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PROJECT-ORIENTED PROBLEM BASED LEARNING (POPBL): AN INITIATIVE TO ENHANCE SELF-ESTEEM AMONG ORPHANS

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Abstract:

Self-esteem is embodied by a person when he feels capable of handling life's basic challenges and being worthy of happiness. Countless studies unfortunately indicated that orphans are often deficient of this quality. This paper explores and discusses the implementation of Project-Oriented Problem Based Learning (POPBL) in an orphanage to boost the participants' self-esteem. The study involved 32 male orphans aged 9 to 16 years old, coming from diverse backgrounds and originated from various parts of Malaysia. Participants were divided into three groups of 11 and 10 members, and each led by a male supervisor or warden. Each group was required to manage and participate in a program called "Saiyyidul Ayyam". The program took place on specified Fridays, and all three POPBL sessions were completed within two months. Each orphan in each group was entrusted with specific roles such as master of ceremony (MC), reciter of the Quran, reciter of the meaning of the Quran, storytellers, *Nasyid* presenters and finally *Doa* reciter. Each group was given two weeks to practice prior to their designated Friday and were given the freedom to choose their own roles, their own *nasyid* etc. Participants' self-esteem levels were assessed using The Rosenberg Self-Esteem Scale (RSES) before and after completing their tasks. To ensure RSES items were understood by minor participants, individual interviews were conducted to collect data. The RSES uses a scale of 0–30, where a score less than 15 suggested low self-esteem. The findings indicated that after completing the POPBL program, 62.63% (N=20) of the participants demonstrated improved self-esteem, 21.22% (N=7) reported no change, and 15.15% (N=5) experienced a decrease in their self-esteem level. The findings were shared with the Pahang Orphan Welfare Association (PEKAYA) aiming to facilitate its members to adopt the Problem-Based Project-Based Learning (POPBL) module as a tool to strengthen their residents' self-esteem.

Keywords:

POPBL, Self-esteem, Orphan, Intervention

Introduction

Children represent our next generation. They are our future workers, leaders, innovators, and caregivers. Their education, health, and well-being are essential for the long-term development and sustainability of our society. Year 2022 estimates children under the age of 18 made up 28.1 per cent of Malaysia's population of 32.65 million, with 4.75 million of them boys and 4.44 million girls (Department of Statistics Malaysia, 2023). Some of these children however, are facing unfortunate circumstances, among them are orphans.

Orphans are children who have lost either one or both of their parents. Often, if orphans are coming from families that are struggling financially, the last option available is for the orphans to be placed in an orphanage. Yet, orphans staying in orphanage often feel alone, neglected, mad, bored, and unhappy. This situation naturally causes them to face various emotional problems including feeling worthless and lacking of self-esteem. Studies have confirmed that children and adolescents brought up in care centres or orphanages are prone to various emotional and behavioural difficulties, such as anti-social, aggression, anxiety, and depression (Lehmann et al. 2013; Simsek et al. 2007). These children suffered emotional and behavioural problems three to seven times more often than others of their age with the same socio-economic status (Gavita et al. 2012). The environment where the children are raised in i.e., their homes, neighborhoods, schools, and hostels contributed profoundly to the development of their self-esteem. Harter (1983) suggested that children's positive self-esteem comes from four things: 1) how the parent and child get along; 2) what strategies used to handle the child's difficult feelings; 3) how much the child accepts themselves; and 4) how the child acts around others. Unfortunately, children living in orphanages often have no access to all those four essential elements. The number of orphanages increases every year indicates a growing need for research, care and support for orphans and under privilege children. Currently there are 287 registered children care centres nationwide that provide shelter and care to 36,207 children including orphans. The amount suggested the need to provide a stable and nurturing environment for these vulnerable group of our society (Department of Social Welfare Malaysia, 2021). Hence, the main objective of the current study is to know the ability of Project Oriented Problem Based Learning named as '*Sayyidul Ayyam*' to improve participants' self-esteem. The changes in level of self-esteem among participants were measured before and after the intervention take place. The current research studied institutionalized orphans, but it focusses only to one of orphanages located in Kuantan, Pahang. The occupants of the respective orphanage were all included in the research to avoid any of them feeling left out.

