

Examination-centered Approach Instead of Student-centered; Negative Washbacks, Spoiling Real Learning in Education

Qaisar Khan* and Sadia Ashraf**

Abstract

Assessment methods have more effects on the strategy of study; if an exam requires the recall of factual information, then students adopt the surface-level approach or rote learning (Newble & Jaeger, 1983). Measuring the learning outcomes of students is paramount for learning and teaching improvement. However, in the Pakistani education system, the scenario is quite contradictory. Instead of supporting learning, the exams are spoiling the real learning process. These exams have complete control over learning and teaching processes; all the pedagogies and strategies of stakeholders revolve around the examination. Negative washbacks are explored through a systematic review of twenty-year studies, which showed that in Pakistan, high-stakes (external exams) are mostly conducted and have predefined goals like promoting students to the next grade, giving them jobs, and admission to higher education. These goals were set in view of colonialism's requirements for the subcontinent. Still, our exams have the same goals even after decades of independence: rather than testing student learning, critical, analytical, and creative ability, our exams focus on testing the memory of students; thus, students and teachers adopt strategies of rote learning to score better in exams. Therefore, it is necessary to divert the approach from examination-centered to student-centered, which can promote our students' critical, analytical, and creative abilities instead of making them habitual to rote learning, cramming, and cheating, which is very dangerous for any country's educational system. Empirical recommendations rendered here can improve the examination system in Pakistan and foster critical, analytical, and creative thinking abilities.

Keywords: Assessment, Exams effects, Examination in Pakistan, Washback

* Department of Education, SMIU Karachi Pakistan. Email: theqaiserkhan@gmail.com

** Department of Management Science, Hazara University Mansehra

Introduction

The student-centered approach moves students from passive receivers of information to active participants, and at the system level, this requires implementing curriculum planning practices, pedagogy, and assessment methods that support a student-centered approach in its true spirit. This is an approach that has shifted educational culture toward a system that supports technology for standards-based learning and real-world problem-solving. Roll and Wylie (2016) reminded us that knowledge is now a verb (something we do) rather than a noun (something we possess). Through the current study, researchers investigated how the learning process is affected by an examination-centered approach.

What's meant by the examination-centered approach is that it's an approach that is neither student-centered nor teacher-centered, but it is different from both. In this approach, all matters of education revolve around the examination; the focus is not on the student's true learning but on passing or clearing exams with good marks by any means, whether through rote learning, memorization, regurgitation, guess papers, guidebooks, or even cheating. Practicality, critical thinking, comprehension, skill development, and creativity are overlooked. Students, teachers, parents, and even institutes are in the race to get good results for materialistic benefits. Implicitly, this approach is spoiling the real learning process for students here in Pakistan. As Rehman (2011) highlighted, our examination system is criticised for defining education as the pursuit of high marks instead of developing intellectual power through true learning. The current study is an attempt to scrutinize previous studies through a systematic review to cope with the negative effects of exams on education in Pakistan.

Pakistan is an Islamic and democratic state governed under the Federal Constitution of 1973, which has four autonomous provinces: Punjab, Sindh, Khyber Pakhtunkhwa, and Baluchistan. Educational functions are the responsibility of both provincial and federal ministries. Examinations are a legacy of the past, following the model of the University of London. In the 1880s, an external final examination called matriculation was instituted at the end of the high school stage. This matriculation was used as a gateway to government service and an entrance to higher education (Khattak 2012). Assessment plays a vital role in any educational setup because the teaching and learning process cannot be accomplished without it. But if the validity, reliability, and appropriateness of exams are not ensured, then their supportive role may be badly affected. Scholars in Pakistan have highlighted the negativity of its examination system through their different studies. Through the current study, all findings are synthesized for a comprehensive view of negative washbacks, their root causes, and appropriate solutions to overcome these effects.

Research Question

How is an examination-centered approach to teaching and learning affecting the real learning of students?

Research Objective

To investigate the effects of an examination-centered approach on the real learning of students.

