

# SEP\_AIN3224

*by* Student Help

---

**Submission date:** 23-May-2023 06:32AM (UTC-0700)

**Submission ID:** 2100059613

**File name:** SEP\_AIN3224.docx (156.73K)

**Word count:** 3404

**Character count:** 21403

## **CASE STUDY PROPOSAL**

### **Executive Summary**

Positive psychology plays a major role towards the growth and development of students. Teenagers these days are more often found to be suffering from certain problems like “stress”, “depression” and “anxiety”. Hence, students lack social skills and interpersonal skills which has made a significant impact and resulted in “negative learning outcomes”. This also implies that the path towards adulthood has become much more competitive and the way towards success in life has become uncertain. Remote learning came into force after the outbreak of the Covid 19 pandemic across the world. Hence, the integration of modern technologies in learning has made a significant impact on students along with isolation. The initiative of teachers to execute the practices of PPI under this circumstance can help in the betterment of the learning environment.



## 1. Introduction

Lack of motivation among the students has become a major concern for the teachers as the students tend to seem disinterested in terms of learning. As per the views of Donaldson et al. (2019), teenagers these days are suffering from behavioural problems and low self-esteem and hence the path to adulthood has become relatively much more uncertain and competitive. This puts a negative impact on the implications of academic performance. Hence, academic teachers need to implement the practices of "Positive Psychology Intervention" in the classroom to encourage students to boost morale and dedication. This can also help the students to develop social skills to collaborate with other students for healthy communication while conveying ideas with a better perspective.

## 2. The problem

### Analysing the situation

As a Maths teacher of Standard VI, I have recognised that the majority of the students reportedly interpreted Mathematics as a boring subject. This implies that the majority of the students tend to seem disinterested while learning mathematics and also consider it a hard subject. Therefore, it can be seen that the fear of learning mathematics typically acted as an obstruction for the students in terms of learning. I realised how to apply the practices of PPI in the classroom to boost self-confidence and image. Influenced by the ideas of Gharibi et al. (2020), self-confidence plays a key role in developing the academic performance of an individual. I also have found out that the students are lazier than ever as the students were introduced to electronic gadgets since <sup>5</sup> the outbreak of the Covid 19 pandemic. I have realised the negative implications of remote learning on account of the Covid 19 pandemic. As opined by Zufarova et al. (2020), students lacked face-to-face interaction with the teachers by means of remote learning. Students were unable to address respective problems in learning mathematics due to remote learning.

Students were unable to acquire proper knowledge regarding the basic concepts of mathematics, which has become an obstruction to solving advanced mathematics problems. The students also used electronic gadgets like calculators, and mobile phones to undertake complex calculations. This implied that the students become lazy and also lacked certain abilities like analytical skills and logical reasoning. The application of remote learning in educational institutions had certain implications on the students in terms of academic performance. As per the views of Digra et al. (2022), students had access to limited

educational resources and adequate support due to remote learning practices. Students tend to remain isolated, which had a negative impact on the behavioural pattern of students. Students had the problem with communication, which led to the rise of a communication gap between the students and teachers.

#### **Proposed suggestions with respect to the problems**

As a mathematics teacher, I feel that there is a need to initiate PPI practices in education to encourage students in learning. Influenced by the ideas of Díaz-Lauzurica et al. (2019), PPI can be typically utilised as a tool, which prioritises the treatment of mental health problems. It is also essential to ascertain the problems of students beforehand to find out the current mental condition of students. Assessing the mental conditions of the students will help to find out the difficulty of students in learning. However, it is also not possible to individually assess the behavioural patterns of the students or else it will be a time-consuming process. Teachers need to conduct extra classes for those students, who have the poorest academic performance. As per the views of Tseng et al. (2019), unmotivated students are less likely to engage in academics, which might affect the environment of the entire classroom. I acknowledged the fact that I need to motivate the students to gain better problem-solving skills such that the students can have better academic performance in Mathematics.