Literature Review***Self-esteem***

Countless studies have indicated that orphans often lack self-esteem due to challenges they are facing early in their life. Challenges encountered by these children and teenagers among them related to cognitive development, personality traits, and interpersonal interaction. These teenagers incline to display counterproductive behaviours such as withdrawal, hostility, emotional insensitivity, and self-centeredness (Alem, S. K., 2020; Isnaeni Y., Hartini S., &

Raymondalexas Marchira C., 2021; Osamy Zaid Anbar, H., Mahmoud Elewa, S., & Elias Abdel-Aziz, A., 2023).

Children with a healthy mind and emotions are crucial for our country's future. Presently, there are increasing number of orphans from poor backgrounds and pandemic made it worse. It was reported that 4696 children throughout Malaysia had lost either or both of their parents due to COVID-19 (Ministry of Women, Family and Community Development Malaysia, 2021). The situation urged for immediate necessary care for those orphans so that they could have a good life and a promising future through education and academic achievement (Roy, 2021; Goldman et al., 2020). Self-esteem is a central concept that is related to academic achievement and social functioning. In relation to academic achievement, various studies indicate that children with low self-esteem exhibits low academic achievement (Shuja, 2023; Perven et al., 2020; Subon et al., 2020) and they are less successful at school.

It's central for kids to build strong self-esteem while they're growing up. Positive self-esteem protects children and adolescents from mental distress and enables them to cope effectively with difficult and stressful life situations (WHO, 2000). Accordingly, the development of a strong sense of self-esteem during early life is necessary if children are to withstand family stress, social pressures, and negative temptations. Low self-esteem in children is linked to poor health and deviant social behaviours (Bogdanova et al., 2022; Faiza et al., 2020) such as smoking, substance abuse, poor academic achievement, depression, and pregnancy.

The environment in which children are raised in i.e., their homes, neighbourhoods, schools, and hostels contributed profoundly to the development of their self-esteem or how they feel about themselves. Stanley Coopersmith's (1967 as cited in Seligman, 1996) found that parents and how they raise their kids really affect their children self-esteem. If parents fail to provide a good environment physically, emotionally, and mentally, and if they don't pay much attention to the child or react in extreme ways, then the child's self-esteem might negatively affect. In short, children with low self-esteem were emotionally unstable. Harter (1983) added that positive self-esteem comes from four things: 1) how the parent and child get along; 2) the strategies used to handle the child's difficult feelings; 3) how much the child accepts themselves; 4) how the child acts around others. Regrettably, children in orphanages often have no access to all four of these essential elements.

As children get older, they start making connections beyond just their family. They include their neighbourhood and school in their relationships. When they start going to school, they start thinking about themselves based on how they relate to teachers and friends. This includes their study performance, how they get along with others, and how they feel emotionally and physically. When they do well in these areas, they start feeling better about themselves. This also helps their self-esteem grow as they keep moving forward. Many psychologists have provided definition of self-esteem and examine method to evaluate self-esteem yet, there haven't been many studies focusing on effective ways to help or enhance it. Interventions are considerably vital as there are researches that show self-esteem changes as they get older.

Project Oriented Problem Based Learning

Project Oriented Problem-Based Learning (POPBL) has been widely implemented by many higher learning institutions around the globe in their teaching and learning programs (Lehmann et al., 2008; Uziak et al., 2010) while in Malaysia, Universiti Teknologi Malaysia, Universiti

Kebangsaan Malaysia and Universiti Malaysia Pahang have adopted the POPBL method since 2007 (Fatmawati, L. and Hafizoah K., 2017; Fatmawati, L. Hafizoah K., Jamilah, B. Mansor, S., 2018). Through observation, they found out that POPBL is able to increase motivation, promote deeper learning, improve communication skills and teamwork competency, promote higher grades, increase employability, enhance confidence level, and raise retention rate (Fatmawati et al., 2018).