Research Design

A systematic review strategy is used for this study because evidence was required for a particular focused area. The sample is selected in view of guidelines provided by PRISMA (preferred items included for systematic reviews and meta-analyses). Only 23 studies were chosen for review out of a total of 56.

Searching and Screening Strategy

The following three databases are used to locate the articles for this study: Google Scholar, JSTOR, and Google. The keywords "effects of exams on learning in Pakistan" are used to search the articles on browsers. Initially, 56 articles were located, which were passed through a selection criteria. The irrelevant articles were discarded through screening processes. The inclusion and exclusion process is explained in Table 1.

Table 1
Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion	Excluded studies
Language	English	Non-English language	05
Publication Date	Articles published since 2000	All other studies published < 2000	8
Abstract & Keywords checking	The articles having central keywords and themes	Studies not having central keywords and abstract	10

Findings of the Study

To synthesize the findings for a comprehensive view, the data are analyzed through thematic analyses, which show that examinations have a dominant position in the Pakistani educational system; they are not only affecting but steering the whole education. Exams determine what teachers teach and how students learn in the classroom. The actual goal of assessment is to support learning and teaching, but some

types of assessment that are not up to quality standards can impede the real learning process. This is happening in Pakistan because exams have more demerits than merits. Therefore, this examination system has been criticised a number of times by scholars (Rehmani, 2003). Shreds of evidence from the data about how exams are affecting and spoiling the real learning of students are discussed below in detail.

Wrong Objective of the Exam

The basic objective of exams is wrong in Pakistan because these exams categorize students into pass or fail groups to promote them to the next level or retain them at the same level; instead of this, exams should inquire to what extent precise and appropriate learning is achieved at any particular grade and what matters require more attention, particularly pedagogy and procedure. Summative assessment is used in Pakistan, which needs a lot of improvements because these students do not realize their learning deficiencies but instead focus on promoting themselves to the next level (Ishaq et al., 2020). The SSCE (Secondary School Certificate Exam) has significance because it opens up ways to get admission in medical, engineering, commerce, and other fields; not only that, it also provides a chance for government jobs. So students and teachers try their best to get good scores; for them, the only important thing is the examination; they do not focus on learning (Summro & Shah, 2016). Educational assessment in Pakistan is much more influenced by British colonization and is designed to only measure the ability of students to advance to the next level. Particularly the high-stakes examinations at the metric (10th grade) and intermediate levels (12th grade), which can determine the career options of students. Through different boards of examination, such assessments are conducted across all provinces of the country (Gouleta, 2015). The examination and assessment system of Pakistan at the primary and secondary levels was scrutinised by Khattak (2012) who found that this system does not judge real educational accomplishment. Our examination system is criticised for defining education as the pursuit of high marks instead of developing intellectual power through true learning (Rehman, 2011). Exams can play a vital role in improving the quality of education if their goal is to enhance teaching and learning. In Pakistan, we can achieve this through a combination of summative and formative assessment (Rehmani, 2003).

Promotes Rote Learning and Memorization

Exams are focusing on memorization and rote learning instead of high-order skills in Pakistan. The students who can reproduce, as it is, what they have learned are considered the best. A number of studies and scholars have highlighted this issue, as a recent study highlighted that our exams are focusing on knowledge and rote learning, which is an impediment in the way of true learning (Khattack et al., 2022). The impact of high-stakes exams was determined by analyzing seven tests in grades eight, nine, and

