess students' performance by comparing two groups of students from the SNC and non-SNC curricula.

e) An equal percentage of students were sampled for each study group to make group comparison effective.

f) Based on the independent sample t-test results, it can be inferred that non-SNC students studying in private schools, on average, score significantly higher marks in all four subjects overall. The significance of the difference in average scores of non-SNC and SNC students is high, with a p-value of 0.000.

g) A significant and moderately stronger relationship exists between the study group and the overall marks obtained. This research shows that with a change in the study group from SNC to non-SNC, the students' marks are significantly increased. The strength of the relationship stands at 0.632 with a significant value of 0.000, and the relationship is significant at a 1% confidence interval.

5.1 Recommendations

a) Training programs for teachers training and education should be made available before and after introducing new curricula to prepare teachers for the difficulties they face. Lesson-learned workshops may also be introduced at the end of the academic year-end to share the best practices among teachers.
b) If SNC is to be implemented again, it must involve all the stakeholders, cater to their needs, be more flexible in its contents, and have extensive groundwork to be done.
c) Private schools hold a considerable share in the education sector, and according to ADB, private schools hold 64% and 58% share at middle and high schools; the implementation of SNC must bring on board the private schools associations, and for that matter, advocacy workshops may be conducted by the implementing authorities.

References

Abbas, Z. (2021). Single National Curriculum & Our Academic Torment. Retrieved from https://timesglo.com/single-national-curriculum-our-academic-torment/

Ahsan, H. (2021). *Analyzing the Pros and Cons of Single National Curriculum*.

Awais, S. (2021). Single National Curriculum in Pakistan. Retrieved from https://educations.pk/blog/2021/08/23/single-national-curriculum-in-pakistan/

Chaudhry, N. U. (2021). Implications of Single Curriculum. Lahore. https://learnpak.com.pk/wp-content/uploads/2021/03/Implications-of-Single-Curriculum-Nida-Usman-Ch.pdf

Dilshad, S. A., & Rehmat Shah, D. N. A. (2023). Implementation of Single National Curriculum at primary level: Problems and practices in district Khushab. *Journal of Positive School Psychology*, 465-476.

Federal Eduation Department, G. o. P. (2021). *Single National Curriculum*. Retrieved from http://www.mofept.gov.pk/ProjectDetail/MzkyNDc2MjMtY2VjYy00ZDA4LTk5OTUtNzUyNDI3ZWMzN2Rm

Hrivnak, G. A. (2019). The increasing importance of curriculum design and its implications for management educators. *Journal of Management Education*, *43*(3), 271-280. https://journals.sagepub.com/doi/abs/10.1177/1052562918822068?journalCode=jmed

Jamil, M. (2021). *An analysis of education policy and science teachers' practices for developing critical thinking skills in secondary school students, [PhD dissertation*, University of Management and Technology, Lahore, Pakistan].

Jamil, M., Ain, Q. u., & Chohan, I. R. (2024). Integration of core life skills in Physics textbook grade X: A qualitative content analysis. *Pakistan Journal of Law, Analysis and Wisdom*, *3*(6), 119-131.

Jamil, M., Aslam, M., & Ali, S. (2024). Single national curriculum (SNC) for Social Studies (2020): Document analysis for development of critical thinking skills at the primary level. *Pakistan Journal of Law, Analysis and Wisdom*, *3*(2), 67-74.

Jamil, M., Bibi, T., & Shahzadi, U. (2024). Critical thinking skills development among secondary school students: An analysis of Chemistry textbook grade X (2020). *Research Journal for Societal Issues*, *6*(2), 1-11.

Jamil, M., Bokhari, T. B., & Ahmad, D. (2024). Evaluation of critical thinking elements: A qualitative content analysis of physics textbook grade ix. *Qlantic Journal of Social Sciences*, *5*(1), 344-350.

Jamil, M., Bokhari, T. B., & Iqbal, J. (2024). Incorporation of critical thinking skills development: A case of mathematics curriculum for grades I-XII. *Journal of Asian Development Studies*, *13*(1), 375-382.

Jamil, M., Bokhari, T. B., & Rafiq, M. (2024). Critical thinking skills development for 21st century: An analysis of Biology curriculum (2006). *Voyage Journal of Educational Studies*, *4*(1), 127-138.

Jamil, M., Bokhari, T. B., & Zia, Q. (2024). Qualitative content analysis for critical thinking and skill development: A case of Chemistry curriculum. *Journal of Asian Development Studies*, *13*(1), 147-155.