I have addressed that engaging in healthy conversations with the students will help in the identification of problems in learning. As per the views of Weisz et al. (2021), de-motivation in students will affect the behaviours and attitudes of learners. I also need to focus on the set practice papers for the students to appropriately monitor the learning capabilities.

### **3. The PPI category**

#### **Concept of PPI**

PPI is commonly indicated as those intentional activities that intend to enhance the well-being, behaviours, and positive feelings of an individual. Based on the views of Saputra et al. (2019), the application of PPI in an environment contributes towards developing the mental well being of individuals. This implies that it helps to fight back against major problems like “stress”, “depression” and “anxiety”.

#### **Focusing on PPI Categories**

PPI can be typically utilised as a tool by the teachers to encourage the students to perform well. Influenced by the ideas of Chu et al. (2020), lack of motivation among the students affects the long term negative learning outcomes. Hence, students need to be motivated by the application of PPI practices for the objective of positive learning outcomes. As per the

views of Yadav et al. (2019), motivated students are much more likely to adapt and learn under new circumstances as the students are able to relate the learning with the dedicated frameworks. Additionally, the application of “*optimism*” in the classroom environment will help to make sure that the students are able to solve mathematical problems easily. “*Optimism*” among the students will also make sure that the students are relatively much more engaged towards the academic studies.

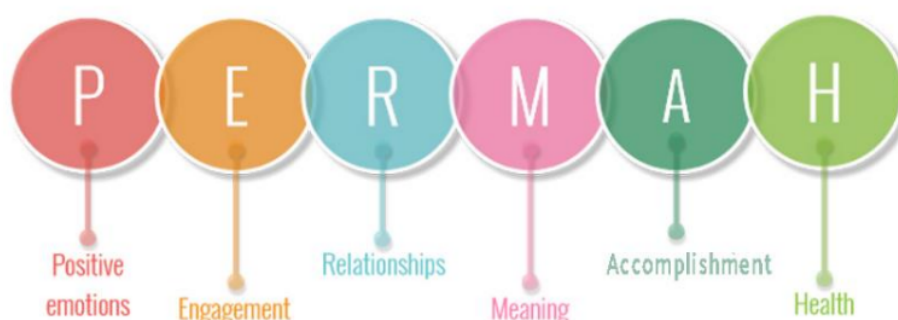
A teacher needs to show “*empathy*” in order to understand the feelings and behavioural patterns of the students. Influenced by the ideas of Weisz et al (2021), showing “*empathy*” among the students can contribute towards the mental well being of students. This implies that “*empathy*” will help to increase the engagement of the student towards academic studies. Therefore, students will now perceive academic studies much more seriously. According to Depow et al. (2021), “*empathy*” helps to build social connections with the peer group individuals. This implies that the teachers can be able to build social connections with the students by showing “*empathy*”. I realised that proper cooperation among the students while identifying learning problems will help to increase the academic performances of students. This implies that the students can now be able to open up with the teachers.

#### **PPI theories and linking with PERMAH**

Remote learning had significant drawbacks in the learning process for students. Therefore, the practices of “Positive Psychology Intervention” need to be enacted <sup>1</sup> in the classroom environment in order to mitigate the problems of students in terms of learning. Application of “*optimism*” and “*empathy*” in the classroom environment will help the teachers in the development of positive feelings of the students. As per the views of Yadav et al. (2019), “PERMAH” <sup>2</sup> stands for “Positive Emotion”, “Engagement”, “Relationships”, “Meaning” and “Accomplishments”. “PERMA” is regarded as an evidence based approach that aims in the improvement of mental conditions like “happiness”, which reduces “depression”, “anxiety” and “stress”. Based on the views of Yadav et al. (2019), <sup>6</sup> the application of the PERMA model in the learning environment will help to inculcate supportive and friendly relationships in an individual environment. Since the application of “*empathy*” and “*optimism*” will help to induce positive feelings of students in the learning environment. Hence, application of these PPI theories in the learning environment will meet the criterias of the “PERMA” model.