ten used for the preparation of high-stakes exams by tuition centers. The rubrics showed that, except for a few things, the rest of the content was a mere replica of ready-made notes and guidebooks, and instead of inducing real writing skills, these exams are inducing cramming ability (Mahmood et al., 2020). In our assessment process, only memory is tested, and we overlook important abilities like reading, writing, speaking, and listening in English language teaching. Due to effective assessment and a lack of interactive teaching techniques, English skills cannot be acquired (Ishaq et al., 2020). For determining the impact of exams and empirical evidence, 10 years of examination papers on different subjects from six different boards are analyzed in view of Bloom's Taxonomy. It was found that 41% of the items in the papers in grade ten required memorization, 52% of the items in Grade 12 required comprehension, and 0% of the items required creative and analytical ability (Rind & Mari, 2019). The SSC (secondary school certificate) exam in Pakistan for grades nine and ten is not learning-centered but examination-centered; ultimately, this gives birth to rote learning instead of practical. The researcher concluded that only those items were taught in classes that are expected to be tested in exams, the grammar-translation method is used in class, and students are directed to revise previous papers, but these practices increase grades and destroy learning (Summro and Shah, 2016). In KPK (Khyber Pakhtunkhwa) Pakistan, most assessments are non-standardized and not significant, which promotes rote learning instead of critical and analytical thinking (Gouleta, 2015). An interview of 12 college participants by Aftab et al. (2014) explored that students in intermediate class mostly depend on rote memorization because it is examination-oriented. Cramming and rote learning are encouraged by our poor examination system (Rehman, 2011). A researcher in another study also showed the same result, as 95% of participants in a case study agreed with the opinion that these exams create pressure on students and promote rote learning (Rehmani, 2003).

Crushing Creativity, Critical Thinking, and Analytical Ability

Mahmood et al. (2020) explored the effects of high-stakes exams on creative writing skills in Pakistan by analyzing the preparation tests of tuition centers for eight, nine, and ten grades. Through self-developed rubrics, it was found that in the beginning, students at tuition centers tried to write by themselves, but later on, they were suggested to concentrate on memorization to avoid mistakes and for good scores in exams, thus closing the doors of learning by self and killing the potential to write creatively. It contradicts the theory of trial and error developed by Thorndike in 1898. Reayat et al. (2020) highlighted that major overhauling needs to be done to assessment in law education in Pakistan because the archaic method is used to assess the abilities of law students and is not able to measure the critical analysis ability of students, unlike developed countries, which focus on the critical abilities of students. The Asian Bank

(2019) report also shows evidence that exam quality is poor, which is conducted by the BISEs in Pakistan. Because it focuses on rote learning and memorization instead of high-order skills, which are a real learning process. The examination's question papers for 10 years of English in Grade 10 and Grade 12 were analyzed by Rind et al. (2019); the researchers were surprised to find that there were hardly any analytical or creative-level questions in the 10 years papers. The assessment in Pakistan is non-standardized, which does not significantly measure the learning quality, critical thinking, or analytical ability, but rather measures rote learning (Gouleta, 2015).

Inappropriate Pedagogies

Due to deficiencies, decline, unreliability, weaknesses, and inappropriate design and content of exams, teaching practices are negatively affected (Ishaq, 2020). The Asian Development Report (2019) highlighted that BISE in Pakistan, which conducts secondary-level public exams, has no capacity to design and score effective tests or to use data as feedback for the improvement of teaching pedagogies. Another study was conducted by Rind et al. (2019), who scrutinized the examination question papers of BISE (Board of Intermediate Secondary Education) Sukkur by using desk review. In this study, teachers and students from schools affiliated with BISE Sukkur were interviewed to know how the examination pattern influenced the teaching and learning process. It was found that teachers yield examination-oriented pedagogies because memory is measured in exams; therefore, students and teachers adopt strategies that promote memorization and comprehension. Summro and Shah (2016) investigated the effects of the SSCE (Secondary School Certificate Exam) on teaching methods of English teachers in Tehsil Faiz Gang Bakhsh, Pakistan; the impacts, like materials, methods, contents, and arrangements, were explored by a 16-item questionnaire from 50 teachers. The researcher showed through the result of his study a strong effect (4.42) of the teaching method according to SSC priority: things are focused, measured, and ignored. The content selection also indicated a strong effect (3.85) according to SSC objectives. Adnan and Mahmood (2014) stated that the teachers adopted teaching methods that were suitable for preparing students for the HSSC (Higher Secondary School Certificate) exam, not for learning. Aftab et al. (2014) interviewed six teachers and six students of a women's college to know the Washback of the intermediate English exam; the result indicated the direct influence of the assessment procedure on teaching because they are teaching towards the examination; listening and speaking are ignored in favor of reading and writing, which will be tested. Jilani (2009) highlighted that education in Pakistan is strongly affected by examinations, particularly the teaching and learning of English.