Jamil, M., Hafeez, F., Abdul, & Muhammad, N. (2024). Critical thinking development for 21st century: Analysis of Physics curriculum. *Journal of Social & Organizational Matters*, *3*(1), 1-10.

Jamil, M., Jabeen, M., & Moin, M. Life skills in Biology textbook grade IX: A qualitative content analysis. Journal of Policy Research, 10(2), 429–434.

Jamil, M., Khalil, F., & Noorani, Z. (2024). Education for sustainable development: An analysis of English textbook grade-V. *Journal of Social Research Development*, *5*(2), 1-13.

Jamil, M., Mahmood, A., & Masood, S. (2023). Fostering critical thinking in Pakistani secondary school science: A teacher's viewpoint. *Global Educational Studies Review*, *8*(2), 645-659.

Jamil, M., Muhammad, Y., Masood, S., & Habib, Z. (2020). Critical thinking: A qualitative content analysis of education policy and secondary school science curriculum documents. *Journal of Research and Reflections in Education*, *14*(2), 249-258.

Jamil, M., Muhammad, Y., & Qureshi, N. (2021a). Critical thinking skills development: Secondary school science teachers' perceptions and practices. *Sir Syed Journal of Education & Social Research (SJESR)*, *4*(2), 21-30.

Jamil, M., Muhammad, Y., & Qureshi, N. (2021b). Secondary school science teachers' practices for the development of critical thinking skills: An observational study. *Journal of Development and Social Sciences*, *2*(4), 259-258.

Jamil, M., Rasool, S., & Moin, M. (2024). Sustainability education in english textbook grade VIII based on SNC (2022). *International Journal of Social Science & Entrepreneurship*, *4*(2), 180-196.

Jamil, M., Muhammad., Y., & Qureshi, N. (2021). Secondary School Science Teachers' Practices for the Development of Critical Thinking Skills: An Observational Study. *Journal of Development and Social Sciences*, *2*(4), 259-265.

Jamil, M., Arif, F., & Shahzadi, U. (2024). Integration of core life skills in Pakistan studies textbook grade IX. *International Journal of Social Science Archives*, *7*(2), 870-876.

Mehmood, M. J. W., & Saleem, A. (2024). Biology textbook grade X (2020): Analysis for the development of higher order thinking skills among secondary school science students. *Global Regional Review (GRR)*, *9*(1), 29-35.

Muhammad, Y. (2019). Pakistani national identity, curriculum reform and citizenship education textbooks: Understanding teachers' perspectives. *Journal of Research & Reflections in Education*, *13*(1), 103-122.

Naseer, H., Muhammad, Y., & Jamil, M. (2021). Critical thinking skills in Pakistan studies textbook: Qualitative content analysis. *Pakistan Journal of Social Research*, *4*(3), 744-755.

Patel, M. (2021, June 24). What is the Single National Curriculum proposed for schools in Pakistan and what are its criticisms? *the Indian express*. https://indianexpress.com/article/explained/single-national-curriculum-proposed-for-schools-in-pakistan-7373650/

PIDE. (2021). *What Really is the Single National Curriculum*. Webinar.

Sarfraz, H. (2020). *Single National Curriculum 2020- Early Childhood Care and Education*.

Shahid, S. M. (2020). *Curriculum and Instruction* [Course book]. Allama Iqbal Open University. https://www.aiou.edu.pk/SoftBooks/8655.pdf

TFT. (2021). Single National Curriculum Termed 'Chaotic', 'Misleading' By Experts. https://thefridaytimes.com/30-Nov-2021/single-national-curriculum-termed-chaotic-misleading-by-experts

UN. (2015, 21 October, 2015). *Transforming our world- The 2030 Agenda for Sustainable Development* [Resolution]. UN General Assembly, New York, United States. https://sdgs.un.org/sites/default/files/publications/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf

Vinayak, A. (2021). Single National Curriculum in Pakistan- a Recipe for Disaster? https://www.vifindia.org/2021/october/29/single-national-curriculum-in-pakistan-a-recipe-for-disaster

Zaman, M. S., Saleem, K., & Ali, S. (2021). Implementation of the Single National Curriculum (SNC) at Primary Level: Teachers' Expectations and Concerns. *Jahan-e-Tahqeeq*, *4*(4), 161-168.