

**RESEARCH PAPER****Creativity in English Question Papers of Cambridge O-Level and Matriculation in Pakistan: A Comparative Study****¹ Areej *, ²Dr. Syed Kazim Shah and ³Dr. Muhammad Ilyas Mahmood**

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Corresponding Author kazim.shah@gcuf.edu.pk**ABSTRACT**

Creativity is the ability to generate new and valuable ideas, concepts, or solutions that are unique, original, innovative, and meaningful. This study aims to analyze the creativity in question papers of Matriculation Part II and Cambridge O levels Part II (O2). The design used for this study was exploratory sequential mixed method design. Data was collected in the form of question papers from both groups which was qualitatively analyzed using CRL's five-dimensional model of creativity as a framework for coding of data. The quantitative analysis was performed on the coded data using SPSS to calculate the results. The results of the study revealed creativity in the question papers of Matriculation and O levels. However, there was also a statistically significant difference in creativity in the question papers of both groups. This study has implications in the field of ESL, EFL, education, and evaluation. This study is also significant for teachers, researchers and policy-makers of language evaluation.

Keywords: Cambridge, Five-Dimensional Model of Creativity, Matriculation, Question Papers**Introduction**

Creativity is the ability to generate new and valuable ideas, concepts, or solutions that are original, innovative, and meaningful. It involves the capacity to think and act that go beyond conventional or traditional approaches bringing about novel and useful outcomes. It is the fundamental human capacity that contributes to innovation, personal growth, and societal advancement. It plays a vital role in fostering progress, generating new ideas, and solving complex problems in a wide range of contexts. Creativity is not limited to specific domains or fields but can be observed and cultivated in various areas including the Arts, Science, Technology, business, education, and everyday life. Creativity in a product is the level of originality, innovation, and uniqueness demonstrated in its design features or functionality. It involves the ability to generate new and valuable ideas, and solutions or concepts that differentiate the product from existing offerings in the market. A product is said to be creative if it has novelty, resolution, and style. Novelty refers to the newness of the product. It differentiates the product from its older versions because of it being original and creative. Resolution is the ability to counter the needs of the people. If a product is serving what it was meant to be created for, then it has resolution. Style is a new feature that is considered in the products. It relates to the presentation of the product, its design and visual appeal. Some researchers have introduced more than three features of a creative product but if a product has the aforementioned three features, then it is said to be creative (O'Quin & Besemer, 2017).

Previous research on creativity has focused on measuring creativity of people and products. Some researchers have developed scales that have explicit criteria to measure creativity. However, some researchers believe that no explicit criteria can measure creativity. They believe that experts in the field can measure the creativity of products with

implicit criteria because the scales and models of creativity are not universal and thus cannot be applied to every creative product. The researcher favours the former point of view as implicit criteria to measure creativity is not considered a valid approach in some cases because as compared to scales of creativity measurement, it is not that reliable. The null hypothesis is that there is no creativity in question papers of Matric and O levels while the alternative hypothesis is otherwise.

Literature Review

Convergent and divergent thinking are two different cognitive processes that humans use to approach problem-solving and creative thinking tasks. Convergent thinking is a process of narrowing down possibilities to find a single correct solution or answer to a specific problem. It is a linear and focused approach that relies on logic, critical thinking, and the application of existing knowledge and rules. Convergent thinking exercises finding a single right answer. It is used in standardized tests and situations with well-defined answers. It is focused and goal-oriented. It requires a solution with a limited set of options. There is little room for creativity in convergent thinking. On the other hand, diverging thinking is a process of generating multiple, diverse, and creative ideas or solutions to a problem. It involves exploring various possibilities, brainstorming, and thinking outside the box. It is not rigid in its approach and it does not support a single right answer. It encourages the generation of multiple different ideas. It values creativity, originality, and unconventional approaches. It allows for flexibility and open-mindedness and it is often used in creative problem-solving. It encourages free-flowing thoughts and fosters creativity and imagination (Hommel et al., 2011; Kharkhurin, 2009; Valijonovna, 2022). Both convergent and divergent thinking are valuable in different contexts. Convergent thinking helps to arrive at precise solutions when there is a definite answer to be found while divergent thinking helps in generating innovative and imaginative ideas, especially in complex situations.