Examination Phobia

A survey in Lasbela, Baluchistan, Pakistan, investigated the fear of students to learn English; these students were unwilling to speak English (Ishaq et al., 2020). In Pakistan, most teachers are following the traditional practices for classroom assessments, which is an identified factor having a low contribution to students' learning outcomes; not only that, but these practices also result in exam anxiety in students (Hussain et al., 2019). The education system of Pakistan is causing different mental health problems like stress, insomnia, maladjustment, and anxiety; achievements in exams are also affected due to these mental problems. A survey was conducted with a sample of 172 ten grade students from a public secondary school in Quetta, Pakistan. The Westside Test Anxiety Scale, an adapted questionnaire, is used to measure the anxiety test score of students. Participants willingly filled out questionnaires from selected examination centers on the basis of their personal feelings of worry during, after, and before exams. Statistics from the study show that 99% of male and 97% of female respondents feel anxious at the time of exams. Exam anxiety leads to a decline in academic achievements and cognitive functioning (Anwar & Batol, 2019). Khatoon and Parveen (2009) highlighted that fear of examinations makes students nervous and causes poor academic performance. A case study by Rehmani (2003) evaluated its results and found that 95% of respondents agreed with the opinion that exams in Pakistan put pressure on students.

Selective Study

Punjab Examination Commission (PEC) conducts the high-stakes exam for grade eight. By using an explanatory sequential design (qualitative followed by quantitative), the impact of this exam is measured by survey data from 521 students and interviews from 28 teachers of elementary schools, which showed that this examination is controlling the curriculum as previous papers are being used for subsequent exams and the curriculum is narrowed to objective-type items. Selective study and helping books are encouraged for preparation for these exams, and those subjects that are neglected in exams are ignored (Masood et al., 2020). By analyzing the tests of tuition centers that prepare students for high-stakes exams in Pakistan, it was found that no student tried to attempt paraphrasing, dialogue, or paragraph writing; instead, they attempted those things that they had prepared for through selective study (Mahmood et al., 2020). The use of previous papers for examination preparation is observed by Aftab et al. (2014), which narrows the whole syllabus scope. Adnan (2014) diagnosed the influence of the HSSC (Higer Secondary School Certificate) exams on teaching material selection; the lessons and selective material have been given considerable importance, which was tested in the exams.

Discussion

Considering the assessment, a number of questions are required to be answered, i.e., How to develop and implement the assessment? Whether it is reliable and valid? Whether it is appropriate academically, pedagogically, culturally, contextually, and linguistically? How will the results be calculated, interpreted, and analyzed? How will the data be used to evaluate the improvement of the education system? (Gouleta, 2015). If all these important aspects are considered in assessment, then it will be supportive of the teaching and learning processes of students. But when inappropriate assessment procedures are adopted, instead of a supportive role, they will have a negative impact on the whole teaching and learning activity; this is actually happening here in the Pakistani educational system. Scholars in previous studies have highlighted a number of issues regarding the examination system in Pakistan.

The gap in previous studies is that scholars have not provided a comprehensive view of how the examination system is affecting teaching and learning. In this study, by synthesizing the findings, it is critically appraised that this examination system is the root cause of rote learning and how the creativity, critical thinking, and analytical abilities of students are being crushed. This study not only explored the link between exams and the learning process but also how to mitigate these negative washbacks through modern and innovative alternative exam strategies. If these modern alternative exam strategies are used in the Pakistani educational system, it can improve students' creativity and critical and analytical abilities, which are important factors in learning. Not only that, but they are the real power for the development of any nation in scientific and other fields.

This study supports previous studies findings, such as that rather than assess knowledge, passing exams has become the main goal of our education system, and so all activities are geared toward this (Khattak 2012). In the current study, the negative impact of exams on learning in the Pakistani educational system is discussed in detail. In previous studies, researchers found that learning is highly affected by this examination system, which requires a lot of improvement on an urgent basis.

