

Research Paper



Emogamification to enhance emotional competency among primary school children

Asma Perveen^{1*}, Wan Nurul Izza Wan Husin², Ahmad Nurzid Rosli³, Kannamah A/P Mottan⁴,
Aroyewun Temitope Falashade⁵

^{1*,2,3,5}Senior Lecturer, Faculty of Human Development, Department of Psychology, University Pendidikan Sultan Idris, Tanjong Malim, Malaysia.

⁴SEGi University Kota Damansara, Faculty of Education, Languages, Psychology & Music Malaysia.

Article Info

Article History:

Received: 05 September 2023

Revised: 11 November 2023

Accepted: 19 November 2023

Published: 04 January 2024

Keywords:

Emogamification

Primary

School

Students

Emotional and Behavioural

Management



ABSTRACT

The objective of this study was to test the Emogamification apps among the primary school children to reduce their emotional and behavioural risk of school dropout. The research method was Quasi-experimental design, with 60 participants age range 7 to 12 years, boys (N=29), girls (N=31) from primary level of education of school in Perak, were recruited for the study. Emotional and Behavioural Risk Scale of School dropout among Primary School Children was administered for pre and post assessment. Students were randomly assigned in control group (30) and therapy group to play Emogamification (30). The Emotional Behavioural risk scale of school dropout was administered to assess the pre and post results, among therapy and control group. Results reveals that there was significant mean difference among the score of pre among therapy group of Emogamification. There was significant difference ($p < 0.05$) within the groups. The results show statistical differences for the control group and therapy group of Emogamification in comparison to their pre and post results analysis. Emogamification app is an effective tool to enhance emotional competency and behavioural management among primary school children. The research provided evidence that the application has usability and efficacy to be administered in school and counselling settings.

Corresponding Author:

Asma Perveen

Senior Lecturer, Faculty of Human Development, Department of Psychology, University Pendidikan Sultan Idris, Tanjong Malim, Malaysia.

Email: asmaperveen@fpm.upsi.edu.my

Copyright © 2024 the Author(s). This is an open access article distributed under the Creative Commons Attribution License, (<http://creativecommons.org/licenses/by/4.0/>) which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

1. INTRODUCTION

Technology is always growing, making it a platform for transforming human existence and behaviour. Mobile phones are becoming essential. Mobile phones have the potential to improve health and well-being due to their growing popularity and incorporation into our lives [1].

Children use mobile phones too. The huge number of apps accessible can help people change their social behaviour, improve education, and improve health. Several apps help adults and children detect or develop emotions. Creating learning disability-specific apps is an excellent way to raise awareness. Future technologies can aid learning disabled persons and their communities in education, communication, and basic necessities [2].

In comparison to a population of roughly 33 million, the number of children who stop attending primary school has demonstrated a substantial value [3]. The majority of elementary school students who do not complete their education belong to the B40 category, as stated by the Minister of Education. This is most likely the result of the parents' lack of interest in their children's education, as seen by the fact that they permit their children to leave school before completing their required coursework. The Education Development Plan for 2013–2025 includes provisions to address this concern. Some of the children that belong to the B40 group have a lower socioeconomic status and were brought up in worse conditions. Because of this, some children are more likely to choose not to continue their education and end up falling prey to the harmful influences of society. Students who are slow learners sometimes drop out because they give up trying to catch up. They have a negative outlook on the educational system and believe they will fail. Our educational system is solid and effective [4].

We focused on designing an application that employs cutting-edge technology to improve children's essential learning skills due to the potential benefits of a mobile app for children with unique learning issues. Emogamification, a smart phone application built by researchers, will help primary school pupils, especially slow learners; increase their emotional intelligence (EQ). The game's actions followed Goleman's Theory of Emotional Intelligence [5], [6]. In the emogamification game, each domain of emotional intelligence; self-awareness, self-management, social awareness, social management, and motivation, is combined into sixteen modules. This study has the potential to have a substantial impact on the prevention of emotional imbalance, which can lead to slow learners choosing to remain enrolled in school rather than dropping out of school altogether.