In EFL classrooms, convergent thinking plays a vital role in doing tasks related to grammar vocabulary, reading comprehension, error correction, translation, etc. However, divergent thinking should be promoted in EFL classrooms at the school level to inculcate in the EFL learners the ability to think and process creatively such as doing tasks related to writing a creative essay to describe something, to express personal opinions and arguments, responding to open-ended questions that require thoughtful and reflective answers, or writing a creative story based on any given theme. Tasks like these can only be done if divergent thinking is being promoted in language classrooms and in the assessment of the language of EFL learners (Kharkhurin et al., 2023; Runco & Acar, 2019). The history of assessment of creativity in education began with the speech of Guilford to the American Psychological Association in 1950. Later, researchers developed measures of creativity for assessment. In the latter half of the 20th century, measuring creativity in education shifted from the hands of educators to those of psychologists. They measured creativity in persons as a personality trait which later moved towards the assessment of creativity as a product.

Cumming and Maxwell (1999) highlighted the importance of the development of authentic assessments to assess the performance of students as it motivates the students and increases their interest in learning (Cumming & Maxwell, 1999 as cited in Long et al., 2022). Long et al., (2022) examined and reviewed articles on the assessment of creativity in education from 2010 to 2021. Their findings revealed that the assessment of creativity is split between education and psychological point of view. They reported that divergent thinking or creativity tests, self-report questionnaires, and product-based subjective techniques have been used to assess creativity in education. Newmann and Archbald (1992) proposed that the primary objective of authentic achievement is to foster higher-order thinking and problem-solving abilities that benefit both individuals and society. Authentic achievement should result in constructive learning and the development of advanced thinking and problem-solving skills. According to conventional knowledge, creativity in

products is marked by two key components. One of these is novelty, uniqueness, or presentation of innovation in a product and the other one is the appropriateness of a product, its utility, worth, and ability to address a problem are considered as being crucial to creativity (O'Quin & Besemer, 2017). These two components should be balanced in a creative product, otherwise, the product may seem odd or weird to its users. O'Quin and Besemer (2017) also highlight a third component of creative products which is the product's aesthetic quality or the way it is presented to the people. Cropley and Kaufman (2012) listed four components of creativity which are "relevance and effectiveness, novelty, elegance, and genesis."

Whether it is in education, business, or the arts, evaluation serves as a tool for recognizing and appreciating creative achievement and creative products. In business, the evaluation of creative ideas is essential for identifying the products' marketing potential. New product ideas are assessed and prioritized based on their level of originality, novelty, and visual appeal. Evaluation of creative products in the field of business helps the organizations to make informed decisions about creative products. In education, the evaluation of creativity is important as the students' works of art, writing, and science are considered evidence of learning and aptitude. Teachers assess and provide feedback on creative assignments, projects, and presentations to evaluate students' understanding, skill development, and ability to think outside the box. Through evaluation, educators can identify areas for improvement, nurture students' creative talent, and promote growth in their creative thinking and problem-solving abilities. Much importance is given to the creative ability of students, however, there is less concern regarding the creativity of teachers and educators. Assessing the creativity of students is important however the evaluation of the kind of assessment taken from students should also be considered. Matraeva et al., (2020) analysed factors affecting creativity in higher education. The study used a mixed-method approach. The data was gathered in the form of surveys from students across various disciplines and interviews with experienced creative professionals. The findings of the study emphasized the significance of a supportive educational environment, intrinsic motivation, and institutional commitment in fostering creativity in students. Challenges such as rigid curriculum and limited resources were also identified. This study advocates prioritizing creativity in higher education to better equip students for future challenges and contribute positively to societal progress.