Conclusion

The foremost intention of assessment is to support the learning and teaching process, but in the Pakistani education system, the scenario is quite contradictory. Instead of supporting learning, the exams are spoiling the real learning process; these exams have complete control over learning and teaching processes. All the pedagogies and strategies of stakeholders revolve around the examination. Thus, the overhaul approach has become an examination-centered approach instead of a student-centered one. Due to the

summative approach, mostly high-stakes public exams are practiced, which are conducted annually. The scores in these exams have a great influence on students' lives, particularly in grades nine, ten, eleven, and twelve. Good scores on this level may endorse a bright future for students by getting government jobs or by getting admission to renowned higher educational institutes to be a doctor, engineer, journalist, or any other high-class post. All the marks (scores) are allocated on the basis of summative assessment; nothing is allocated for formative assessment; thus, it has no importance in students, teachers, and parents' perceptions, and they all ignore formative assessment everywhere. But scholars declared the importance of formative assessment because learning is deepened and enhanced by formative assessment, and real learning can take place only when it develops an understanding of students, which can enable them to apply the knowledge and skills in a different context (Aftab et al., 2014). As an example of the Aga Khan Examination Board in Pakistan, which does not adopt a stereotype style like other boards and shows quite diametrical results and positive learning attainments (Burdett & Everett, 2015). A review of 23 published research papers showed a lot of negative washback of exams' in the Pakistani educational system; these exams promote rote learning instead of critical, analytical ability. The creativity of students is also ignored absolutely by these exams; students use previous papers, guides, and other materials for preparation because questions are repeated after some years. Not only students, teachers, and parents, but institutes also adopt strategies and pedagogies to pass their students with good grades by any means. Thus, instead of focusing on improvement in the learning process, the main aim of exams is to promote students to the next grade, get them a government job, and get them admission to renowned educational institutes for higher education. Therefore, the quality of education in Pakistan is not improving, and the education system is not satisfying the national requirements. To cope with the situation in a better way, the empirical suggestions and recommendations are equal distribution of marks between summative and formative assessments, SLO-based exams instead of textbook-based exams, use of portfolios, practical exams, classroom assessment, open-book exams, organizing the data of exams and using it appropriately for feedback, a bilingual strategy, and a major assessment policy. These suggestions can improve exam techniques, which will subsequently improve the learning process and quality of education as well.

Recommendations

Through our current study, we suggest following empirical and practicable recommendations that can improve the examination system in Pakistan.

Appropriate Distribution of Marks

Public exams are conducted in Pakistan mostly under summative assessment and carry 100% marks, due to which these exams are very much focused in Pakistan because marks in these exams have a great impact on students and institutes futures. Marks should be divided as 50% for summative and 50% for formative assessments; thus, students, teachers, institutes, and parents will focus on both formative and summative assessments. This formative assessment will get equal importance and can play a role in the quality improvement of education. Rehman, (2003) also suggested, in his study, to divide public exam marks between summative and formative assessments.

SLO-based Exam Instead of Syllabus-based

The exams should not be based on textbook syllabus but on standard learning objectives; there are learning objectives for every subject in any particular grade that are achieved through a syllabus textbook. Currently, questions for papers are selected from these textbooks, and students memorize them through rote learning. If we make questions according to learning objectives that students achieved during the whole tenure, students will not have the option to memorize them by rote learning; they have to apply critical thinking and analytical ability. Actually, the goal is not to memorize the textbook but to learn the required objective.

Bilingual Strategy

As the trend of English medium is highly promoted in the country, exams are also mostly conducted in English medium, and the English language is also a cause of negative Washback because some students are afraid of English, others fail to understand it, and some cannot elaborate on their answers in their own words. So they memorize the questions and answers from textbooks as they are without understanding them; particularly when it happens in science subjects that students fail to understand things and pass exams through rote learning, it causes the destruction of nations in the scientific field. So questions should be present in both English and Urdu, and it should be optional for students to write answers in English or Urdu. In this way, students will have a chance to use their critical and analytical abilities to answer questions.