Students can now properly address learning problems with the teachers which can help to fill the communication gap among both teachers and students. According to Yadav et al. (2019), “communication” helps to build interpersonal relationships with the peer groups. Since, the

communication gap will be filled, therefore teachers can develop better relationships with the students.



**Figure 1: PERMAH Model**

(Source: Chu et al. (2020))

#### **Linking PPI theory with the problem**

Negative implications of remote learning among the students hugely affected the academic performances and hence there was a need to initiate PPI practices in the learning environment. As per the views of Chu et al. (2020), incorporation of “*empathy*” and “*optimism*” in an environment helps in the development of self confidence and self awareness. Therefore, incorporation of these PPI categories has contributed towards the development of the learning environment.

#### **4. Set of PPI Activities**

##### **Focusing on the activity as per the chosen PPI category**

As a teacher, I recognised the fact that the students were unable to communicate effectively in order to address the learning problems. I realised that in order to inculcate “*optimism*” and “*empathy*” in the learning environment, I need to indulge in healthy conversations with the students. Influenced by the ideas of Scheier, et al. (2021), “*optimism*” helps the individuals to overcome challenges with the identification of potential opportunities. Hence, students will open up and also can freely address the potential learning problems. I realised the need to develop a plan with respect to a specific learning goal for the determination of certain learning outcomes. I initiated the plan to conduct a meeting with students, where the individual will address the problems based on the mathematical subject.



I also assigned the tasks of group work to the students such that the individual can establish team working capability, collaboration and self confidence. As opined by Genç et al. (2021), “*optimism*” among the peer group individuals helps to gain self confidence and awareness which contributes towards the development of problem solving skills. Students will be able to collaborate with each other while expressing feelings and communicating better ideas. Hence, students were less likely to be isolated and have negative feelings like depression, anxiety and stress. Students might lack social skills which can imply that the students are unable to express academic oriented ideas in front of teachers. Assigning Group projects to the students can help in the development of interpersonal skills among the students along with maintaining proper transparency. Students who are lagging behind in academics will be able to come on the right pathway by means of transparency. Influenced by the ideas of (), transparency among the peer group individuals helps to develop engagement of students towards academic studies. Additionally, “transparency” also helps to develop team working capability and collaboration among the students.

#### **Focusing on the importance of PPIs**

I primarily focused on using the PPI practices like “*optimism*” and “*empathy*” as I realised that these PPIs will help to improve the current learning environment. As per the views of Weisz et al. (2021), “*empathy*” can help in the “inclusion” of a positive learning environment. This implies that it increases the engagement of students, which helps to perform well in academic performance. Students tend to feel valued and important whenever a teacher shows “*empathy*”, which can contribute towards the growth and development of students in terms of learning. For instance, a student who is lacking motivation is much more likely to be isolated from the learning environment. The student might show disinterest in learning and might not want to just perform well in academics. Therefore, if a teacher shows “*empathy*” to that student, there will be a significant change in the behavioural pattern of that student.

Additionally, the student will be filled with enthusiasm and show interest in learning. Therefore, “*empathy*” can play an indispensable role in the development of the learning environment. Application of “*empathy*” in the learning environment will ensure that transparency has been maintained among the teachers and students. Indulging in healthy conversations with the students along with proper cooperation has helped me in the learning process. Based on the views of Scheier et al. (2021), “*optimism*” in the learning environment helps the individuals to develop positive feelings like “confidence”, “happiness”, “gratitude” and “satisfaction”. “*Optimism*” needs to be incorporated by the teachers in the learning

environment in order to be supportive and caring towards students with poor academic performances. Hence, this will help in driving towards “positive learning outcomes”.