Ellianawati et al., (2020) examined the creative thinking abilities of high school students focusing on the topic of linear motion. The findings of the study indicated that students' stimulation to solve problems using various representations remains somewhat limited in creativity. Observations, questionnaire responses, and interview results supported this conclusion and highlighted the need for more opportunities to encourage students to respond creatively in their problem-solving. Lutnæs (2018) examined the topic of creativity in assessment rubrics. Data was collected in the form of an assessment repertoire of Norwegian art and crafts teachers concerning creativity. The findings of the study shed light on the dispositions of a creative mind that Norwegian art and crafts teachers cultivate through assessment. The study also highlighted the potential role of Norwegian teachers in fostering creativity in design education at various levels. Creative Product Analysis is the technique of thoughtfully evaluating products or ideas for products in an unbiased manner to assess the qualities of the product. Creativity in a work is inherently a matter of opinion. There are several ways of evaluating the creativity of a product and this evaluation helps to demonstrate the creative people, processes, and environments. Researchers have developed measures of creativity to evaluate the creativity of people, products, and domain-specific creativity. Some researchers have made an effort to develop general criteria for creativity that may be used to evaluate creative products from a variety of areas.

Amabile's (1983) Consensual Assessment Technique (CAT) has been influential in research of creativity in products, using expert judges to evaluate creative products. The CAT assumes that experts have developed their own implicit criteria for evaluating creative products. They do not use any scale of the construct of creativity. This measure of creativity solely relies on the expert judges in the field. They rate the creative products and then an average is calculated of their ratings. The inter-judge reliabilities of CAT are high which makes it useful in the art world and decision-making about the product. However, CAT also has limitations such as being limited to a specific sample and having a correlation with judges' liking for the products. But in many studies, it also has shown good reliability and validity. In 2005, Cropley and Cropley developed the Creative Solutions Diagnosis Scale (CSDS) which is an instrument based on criteria. In 2015, they documented the development of the measurement of creative products in the broader context of organizational innovation (Cropley & Cropley, 2015). The Innovation Phase Assessment Instrument (IPAI), a new instrument they introduced in their book for measuring innovation, enables a complete evaluation and improvement of the creative process inside an organization. Besemer and Treffinger (1981) analysis of creativity literature led to the development of the Creative Product Semantic Scale (CPSS). The CPSS is based on Creative Product Analysis Matrix (CPAM). CPSS focuses on three major dimensions of creative products which are Novelty, Resolution, Elaboration and Synthesis which is now called Style. Besemer and O'Quin (1999) conducted multi-dimensional studies on creative product analysis, focusing on product characteristics. The sub-scales were later updated by Besemer and the three-dimensional model was refined. Reis and Renzulli (1991) created the Student Product Assessment Form. This includes nine criteria for teachers to evaluate creativity in students' work. The criteria for evaluation are explicit in it. This also gives justification for the reason of students' work is or is not considered creative.

Lucas (2016) presented a Five-Dimensional Model of Creativity for the assessment of creativity in schools. This model was developed by Centre for Real-World Learning (CRL) and is based on five Creative Habits of Mind. This model evaluates the development of creativity in school students in their formative assessments. It has five core habits, each having five sub-habits. The core habits being: Inquisitive, Persistent, Imaginative, Collaborative, and Disciplined. In total, it assesses creativity through fifteen aspects or creative habits. The field trials of this model showed that it is possible to assess creativity in schools. Teachers also consider this model valid for the assessment of students in schools.



Figure 1: CRL's Five-Dimensional Model of Creativity

The present study utilized this model to assess creative products in schools, i.e., question papers of Matric level and its equivalent O levels in the Cambridge system. The

reason behind using this model and not following the traditional instruments of creativity assessment of products is the nature of the analysis that this study aimed to conduct. The other instruments used for creative product analysis do not go well with the analysis of question papers. Therefore, this model was used for analysis.

Material and Methods

This study used an exploratory sequential mixed-method design. The data was qualitatively analyzed first and later it was described with a quantitative analysis. This study has taken data in the form of 20 question papers of Matric Part II (Class 10) and its equivalent Cambridge O levels question papers. 10 question papers of Matric from all boards of Punjab were selected for the year 2023. From Cambridge O level Part II, 10 questions papers were selected. As Cambridge O level Part II exam has two question papers i.e., Writing and Reading; therefore, five papers of writing and five papers of reading are selected. This study used CRL's Five-Dimensional Model of Creativity presented by Lucas (2016) for the assessment of creativity in schools. This model has five dimensions (core habits), each having three subtypes. In total, 15 aspects of creativity can be evaluated using this model. The researcher used this model as a framework for the coding of data. Data was coded in Excel in the form of 0 and 1 where 0 represents the absence of a feature and 1 represents the presence of a feature. Coded data was then analyzed using SPSS, statistical software for quantitative data analysis. An Independent t-test was applied to the data to compare the results of both groups, i.e., Matric Part II and Cambridge O level question papers. The coded data has been presented in the form of graphs.