Practical Exam

Only theoretical questions in written exams are not enough for measuring students abilities; therefore, practical exams should be used and should have marks in final scores because, through practical exams, students' can practice applying their knowledge in real life. Different studies also support the practical exams, as Hussain proposes to involve the students in practical work to develop their thinking abilities rather than using

only traditional assessment methods (Hussain et al., 2019). Students in developed countries are tasked with writing assignments with critical arguments by using recent published and authentic work. Students try to find gaps in knowledge and come up with new ideas, thus promoting creativity (Reyat et al., 2020).

Classroom Assessment Practices

Classroom assessment practices improve teachers' teaching and students learning; through this, we can observe progress toward goals, strengths and weaknesses, and the level of understanding of students. The classroom is a platform for various activities, and teachers spend considerable time teaching and assessing the students. Informal assessments have a positive contribution to students' achievement, i.e., rubrics, portfolios, group work, and classroom discussion. Assessment tools are classified by Gronlund into traditional tools such as MCQs, fill-in-the blanks, true-false, and matching items, which need less time and difficulty level, and alternate types of tools such as portfolios, observations, and other performance, which require more time and are more complex but motivational for students (Husain, 2019).

Portfolios

Portfolios present and exhibit the student's progress, efforts, and achievements in one or more areas through a purposeful collection of work; they are a showcase of the student's best work, growth over time, and evidence of change, success, failure, and struggle. Hussain et al. (2019) suggest the use of alternate assessment methods in the education system of Pakistan, such as portfolio assessment, the use of rubrics for the scoring of students' performances, and checklists or non-participant observations, that are close to student learning and student interest. Portfolios are the best option for seeing the whole year's achievements.

Open-Book or Seen Content Exam

According to Rind et al. (2019), the examination system in Pakistan is an unseen assessment system; for measuring 'evaluate and creative skills, an open-book assessment is required. In the modern world, open-book exams are also practiced to give students the chance to evaluate things with their own ideas. In Pakistan, only unseen assessment is in progress. To renovate the education system and exam techniques, an open-book system should be practiced.

Data Analysis for Feedback and Improvement

The exam's data were also not analyzed and used as feedback for improvement in Pakistan (Ishaq et al., 2020). Data are very important if they are organized properly and used appropriately in the education sector; improvement through feedback is a basic phenomenon for any system.

Focus on Formative Assessment

Rehmani (2003) makes clear that formative assessment can enhance and deepen learning; through feedback, the weaknesses of students, teachers, and the system can be resolved. But in Pakistan, summative assessment is in the dominant position; all the marks in exams are obtained by this. That's why formative assessment is not given any importance, so it can't play a positive role in the education system. To improve education, formative assessment needs a lot of space.

References

- Adnan, U., & Mahmood, M. A. (2014). Impact of public examination on teaching of English: A washback perspective. *Journal of Education and Practice*, 5(2), 132-139. <https://www.iiste.org/Journals/index.php/JEP/article/view/10649/0>
- Aftab, A., Qureshi, S., & William, I. (2014). Investigating the washback effect of the Pakistani Intermediate English Examination. *International Journal of English and Literature*, 5(7), 149-154. <https://doi.org/10.5897/IJEL2013.0521>
- Anwar, N., & Batool, B. (2019). Effects of exams anxiety as per gender variance at secondary school level in district quetta. *Pakistan Journal of Educational Research*, 2(2). <https://doi.org/10.52337/pjer.v2i2.25>
- Burdett, N., & Everett, H., (2015). The impact of an examination board in Pakistan on student outcomes. *National Foundation for Educational Research, Slough, UK*. [_Burdett_RISEconferencepaper.pdf](#)
- Gouleta, E. (2015). Educational Assessment in Khyber Pakhtunkhwa Pakistan's North-West Frontier Province: *Global Education Review*, 2(4), 19-39. <https://ger.mercy.edu/index.php/ger/article/view/192>
- Hussain, S., Shaheen, N., Ahmad, N., & Islam, S. U. (2019). Teachers' classroom assessment practices: challenges and opportunities to classroom teachers in Pakistan. *Dialogue*, 14(1), 88-97. <https://rb.gy/3lzzr5>