#### **Whether PPI needs modification**

The PPI model undertaken in the learning environment focused on two different PPI theories that is “*empathy*” and “*optimism*”. The PPI model is undertaken over 51 students which is a relatively small sample size. However, it could have been better if the PPI was undertaken over a relatively larger sample size. Hence, initiatives for the betterment of learning outcomes cannot be properly ascertained.

### **5. The proposed case study**

#### **Ways to implement PPI**

The PPI model was implemented in the learning environment by the incorporation of group activities among the students. Additionally, I also participated in healthy conversations for the implementation of PPI practices in the learning environment. Implementation of these activities in the learning environment has helped to find out learning outcomes after the incorporation of “*empathy*” and “*optimism*”.

#### **Intention, relevant personnel and usefulness**

From the activity it was found that application of “*empathy*” and “*optimism*” in the learning environment will help in the betterment of students with poor academic performances. PPI categories like “*empathy*” and “*optimism*” can help towards the significant growth and development of students. Influenced by the ideas of Weisz et al. (2021) , incorporation of “*empathy*” in learning allows the students to properly understand the concepts and connect with the study materials in the learning process. Hence, teachers can incorporate “*empathy*” to gain a proper understanding about the behavioural patterns of students.

#### **Research question**

What are the benefits of incorporating “*optimism*” and “*empathy*” in the learning environment?

What steps need to be taken to improve the academic performances of students?

How to improve the morale and confidence of students with low academic performances?

How to encourage students to learn?

#### **Methodology**

#### **Participants**

The “research data” will be collected by the student survey of 51 students. The proposed study has been undertaken to find out the well-being of students over a period of 12 weeks. The students will typically gain the opportunity towards new changes in the learning environment over a period of 14 weeks; therefore, the research study will be fully completed after the completion of 14 weeks, which will include certain examinations and assessments to monitor the growth progress of students.

#### **Methods of Data Collection**

“The Happiness Measure” has been typically utilised for the process of collecting data. Lack of motivation has been typically found among the students. Hence, “The Happiness Measure” has been typically utilised as a procedure for data collection in order to measure the satisfaction of students for initiating PPI practices in the learning environment.

(refer to Appendix I )

#### **Efficacy of implementing PPI**

##### **Pros**

Incorporation of “*optimism*” in the learning environment helps to increase the engagement of students in terms of learning. As per the views of Scheier et al. (2021), “*optimism*” helps the individuals to come up with a perspective of better problem solvers. This implies that students have gained confidence to solve complicated mathematical problems. Incorporation of “*empathy*” in the learning environment helps to develop the capability to communicate with other individuals.

##### **Cons**

Incorporation of “*empathy*” and “*optimism*” had certain advantages in the learning environment. However, it also had certain disadvantages in the learning environment. As per the views of Bennett et al. (2019), misplaced empathy can prove to be bad for a specific environment. This implies misplaced empathy in the learning environment can lead to bias towards certain students. This can have a negative impact on the learning environment. Students can be overconfident while solving certain mathematical problems due to the incorporation of “*optimism*” in the learning environment.

#### **6. Conclusion**

PPI plays a significant role in the development of behavioural patterns of an individual. Students nowadays tend to suffer from lack of motivation in learning and here lies the importance of incorporating PPI in the learning environment. Students tend to feel isolated

and also lack encouragement towards delivering extra efforts in academics on account of remote learning. Few of the students lacked social skills, which made it difficult for the students to address learning problems in front of the teachers. Incorporation of PPI categories like “*optimism*” and “*empathy*” implied that the students started feeling motivated to undergo academic studies. Therefore, incorporation of these PPI categories in the learning environment has helped to increase the academic performance of the students. Moreover, incorporation of these PPI categories in the learning environment also contributed towards the development of certain skills like communication skills, problem solving skills and team working capability.