Results and Discussion

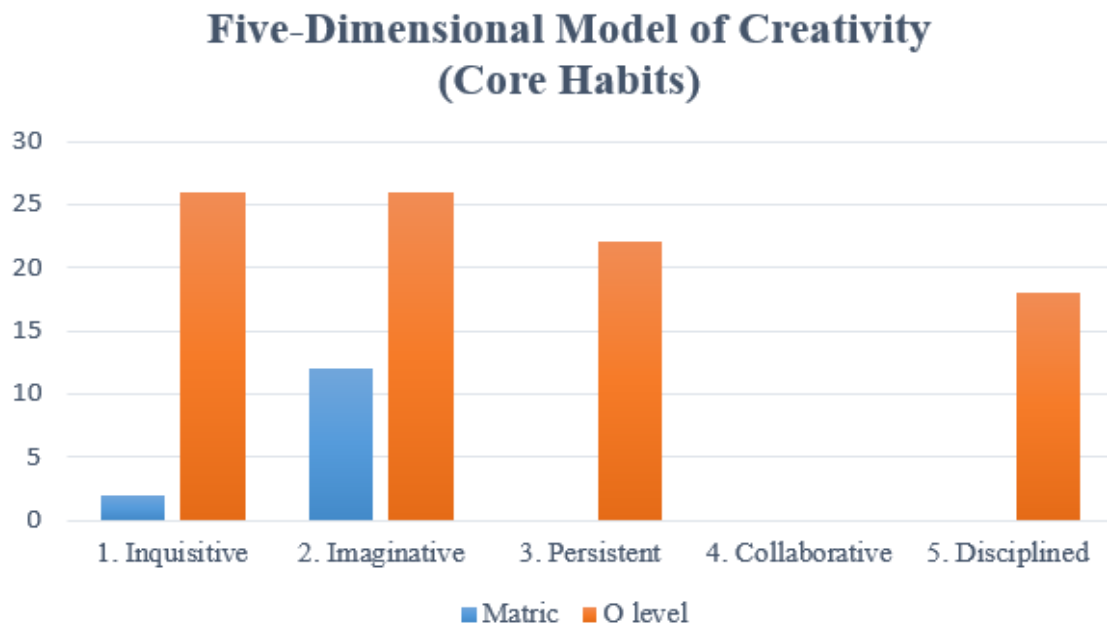


Figure 2: Five-Dimensional Model of Creativity (Core Habits)

Figure 2 shows a graph of core habits of the five-dimensional model of creativity. This shows that Matric papers are inquisitive (ask interesting and worthwhile questions) and imaginative (help learners to think of imaginative solutions and possibilities). However, the frequency of both aspects as compared to Cambridge O level paper is very low. On the contrary, the Cambridge O level paper is inquisitive, imaginative, persistent (dares to take risks and go beyond familiar ideas), and disciplined (crafting and improving the creative

product). The frequencies of these aspects on Cambridge paper are comparatively very high. The collaborative dimension does not appear in both papers because exams are a way of formative assessment of individual students. Therefore, the collaborative dimension is on purpose avoided in both kinds of papers.