In early life, social and emotional intelligence development is crucial. Theoretically and empirically, it has been shown that boosting emotional in early life is important for assuring the success of forming and sustaining a positive self-image. Children with higher EQ have superior attention spans, a greater capacity for compassionate behaviour, better academic performance, and more pleasant peer connections and interactions [7]. Game based learning is often thought of as an educational technique that encourages student engagement and motivation [8]. In recent years, an increase interest in using gamification to study emotions, engagement and motivation amongst the research community [9]. Gamification has been described as the notion of incorporating game elements into products or services in order to attract more users and increase the user's overall experience, engagement and loyalty. There are various gamification design components that have been linked to specific emotional effects [10].

2. METHODOLOGY

This research designed as development-based research which has four phases. The needs analysis study of phase one involved a quantitative and qualitative study. Total of N=10 primary school teachers and using purposive sampling. The results thematic analysis revealed the themes of four components of emotional issues among children including, self-awareness, self-management, social awareness and social management. Based on the finding researcher developed the instrument of emotional behavioral risk scale of school dropout among primary school children, validated by 7 experts (CVR=80%) and module activities of Emogamification app, and module was validated by 7 experts from psychology, special education, early childhood and teachers of primary school (CVR=86%). Overall reliability of the Emotional Behavioral Risk

Scale of primary school children was scored using a Cronbach's Alpha value of .97 for all the items of scale [11].

Module was tested as quasi experimental design on 60 participants from the primary school district of Perak, Malaysia for its effectiveness to reduce Emotional and behavioral risk of the school dropout among primary school children. 30 students were assigned to control group and 30 students were assigned to therapy group of Emogamification randomly. The recruited children were from same school and class with the recommendation of school teacher. The boys were 29 and girls 31 ages of 7 to 12 years old participated. The permission from the Ministry of Education and the school administration, ethical approval from RMIC and permission from participants parents were followed to carry out the research. Students of both groups were administered with the Emotional and behavioral Risk Scale of Primary School dropout (EBRS) as pre and post assessment to study the effectiveness of the Emogamification module app. The students in the therapy group of Emogamification were allocated one hour to play the games as part of their therapy for 5 days per week, for the control group participants, the post assessment was conducted without any given intervention. The results of pre and post assessment scale score were statistically analyzed for further investigation.

3. RESULTS AND DISCUSSION

Data obtained were analysed using descriptive and inferential statistics. According to, descriptive statistics are used solely to describe the characteristics of a collection of scores and it includes the mean and standard deviation. The results show the difference of control group participants and therapy group of Emogamification among the primary school children. 60 students including boys (N=29) and girls (N=31) with age difference 7-12 with (M=9.52), all the children's parents were working with SPM and doctorate level of professional history, the children had average of 3 -4 sibling, from the middle-class economic status including race of Malays, Indians and Chinese. The participants were all from the same school and same level of education form 2.

Table 1. Comparison of Pre and Post Assessment of Control Group and Therapy Group

EBRS Score	Group	N	Mean	Standard Deviation
Pre assessment Self-awareness, self-management and motivation	Control	30	41.9	13.296
	Therapy	30	46.4	12.286
Pre assessment social awareness and social management	Control	30	30.7	13.469
	Therapy	30	37.7	10.292
Post assessment Self-awareness, self-management and motivation	Control	30	41.3	12.995
	Therapy	30	20.7	7.991
Post assessment social awareness and social management	Control	30	22.3	10.357
	Therapy	30	15.4	5.257

The mean score of pre assessment on self-awareness, self-management and motivation M=41.90 with control group and M=46.47 with therapy group, the pre assessment of social awareness and social management with control group M=30.77 and therapy group M=37.73, the post assessment of self-awareness, self-management and motivation M=41.37 with control group and M=20.73 with therapy group, the post assessment of social awareness and social management with control group M=22.33 and therapy group M=15.43. Show the statistical difference among the pre and post assessment within the control group in therapy group of Emogamification ($p < 0.01$).