## References:

- Al Gharibi, MSN, K. A., & Arulappan, MSc (N), PhD, DNSc, J. (2020). Repeated simulation experience on self-confidence, critical thinking, and competence of nurses and nursing students—An integrative review. *SAGE open nursing*, 6, 2377960820927377.  
<https://journals.sagepub.com/doi/pdf/10.1177/2377960820927377>
- Bennett, C. L., & Rosner, D. K. (2019, May). The promise of empathy: Design, disability, and knowing the "other". In *Proceedings of the 2019 CHI conference on human factors in computing systems* (pp. 1-13).  
<https://dl.acm.org/doi/pdf/10.1145/3290605.3300528>
- Chu, S. C., Chen, H. T., & Gan, C. (2020). Consumers' engagement with corporate social responsibility (CSR) communication in social media: Evidence from China and the United States. *Journal of Business Research*, 110, 260-271.  
[http://www.com.cuhk.edu.hk/images/content\\_people/publication/ting-pub-2020-consumers.pdf](http://www.com.cuhk.edu.hk/images/content_people/publication/ting-pub-2020-consumers.pdf)
- Depow, G. J., Francis, Z., & Inzlicht, M. (2021). The experience of empathy in everyday life. *Psychological Science*, 32(8), 1198-1213.  
<https://journals.sagepub.com/doi/pdf/10.1177/0956797621995202>
- Díaz-Lauzurica, B., & Moreno-Salinas, D. (2019). Computational thinking and robotics: A teaching experience in compulsory secondary education with students with high degree of apathy and demotivation. *Sustainability*, 11(18), 5109.  
<https://www.mdpi.com/2071-1050/11/18/5109/pdf> demotivation of students
- Digra, M., Dhir, R., & Sharma, N. (2022). Land use land cover classification of remote sensing images based on the deep learning approaches: a statistical analysis and review. *Arabian Journal of Geosciences*, 15(10), 1003.  
[https://www.researchgate.net/profile/Monia-Digra/publication/360662937\\_Land\\_use\\_land\\_cover\\_classification\\_of\\_remote\\_sensing\\_images\\_based\\_on\\_the\\_deep\\_learning\\_approaches\\_a\\_statistical\\_analysis\\_and\\_review/links/62ad837040d84c1401b32cbb/Land-use-land-cover-classification-of-remote-](https://www.researchgate.net/profile/Monia-Digra/publication/360662937_Land_use_land_cover_classification_of_remote_sensing_images_based_on_the_deep_learning_approaches_a_statistical_analysis_and_review/links/62ad837040d84c1401b32cbb/Land-use-land-cover-classification-of-remote-)

[sensing-images-based-on-the-deep-learning-approaches-a-statistical-analysis-and-review.pdf](#)