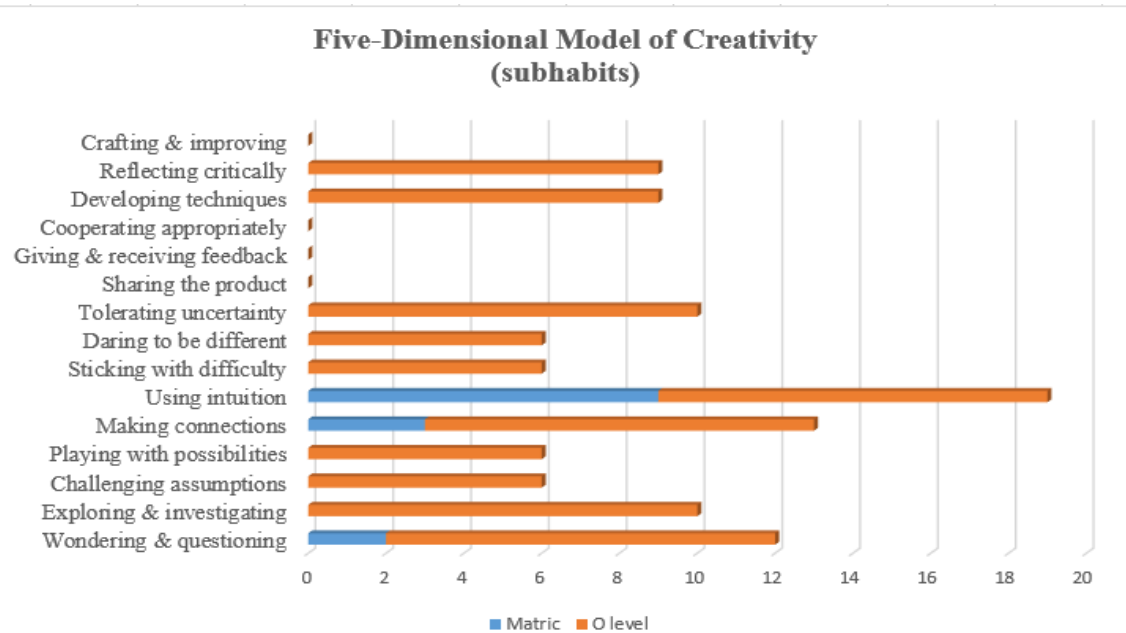


Figure 3: Five-Dimensional Model of Creativity (Subhabits)

Figure 3 shows the sub habits of creativity as per the five-dimensional model of creativity. It is evident from the above graph that the Matric paper incorporates only three sub habits of creativity that are only found in some papers on essay writing questions. On the contrary, the Cambridge O level paper has incorporated almost all the dimensions of creativity and its sub habits except the one related to the collaborative dimension because it is a formative assessment of individual students.

As mentioned earlier, the main objective of this study was to assess creativity in question papers of Matric Part II and O levels and to highlight the difference in creativity between the two. The results obtained after applying t-test on the coded data are discussed below:

**Table 1
Group Statistics**

Question Paper		N	Mean	Std. Deviation	Std. Error Mean
Five-Dimensional Model of Creativity	Matric Question Paper	15	.93	2.404	.621
	Cambridge O Levels Question Paper	15	6.13	4.155	1.073

T-test was applied to compare the means of two groups. If there is no difference in both means, the null hypothesis is accepted. If there is a difference in both means, then the null hypothesis is rejected. Table 1 shows that there is a difference between the means of both groups, i.e., Matric and O levels question papers. Table 2 indicates that the difference between the means of both groups is statistically significant ($P < 0.05$) i.e., $P = 0.02$ which means that the null hypothesis is rejected. There is creativity in the question papers of Matric Part II and O levels. This leads to another question of whether there is any difference in the creativity of both groups.

Table 2
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2 tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Five-Dimensional Model of Creativity	Equal Variances Assumed	5.901	.022	-	28	.000	-5.200	1.240	-7.739	-2.661
	Equal Variances Not Assumed			4.195	22.430	.000	-5.200	1.240	-7.768	-2.632

Table 2 further indicates with 95% confidence level that there is also a statistically significant difference in creativity in the question papers of both groups, i.e., $P = .00$ which means $P < 0.05$. The group having a smaller value of mean has less creativity i.e., Matric (Mean = 0.93), and the group having a larger value of mean has more creativity in its question papers i.e., Cambridge O levels (Mean = 6.13).