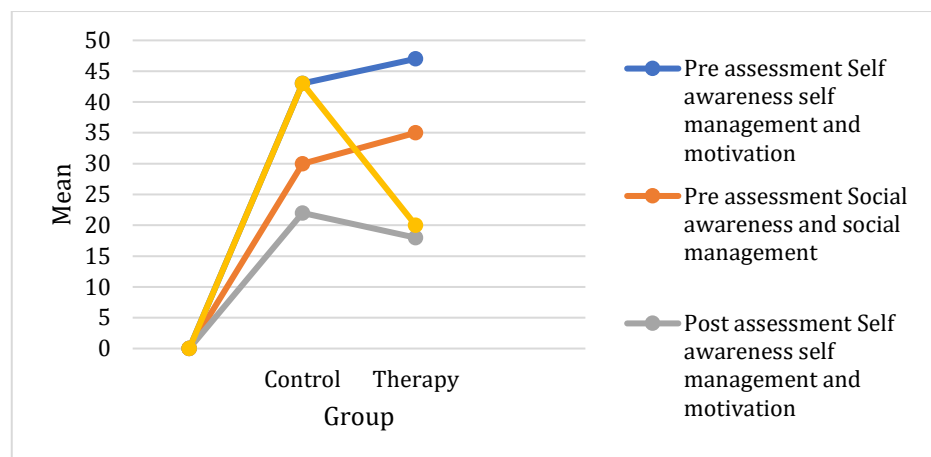


Figure 1. Difference of Mean of Pre and Post Assessment between Control Group and Therapy

Based on the result from the data analysis, it is determined that the emogamification module can be used a framework to produce an emotional competency module among children with learning difficulties between the ages of 7 to 12 years old. Emotional understanding is the capacity to predict the emotion a person would feel as a result of a certain situation. In order for individuals to have the capacity to comprehend emotions, they need to have had their own experiences to learn what feelings are generated by a specific event. Understanding the consequences is an essential component of this process. Understanding emotions requires figuring out where they come from in order for children to be able to comprehend the emotions of others, they must first learn to identify and name their own feelings [12]. It is possible to discern the beginnings of emotional language in a child as young as two years old, and this comprehension continues to grow throughout the ages. When it comes to complicated emotion like guilt and appreciation, children have a hard time comprehending them [13]. Children are capable of distinguishing between different emotions. The children discover that they may feel a variety of emotions at the same time, both positive and negative, as young as eight years old. They also understand that emotional responses do not always represent what a person is genuinely experiencing, and that emotions should sometimes be concealed.

It is necessary to offer emotional and social education to young children in order to raise them who will be successful in their lives. By introducing emotional intelligence early in different environment, either at home or in school, we may help these children achieve better outcomes not just in the present, but also in the future [14]. The findings from this research contribute in ways to increase awareness among parents, community and friends on their misconception, misunderstanding and cultural expectation regarding children with learning disability that may lead to school dropout risk which may cause them to attempt [15]. People might have a general misconception that children that with learning disability problems are only seeking-attention, however this is partially true. Some children with learning disability problems are not known until they reach their teenage years. Besides that, this research also gives the idea for whole community to not take school dropout behavior as a minor issue in today's society. Based on the current results and results from past researches, stated that school dropout behavior is a major issue to be concern of. The community should play a role in preventing this as, nowadays social conformity from society is common.

4. CONCLUSION

The early prevention strategy of dropout behavior among primary school students using emogamification well-being module had been discussed in this article thoroughly. The results added evidence that the mobile based app of Emogamification increased the students learning on emotional self-awareness, self-management, motivation, social awareness, and social management. The finding of the study is unique to help the students to reduce the risk of school dropouts by providing them meaningful and

learning based activities to enhance their emotional competency, which are stronger indicator of life skills, future education and health growth.

Acknowledgements

This research was supported by Ministry of Higher Education (MOE) through Fundamental Research Grant Scheme (FRGS/1/2019/SS109/UPSI/02/7). We acknowledge the Ministry of Higher Education and Research Management and Innovation Center, University Pendidikan Sultan Idris (RMICUPSI).