- Dolinski, D., Dolinska, B., Zmaczynska-Witek, B., Banach, M., & Kulesza, W. (2020). Unrealistic optimism in the time of coronavirus pandemic: May it help to kill, if so—whom: Disease or the person?. *Journal of clinical medicine*, 9(5), 1464. <https://www.mdpi.com/2077-0383/9/5/1464/pdf>
- Donaldson, S. I., Lee, J. Y., & Donaldson, S. I. (2019). Evaluating positive psychology interventions at work: A systematic review and meta-analysis. *International Journal of Applied Positive Psychology*, 4, 113-134. <https://www.scottdonaldsonphd.com/publication/ijpp/IJPP.pdf>
- Genç, E., & Arslan, G. (2021). Optimism and dispositional hope to promote college students' subjective well-being in the context of the COVID-19 pandemic. *Journal of Positive School Psychology*, 5(2), 87-96. <https://www.journalppw.com/index.php/jpsp/article/download/127/121>
- Rand, K. L., Shanahan, M. L., Fischer, I. C., & Fortney, S. K. (2020). Hope and optimism as predictors of academic performance and subjective well-being in college students. *Learning and Individual differences*, 81, 101906. [https://scholarworks.iupui.edu/bitstream/handle/1805/27886/Rand\\_2020\\_hope.pdf?sequence=1](https://scholarworks.iupui.edu/bitstream/handle/1805/27886/Rand_2020_hope.pdf?sequence=1)
- Saputra, T. (2019). Pengaruh Motivasi Kerja Terhadap Disiplin Kerja Karyawan Pada Hotel Permai Pekanbaru. *Jurnal Benefita: Ekonomi Pembangunan, Manajemen Bisnis & Akuntansi*, 4(2), 316-325. [https://d1wqtxts1xzle7.cloudfront.net/77120851/1310-libre.pdf?1640229910=&response-content-disposition=inline%3B+filename%3DPengaruh\\_Motivasi\\_Kerja\\_Terhadap\\_Disipli.pdf&Expires=1684848112&Signature=ey7O7To~gbmb~raOgP~xdnuwJADIEqf7o17giTaUQJ0YmeKtyQXE2R0b9DcEyjFPy0XTvF12bKlsrJBoHYgjuNy3-j0SoS~p5tSXVRZfCzymmLU~s77Rs7pBTWNQKJC9bHn~aQuuEfBBQF6jld9ZdGaGy6g3VOUQ9HQnSi739oeNM8M-8dP~HrV9ialYoX2XvirH7~t~Knfake8TNRtgrjUBpmrqVcu3A2iOFvHvBxkCoRXwiBS3MrgWRaud~Ps0Ge~yT](https://d1wqtxts1xzle7.cloudfront.net/77120851/1310-libre.pdf?1640229910=&response-content-disposition=inline%3B+filename%3DPengaruh_Motivasi_Kerja_Terhadap_Disipli.pdf&Expires=1684848112&Signature=ey7O7To~gbmb~raOgP~xdnuwJADIEqf7o17giTaUQJ0YmeKtyQXE2R0b9DcEyjFPy0XTvF12bKlsrJBoHYgjuNy3-j0SoS~p5tSXVRZfCzymmLU~s77Rs7pBTWNQKJC9bHn~aQuuEfBBQF6jld9ZdGaGy6g3VOUQ9HQnSi739oeNM8M-8dP~HrV9ialYoX2XvirH7~t~Knfake8TNRtgrjUBpmrqVcu3A2iOFvHvBxkCoRXwiBS3MrgWRaud~Ps0Ge~yT)

[eYQU2PzAHEOcg~u4E9LpCYbQ-MSkVURKc3YhKN3R4NxBUI-Mzux-qIII6pr9wM1gDG7dMYJr4l3oyPg](https://orcid.org/0000-0001-9146-0002) &Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