The results of this study indicate that there is creativity in the question papers of Matric Part II and Cambridge O level Part II. Further analysis of both the groups i.e., Matric and O levels reveal that in O level exam there is more creativity as compared to Matric exam. The question paper of Matric includes the following format of questions: Q1 is about the Multiple-Choice Questions (MCQs) from the book and grammar including meanings, synonyms and antonyms, and grammatical concepts which are purely rule based. Q2 on the subjective part of the paper is about the question/answers related to the text of the book, Q3 is about the translation or simple English of a passage from any lesson into Urdu, Q4 is about writing a summary of the poem or explanation of a stanza from a poem that is part of textbook, Q5 is about writing an essay or a paragraph on the topics that are usually included in the grammar of Matric (an extension of textbook), Q6 is about changing sentences into indirect form, Q7 is about making sentences of pair of words, Q8 is about translating a passage from Urdu to English, or an alternative question is given to foreign candidates to write a paragraph in English.

The question paper of Matric is based more on the side of the convergent thinking continuum as it questions mostly those aspects that are already part of the textbook. It promotes cramming rather than creativity as the questions repeat every year. Any question that is not already written in the book would not appear on the exam. Even the questions related to direct indirect speech would have sentences that are already written in grammar. Any sentence other than the book was not observed in the data. Similar is the case with all the questions including making sentences and translation. The only question that has a bit of a creative element is the essay or paragraph question but unfortunately, the topics given for essay/paragraph are mostly narrative or descriptive and are included in the book like A Visit to hill station, my favorite book, etc. An essay that requires opinion or argumentation or one that requires reflecting on one's thoughts is never given. The question paper is a result of the grammar translation method that is still being used to teach in schools in Pakistan. This only promotes learning rules and cramming and there is no room for creativity in this.

Cambridge O level exam, on the other hand, is much different from Matric exam. On the continuum of convergent and divergent thinking, it falls more towards divergent thinking. Cambridge O level exam has two papers. Paper 1: Writing has two sections. Section 1 is about directed writing. It includes writing a letter, a magazine article, or a speech as observed in data, on a given situation in which task fulfillment and use of language are graded separately. Even if a person has poor use of language, he still has a chance to score marks based on task fulfillment. This practice is seldom followed while scoring Matric exams.

Section 1

Question 1

You recently attended a course in your spare time which you think other students might enjoy. It could be an educational course or a sporting course or any other kind of course. Your Principal asks you to write an article about the course for the school magazine to encourage other students to join it.

Write your **school magazine article**. You must include the following:

- what type of course it was **and** where it took place
- details of the activity on the course you enjoyed the most, and why
- how the course might benefit other students.

Cover all three points above **in detail**. You should make your school magazine article informative and persuasive. Start your school magazine article with a suitable headline.

Figure 4: An Evidence of Directed Writing from Cambridge O Level English Language Assessment October/November 2022

Section 2

Section 2 is about composition in which topics about description, argument, and narration are given and the student is asked to write between 350 and 500 words. Examples of topics in this section are:

Description

- 2 Describe the typical scene in a busy restaurant or café you know. (Remember you are describing the atmosphere and any people, as well as the restaurant or café itself.)

Argument

- 3 'Telling people what they should do only makes them do the opposite.' Do you agree? Give reasons and examples to support your view.
- 4 'It is completely unfair to judge the behaviour of people in the past by the way we think today.' Do you agree? Give reasons and examples to support your view.

Narrative

- 5 Write a story which includes the sentence: 'I had never been so curious about another person before.'
- 6 Write a story in which a coincidence plays an important part.

Figure 5: An Evidence of Composition Writing from from Cambridge O Level English Language Assessment October/November 2022

Paper 2: Reading has two sections. Section 1: Reading for Ideas has two parts: 1-a) taking notes about reading text b) writing content points. 2- Writing a summary of the text based on content points and giving your opinion about paragraphs in reading text. Section 2: Reading for meaning is about comprehension questions from the different paragraphs in the reading text and MCQs are about guessing the meanings of words as used in the reading text.