Funding Information

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Author Contributions Statement

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Asma Perveen	✓	✓	✓	✓		✓		✓	✓	✓	✓		✓	
Wan Nurul Izza Wan Husin	✓		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
Ahmad Nurzid Rosli		✓	✓	✓		✓	✓	✓	✓		✓	✓	✓	✓
Kannamah A/P Mottan	✓	✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
Aroyewun Temitope Falashade	✓		✓	✓	✓	✓	✓		✓	✓		✓	✓	✓

C : Conceptualization

M : Methodology

So : Software

Va : Validation

Fo : Formal analysis

I : Investigation

R : Resources

D : Data Curation

O : Writing - Original Draft

E : Writing - Review & Editing

Vi : Visualization

Su : Supervision

P : Project administration

Fu : Funding acquisition

Conflict of Interest Statement

The authors declare that there are no conflicts of interest regarding the publication of this paper.

Informed Consent

All participants were informed about the purpose of the study, and their voluntary consent was obtained prior to data collection.

Ethical Approval

Not Applicable.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

REFERENCES

- [1] F. D. Reed, A. L. Blackman, T. G. Erath, D. Brand, and M. D. Novak, 'Guidelines for Using Behavioral Skills Training to Provide Teacher Support', *Teach Except Child*, vol. 50, no. 6, pp. 373-380, July 2018. doi.org/10.1177/0040059918777241
- [2] C. Hursen and C. Bas, 'Use of gamification applications in science education', *International Journal of Emerging Technologies in Learning*, vol. 14, no. 1, pp. 4-23, 2019. doi.org/10.3991/ijet.v14i01.8894
- [3] R. W. Mee Mee, 'Role of gamification in classroom teaching: Pre-service teachers' view', *International Journal of Evaluation and Research in Education*, vol. 9, no. 3, pp. 684-690, Sept. 2020. doi.org/10.11591/ijere.v9i3.20622

- [4] A. C. F. Costa and L. Faria, 'Implicit theories of emotional intelligence, ability and trait-emotional intelligence and academic achievement', *Psihologijske Teme*, vol. 29, 2020. doi.org/10.31820/pt.29.1.3
- [5] S. Sharma, J. Deller, R. Biswal, and M. K. Mandal, 'Emotional Intelligence', *Int. J. Cross Cult. Manag.*, vol. 9, no. 2, pp. 217-236, Aug. 2009. doi.org/10.1177/1470595809335725
- [6] A. Fiuza-Fernández, L. Lomba-Portela, J. Soto-Carballo, and M. R. Pino-Juste, 'Study of the knowledge about gamification of degree in primary education students', *PLoS One*, vol. 17, no. 3 March, Mar. 2022 doi.org/10.1371/journal.pone.0263107
- [7] M. E. Parra González et al., 'Gamification in primary education grade. A project of gamification in tutorial action subject to increase motivation and satisfaction of the students', in *Trends and good practices in research and teaching. A Spanish-English collaboration*, Editorial Octaedro, 2019.
- [8] M. Sanchez-Gomez and E. Bresó, 'The Mobile Emotional Intelligence Test (MEIT): An ability test to assess emotional intelligence at work', *Sustainability (Switzerland)*, vol. 11, no. 3, 2019. doi.org/10.3390/su11030827
- [9] N. Baghaei, J. Casey, B. Barmada, F. Mehdipour, and H.-N. Liang, 'Engaging children with educational content via Gamification', *Smart Learning Environments*, vol. 6, no. 1, Dec. 2019. doi.org/10.1186/s40561-019-0085-2
- [10] A. Perveen, W. N. I. Husin, A. N. Rosli, K. A. Mottan, and M. Yusuf, 'Assessment scale for emotional and behavioural school dropout risk among primary school children', 2022.
- [11] D. Gooch, A. Vasalou, L. Benton, and R. Khaled, 'Using gamification to motivate students with dyslexia', in *Conference on Human Factors in Computing Systems - Proceedings*, 2016, pp. 969-980. doi.org/10.1145/2858036.2858231
- [12] A. N. Saleem, N. M. Noori, and F. Ozdamli, 'Gamification Applications in E-learning: A Literature Review', *Technology, Knowledge and Learning*, vol. 27, pp. 139-159, Mar. 2022. doi.org/10.1007/s10758-020-09487-x
- [13] K. Dilnoza Shavkatovna and K. Eldar Davlatjonovich, 'TEACHING SLOW LEARNERS IN RUSSIAN AND ENGLISH CLASSES', *EPRA International Journal of Multidisciplinary Research (IJMR)-Peer Reviewed Journal*, no. 8, 2020.
- [14] J. Gubbels, C. E. Van Der Put, and M. Assink, 'Risk Factors for School Absenteeism and Dropout: A Meta-Analytic Review', *J Youth Adolesc*, vol. 48, no. 9, pp. 1637-1667, Sept. 2019. doi.org/10.1007/s10964-019-01072-5
- [15] M. S. M. Momo, S. J. Cabus, K. D. Witte, and W. Groot, 'A systematic review of the literature on the causes of early school leaving in Africa and Asia', *Review of Education*, vol. 7, no. 3, pp. 496-522, Oct. 2019. doi.org/10.1002/rev3.3134