- Ishaq, K., Rana, A. M. K., & Zin, N. A. M. (2020). Exploring Summative Assessment and Effects: Primary to Higher Education. *Bulletin of Education and Research*, 42(3), 23-50. <https://files.eric.ed.gov/fulltext/EJ1291061.pdf>
- Jilani, R. (2009). Problematizing high school certificate exam in Pakistan: A washback perspective. *Reading*, 9(2).https://www.readingmatrix.com/articles/sept_2009/jilani.pdf
- Khatoon, S., & Parveen, F. (2009). Examination phobia among secondary level students. *International Research Journal of Arts & Humanities (IRJAH)*, 37(37). <https://sujo-old.usindh.edu.pk/index.php/IRJAH/article/view/1052>.
- Khattak, S. G. (2012). Assessment in schools in Pakistan. *SA-eDUC*, 9(2). <https://rb.gy/a8en6i>
- Mahmood, M. I., Mobeen, M., & Abbas, S. (2020). Effect of High-Stakes Exams on Creative Writing Skills of ESL Learners in Pakistan. *Research Journal of Social Sciences and Economics Review*, 1(3), 169-179. <https://rb.gy/rnc8kq>
- Masood, S., Hameed, A., & Tatlah, I. A (2018). Effect of Examination on Curriculum at Elementary Level in Punjab: A Mixed Methods Study. *Journal of Elementary Education*, 27(2), 147-162.
- Mogapi, M. (2016). Examinations Wash Back Effects: Challenges to the Criterion Referenced Assessment Model. *Journal of Education and e-Learning Research*, 3(3), 78-86. <https://files.eric.ed.gov/fulltext/ED569173.pdf>
- Naveed-Ur-Rehman Khattak, D., & Sohaib Sultan, D. (2022). Washback Effects of Exams On English Language Learning: An Analysis of PEC English Question Papers in Pakistan. *Journal of Positive School Psychology*, 6(10), 52-60. <https://journalppw.com/index.php/jpsp/article/view/12836>
- Newble, D., & Jaeger, K. (1983). The effect of assessments and examinations on the learning of medical students. *Medical Education*, 17(3), 165–171. <https://doi.org/10.1111/j.1365-2923.1983.tb00657.x>
- Reayat, N., Shah, A., & Shah, S. a. A. (2020). The Problems of Legal Education in Pakistan: Teaching and Learning, Curriculum, and Assessment Methods. *International Review of Management and Business Research*, 9(4), 357–368. [https://doi.org/10.30543/9-4\(2020\)-30](https://doi.org/10.30543/9-4(2020)-30)

- Rehmani, A. (2003). Impact of public examination system on teaching and learning in Pakistan. *International Biannual Newsletter ANTRIEP*,8(2), 3-7. <https://rb.gy/kntp90>
- Rehman, H., & Khan, N. (2011). Flaws in Pakistan's Educational System. *Abasyn University Journal of Social Sciences*, 4(1). <http://ajss.abasyn.edu.pk/admieditor/papers/V4I1-5.pdf>
- Rind, I. A., & Malik, A. (2019). The examination trends at the secondary and higher secondary level in Pakistan. *Social Sciences & Humanities Open*,1(1), 100002. <https://doi.org/10.1016/j.ssaho.2019.100002>
- Roll, I., & Wylie, R. (2016). Evolution and Revolution in Artificial Intelligence in Education. *International Journal of Artificial Intelligence in Education*, 26(2), 582–599. <https://doi.org/10.1007/s40593-016-0110-3>
- Rind, I. A., & Mari, M. A. (2019). Analysing the impact of external examination on teaching and learning of English at the secondary level education. *Cogent Education*, 6(1), 1574947. <https://doi.org/10.1080/2331186X.2019.1574947>
- Soomro, A. H., & Shah, S. Z. A. (2016). Effects of washback on high school teachers of English. *International Journal of English and Education*, 6(2), 201-210. <https://rb.gy/cocdtg>
- School Education in Pakistan: A Sector Assessment. (2019, October 1). Asian Development Bank. <https://dx.doi.org/10.22617/TCS190039>