It is evident from the analysis of both Matric and Cambridge O level question papers that the latter is more creative in nature. It forces the students to think, reflect upon their ideas, use their creative minds, brainstorm things, and write effectively using their

creativity. Hence, it is a product of divergent thinking as it promotes creativity. In order to foster creativity in the students, it is important to work on making authentic assessments that promote learning as well as innovation and creation. As highlighted by Cumming & Maxwell (1999) students should be assessed by authentic assessments. Newmann and Archbald (1992) proposed that the primary objective of authentic achievement is to foster higher-order thinking and problem-solving abilities that benefit both individuals and society. The assessment of Matric is in no way creative at all. This will not produce problem-solving skills in the students. This will only promote cramming which will lock up the creative side of students' minds. On the contrary, the Cambridge O level exam aligns with the concept of Newmann and Archbald. Thus, divergent thinking and creative assessment should be promoted and practiced in language classrooms and assessment of language. The question paper of Matric assesses the language skills namely writing, grammar, vocabulary, translation, etc. separately while the O level paper assesses two major language skills reading and writing by incorporating all the minor skills into these. The findings of this study are similar to the findings of Malik et al., (2020).

Conclusion

A five-dimensional model of creativity was applied to 10 question papers of Matric Part II and 10 question papers of Cambridge O level Part II to analyze creativity in both types of paper. The five-dimensional model of creativity has 15 aspects which were used as a framework to code the data of question papers. This coded data was later put on SPSS to conduct a quantitative analysis by applying an independent t-test to the data. The results of the study rejected the null hypothesis and the alternative hypothesis of the study was accepted. The findings of the study revealed that there is creativity in the question papers of Matric and O level. Further analysis was conducted to check which of the two types of question papers is more creative. The findings showed that the Cambridge O level paper is more creative than the Matric Part II paper because the former promotes divergent thinking and assesses two major language skills, reading and writing while incorporating the minor language skills including grammar, vocabulary, etc. into it. On the contrary, the Matric Part II question paper promotes convergent thinking. It assesses the major and minor skills separately but very poorly because there is no creativity in Matric question papers as almost all the questions are from textbook, and Grammar and Composition book. In addition, the questions are repeated every year which promotes cramming and no creative thinking. The findings of this study suggest reforms in the field of EFL teaching and learning and in policy-making regarding the education and evaluation of EFL learners.

Recommendations

Based on the findings of this comparative study, several recommendations can be made to enhance the creativity in English question papers for Matriculation system in Pakistan:

- i. The Matriculation exam should move away from relying solely on textbooks and grammar books. Instead, the content should be updated regularly to include contemporary topics and diverse genres of text. This will prevent repetition and reduce the tendency for students to rely on rote memorization.
- ii. Matriculation question papers should include tasks that encourage students to think divergently. This can be achieved by incorporating open-ended questions, essay prompts that allow for multiple perspectives, and tasks that require students to synthesize information from various sources.
- iii. Both major and minor language skills should be assessed in an integrated manner. For example, reading passages should be followed by questions that not only test comprehension but also require students to use vocabulary and grammar in context.

- iv. Educational policymakers should consider revising the existing examination frameworks to prioritize creativity and critical thinking. This includes setting clear guidelines and standards for what constitutes a creative assessment and ensuring that these standards are adhered to in the creation of question papers.
- v. Teachers should be provided with training and resources to design and evaluate creative and effective assessment tasks. Workshops and continuous professional development programs can help teachers understand the principles of creative assessment and how to implement them in their classrooms.