- Scheier, M. F., Swanson, J. D., Barlow, M. A., Greenhouse, J. B., Wrosch, C., & Tindle, H. A. (2021). Optimism versus pessimism as predictors of physical health: A comprehensive reanalysis of dispositional optimism research. *American Psychologist*, 76(3), 529. <https://orca.cardiff.ac.uk/id/eprint/132496/1/Boivin.%20Optimism%20v%20Pessimism.pdf>
- Tseng, H., Yi, X., & Yeh, H. T. (2019). Learning-related soft skills among online business students in higher education: Grade level and managerial role differences in self-regulation, motivation, and social skill. *Computers in Human Behavior*, 95, 179-186. [https://digitalcommons.jsu.edu/cgi/viewcontent.cgi?article=1109&context=fac\\_res](https://digitalcommons.jsu.edu/cgi/viewcontent.cgi?article=1109&context=fac_res) motivation among students
- Weisz, E., & Cikara, M. (2021). Strategic regulation of empathy. *Trends in Cognitive Sciences*, 25(3), 213-227. <https://par.nsf.gov/servlets/purl/10215752>
- Weisz, E., & Cikara, M. (2021). Strategic regulation of empathy. *Trends in Cognitive Sciences*, 25(3), 213-227. <https://par.nsf.gov/servlets/purl/10215752>
- Yadav, R., & Lata, P. (2019). Role of emotional intelligence in effective leadership. *International Journal of Leadership*, 7(2), 27-32. [https://d1wqtxts1xzle7.cloudfront.net/66056285/Role\\_of\\_Emotional\\_Intelligence\\_in\\_Effective\\_Leadership-libre.pdf?1616143845=&response-content-disposition=inline%3B+filename%3DRole\\_of\\_Emotional\\_Intelligence\\_in\\_Effect.pdf&Expires=1684848262&Signature=VICdl~ppIPIFvX8hd7R4iQu9Yq5FSltz5vI2AhuOSOV7WiS2ezsRhtwb2f6o18xx~UbklpIs1Y9KwAjryD6QH2cngMDBe8FniVX-VtEljPhMQWnTZelOkRtVIdexX9RzMCs59sFi5JB2IbMEd-3V1ydM~K1SRsQmgJRY7V-4ULvnUujrIbTvxp7VZBVaxPhdIAGZ8IYYvaSJ0WVPzX8FhKQDRBiO3cEkQINibII7DE3p4ToSF11icbOvWIw~BerrcHqNlCbdcG-G4GGmtCchqBI-WbHvV0nB2z1lCgYf9t5jOAnA8KWjCIzjgIJ7YAI-uwrwoDXErBlTYJrVcLTYg](https://d1wqtxts1xzle7.cloudfront.net/66056285/Role_of_Emotional_Intelligence_in_Effective_Leadership-libre.pdf?1616143845=&response-content-disposition=inline%3B+filename%3DRole_of_Emotional_Intelligence_in_Effect.pdf&Expires=1684848262&Signature=VICdl~ppIPIFvX8hd7R4iQu9Yq5FSltz5vI2AhuOSOV7WiS2ezsRhtwb2f6o18xx~UbklpIs1Y9KwAjryD6QH2cngMDBe8FniVX-VtEljPhMQWnTZelOkRtVIdexX9RzMCs59sFi5JB2IbMEd-3V1ydM~K1SRsQmgJRY7V-4ULvnUujrIbTvxp7VZBVaxPhdIAGZ8IYYvaSJ0WVPzX8FhKQDRBiO3cEkQINibII7DE3p4ToSF11icbOvWIw~BerrcHqNlCbdcG-G4GGmtCchqBI-WbHvV0nB2z1lCgYf9t5jOAnA8KWjCIzjgIJ7YAI-uwrwoDXErBlTYJrVcLTYg) &Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA

Zufarova, N. G., & Shakirova, D. (2020). Remote Education Increases Competitive Environment of Tertiary Education in the Republic of Uzbekistan. *Economics and Innovative Technologies*, 2020(4), 5. <https://core.ac.uk/download/pdf/336867124.pdf>



## Appendices

### Appendix I:

**Question 1: Are you happy if Mathematics is considered as the major subject in academics?**

Options	Percentage	Total participants	Respondents
Extremely happy		51	
Happy		51	
Unhappy		51	
Extremely unhappy		51	

**Question 2: Are you happy when you get to solve difficult problems in Mathematics?**

Options	Percentage	Total participants	Respondents
Extremely happy		51	
Happy		51	
Unhappy		51	
Extremely unhappy		51	

ORIGINALITY REPORT

2%

SIMILARITY INDEX

2%

INTERNET SOURCES

0%

PUBLICATIONS

0%

STUDENT PAPERS

PRIMARY SOURCES

1

3f1681b7-d124-40a1-92d5-a8c4e4d43fa0.filesusr.com

Internet Source

1%

2

www.coursehero.com

Internet Source

<1%

3

pnojournalarchive.files.wordpress.com

Internet Source

<1%

4

9pdf.net

Internet Source

<1%

5

ir.cut.ac.za

Internet Source

<1%

6

repository.up.ac.za

Internet Source

<1%

Exclude quotes On

Exclude matches Off

Exclude bibliography On