How to Cite: Asma Perveen, Wan Nurul Izza Wan Husin, Ahmad Nurzid Rosli, Kannamah A/P Mottan, Aroyewun Temitope Falashade. (2024). Emogamification to enhance emotional competency among primary school children. *Journal of Learning and Educational Policy (JLEP)*, 4(1), 1-7. <https://doi.org/10.55529/jlep.41.1.7>

BIOGRAPHIES OF AUTHORS



Asma Perveen^{ORCID}, Senior Lecturer Department of Psychology and Counseling, Faculty of Human Development, Universiti Pendidikan Sultan Idris Malaysia. She focuses on clinical psychology and she got her PhD from Karachi University Pakistan. Her research concerns usually rotate around clinical psychology, mental health, and child psychology, more or less. The articles and publications she worked on include things like emotional and behavioral risk in school children, mental health literacy, suicidal ideation, and psychological wellness among students in Malaysia. Sometimes, it feels like her whole academic lane

	keeps circling those themes. Email: asmaperveen@fpm.upsi.edu.my
	Wan Nurul Izza Wan Husin , currently works in the Department of Psychology & Counselling at Universiti Pendidikan Sultan Idris. She has research interests in Emotion, Cognitive Psychology and Psychometrics, plus Leadership, and Mental Well-being as well. In her published work she has done studies on emotional intelligence, leadership among Muslim youth, organizational citizenship behaviour, and also psychometric scale validation.
	Ahmad Nurzid Rosli , is based at the Faculty of Computing and Meta-Technology, UPSI. Not psychology perse, but he often ends up collaborating on cross domain work like this one, were ideas from different fields sort of, merge together. He finished his PhD at Inha University in Incheon, South Korea, in the Department of Computer and Information Engineering. His focus areas include semantic web, ontologies, recommendation systems, and e-learning technology, which are the kinds of abilities he likely uses when building the tech parts of this research. Even if the topic is psychology-related, the underlying system components tend to lean on that exact mix of expertise.
	Kannamah A/P Mottan , seems linked to the Faculty of Education, Language, Psychology and Music at SEGi University, Petaling Jaya Malaysia. In her Google Scholar profile, you can see research topics that lean toward special education, disability studies, special needs, and psychology, kinda all connected.
	Aroyewun Temitope Falashade ^{ORCID} , is a Senior Lecturer as well as a Clinical Psychologist at Universiti Pendidikan Sultan Idris, Department of Psychology, Faculty of Human Development/Education. Her research interest keeps moving across Personality, Clinical Psychology, Forensic Psychology, Health Psychology, and Social Psychology, kind of a broad yet connected range. She has published work on mental illness representation within Nigerian media, prison-based research challenges, and the psychosocial drivers linked to student exam withdrawal, and in the class-room she also teaches psychometrics, research methodology for clinical psychology, and related areas.