References

- Amabile, T. M. (1983). *The Social Psychology of Creativity*. Springer. <https://doi.org/10.1007/978-1-4612-5533-8>
- Besemer, S. P., & O'Quin, K. (1999). Confirming the three-factor creative product analysis matrix model in an American sample. *Creativity Research Journal*, 12(4), 287–296. https://doi.org/10.1207/s15326934crj1204_6
- Besemer, S. P., & Treffinger, D. J. (1981). Analysis of Creative Products: Review and Synthesis*. *The Journal of Creative Behavior*, 15(3), 158–178. <https://doi.org/10.1002/j.2162-6057.1981.tb00287.x>
- Cropley, D., & Cropley, A. (2005). Engineering Creativity: A Systems Concept of Functional Creativity. In *Creativity across domains: Faces of the muse* (pp. 169–185). Lawrence Erlbaum Associates Publishers. <https://doi.org/10.4324/9781410611925>
- Cropley, D. H., & Cropley, A. J. (2015). *The Psychology of Innovation in Organizations*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316104811>
- Cropley, D. H., & Kaufman, J. C. (2012). Measuring Functional Creativity: Non-Expert Raters and the Creative Solution Diagnosis Scale. *The Journal of Creative Behavior*, 46(2), 119–137. <https://doi.org/10.1002/jocb.9>
- Cumming, J., & Maxwell, G. S. (1999). Contextualising Authentic Assessment. *Assessment in Education: Principles, Policy & Practice*, 6(2), 177–194. <https://doi.org/10.1080/09695949992865>
- Ellianawati, Mufiatunnikmah, S., Setyaningsih, N. E., & Subali, B. (2020). Profile of creative thinking abilities of students measured by multi representation-based creative thinking assessment. *Journal of Physics: Conference Series*, 1567(2), 022047. <https://doi.org/10.1088/1742-6596/1567/2/022047>
- Hommel, B., Colzato, L., Fischer, R., & Christoffels, I. (2011). Bilingualism and Creativity: Benefits in Convergent Thinking Come with Losses in Divergent Thinking. *Frontiers in Psychology*, 2. <https://www.frontiersin.org/articles/10.3389/fpsyg.2011.00273>
- Kharkhurin, A. V. (2009). The Role of Bilingualism in Creative Performance on Divergent Thinking and Invented Alien Creatures Tests. *The Journal of Creative Behavior*, 43(1), 59–71. <https://doi.org/10.1002/j.2162-6057.2009.tb01306.x>
- Kharkhurin, A. V., Koncha, V., & Charkhabi, M. (2023). The effects of multilingual and multicultural practices on divergent thinking. Implications for plurilingual creativity paradigm. *Bilingualism: Language and Cognition*, 26(3), 592–609. <https://doi.org/10.1017/S1366728922000864>
- Long, H., Kerr, B. A., Emler, T. E., & Birdnow, M. (2022). A Critical Review of Assessments of Creativity in Education. *Review of Research in Education*, 46(1), 288–323. <https://doi.org/10.3102/0091732X221084326>
- Lucas, B. (2016). A Five-Dimensional Model of Creativity and its Assessment in Schools. *Applied Measurement in Education*, 29(4), 278–290. <https://doi.org/10.1080/08957347.2016.1209206>

- Lutnæs, E. (2018). Creativity In Assessment Rubrics. <https://www.semanticscholar.org/paper/CREATIVITY-IN-ASSESSMENT-RUBRICS-Lutn%C3%A6s/6e9f90e51111ad9d06b6d65fa127c18a312e329e>
- Malik, S., Khan, A., & Sadiq, U. (2020). A Comparative Analysis of Assessment Schemes in Secondary School Certificate and Cambridge O Level English Examination Papers in Pakistan: Need for Reform. *The Journal of Humanities & Social Sciences*, 28(1), Article 1.
- Matraeva, A. D., Rybakova, M. V., Vinichenko, M. V., Oseev, A. A., & Ljapunova, N. V. (2020). Development of Creativity of Students in Higher Educational Institutions: Assessment of Students and Experts. *Universal Journal of Educational Research*, 8(1), 8-16. <https://doi.org/10.13189/ujer.2020.080102>
- Newmann, F. M., & Archbald, D. A. (1992). The Nature of Authentic Academic Achievement. *Toward a New Science of Educational Testing and Assessment*, 71.
- O'Quin, K., & Besemer, S. P. (2017). Creative Products. <https://doi.org/10.1016/B978-0-12-809324-5.06152-6>
- Reis, S. M., & Renzulli, J. S. (1991). The Assessment of Creative Products in Programs for Gifted and Talented Students. *Gifted Child Quarterly*, 35(3), 128-134. <https://doi.org/10.1177/001698629103500304>
- Runco, M. A., & Acar, S. (2019). Divergent thinking. In *The Cambridge handbook of creativity*, 2nd ed (pp. 224-254). Cambridge University Press. <https://doi.org/10.1017/9781316979839.013>
- Valijonovna, K. I. (2022). The Concept And Essence of Divergent Thinking in Pedagogy and Psychology. *Gospodarka i Innowacje*, 22, 86-94.