POPBL is an approach based on learning theories and principles. It has been widely adapted by numerous higher education institutions particularly in medical and engineering faculties. Among the theories adopted are Cognitive Theory and Constructivism (Piaget), Experiential Learning (Dewey & Lewin) as well as Social Cognitive Theory (Vygotsky). Additionally, the learning principles adapted by this scheme are “Learning by Doing and Experiential Learning”, “Dale’s Cone of Learning”, “Kolb’s Experiential Learning” also the “How People Learn (HPL) Framework” (Hmelo et al., 1997).

While Problem-Oriented Project-Based Learning (POPBL) is commonly employed as an educational method, it also proves effective in assessing the effectiveness of training programs, particularly those centered around collaborative group work. As project oriented problem based learning (POPBL) is a group-based nature it is suitable to assist and improving individual with low self esteem. Prior research suggests that being in the group provides (i) social interaction (Fortunela, 2014), (ii) decision-making opportunities (Lian & Yusoof, 2009) and (iii) peer support (Li et al., 2014). In short it is an effective approach for enhancing the level of self-esteem among participants.

Having the POPBL running as weekly activities should maintain a high level of self-esteem of the participants. Employing this method will potentially shield participants from psychological challenges commonly faced by orphans residing in orphanages. It should become a prevention measure from other emotional and behavioural issues as previous studies have identified. Past studies suggested the prevalent emotional and behavioral challenges faced by orphan adolescents with common issues include depression, anxiety, and low self-esteem (Tejvani R, Metri K, Agrawal J, Nagendra H. 2016). Adolescents also, often contend with feelings of anger, depression, and trauma (Mohammadzadeh M, Awang H, Ismail S, Shahar HK. 2019; Green EP, Cho H, Gallis J, Puffer ES. 2019). Thus, studying this matter is particularly timely, as society often places greater emphasis on physical aspects, sometimes overlooking the critical role that psychological and emotional well-being play in a person's overall survival and thriving.

Methods

Research approach was quantitative in nature focusing to identify the effectiveness of a project-oriented problem-based learning (POPBL) known as “*Sayyidul Ayyam*” on participants’ self-esteem. The study involved 32 orphans staying in one of the orphanages in the East Coast Malaysia. Data collection was carried out using a translated version of the 10-item Rosenberg Self-Esteem Scale and the evaluation are made using a four-level scale. Data collection for pre-test was done by the researchers after getting the permission from the orphanage’s management and before the intervention took place while the post-test was administered directly after the completion of the respective ‘*Sayyidul ayyam*’. As we were dealing with minor participants, individual interviews were conducted to ensure RSES items were understood by all participants both before and after the intervention. The study took two months

to complete as we have three teams and each team were given two weeks to prepare and execute their tasks. RSES uses a scale of 0–30, where a score less than 15 suggested low self-esteem. Pre-test and post-test scores were analysed using descriptive analysis and paired T-test to determine the effectiveness of the intervention.

POPBL Procedure

Project Oriented Problem Based Learning (POPBL) project module exposes the participants to three opportunities (i) social interaction opportunities, (ii) decision making opportunities, and (iii) peer support to ultimately enhance their self- esteem. This project focuses on dynamic and integrated approaches that suit the needs of the participants (i.e., orphans). Past research suggested that participants that gone through experiential learning will simultaneously enrich their communication skills, team-working skills and most importantly improving their self-esteem (Fatmawati, L. & Hafizoah K., 2017; Fatmawati et al., 2018).

POPBL is a teaching method in which participants learn by practice. Participants are instructed to organise a hands-on project that involve a real scenario called “*Sayyidul ayyam*”. The project should promote Soft Skills values such as team-working, communication, problem solving, leadership and more. Concurrently, it should also boost self esteem through decision making, social connection and peer support. Through this project participants manage their actions in accordance with the demands of the project. In short, the main objective of the project was to expose the participants to challenges and at the end experince success, connection and sense of accomplishment.

To accomplish the POPBL, consent was obtained from the management of the orphanage to organize POPBL and to administer questionnaire before and after the project. The demographic variables were collected, and self-esteem was assessed using the Rosenberg Self – Esteem Scale before the intervention took place. The participants were latter divided into three groups where each group received the intervention for a period of two weeks. The intervention comprises of personal training, group training, individual guide, and rehearsal. After completing the project, participants ‘self-esteem was again assessed using the same scale.

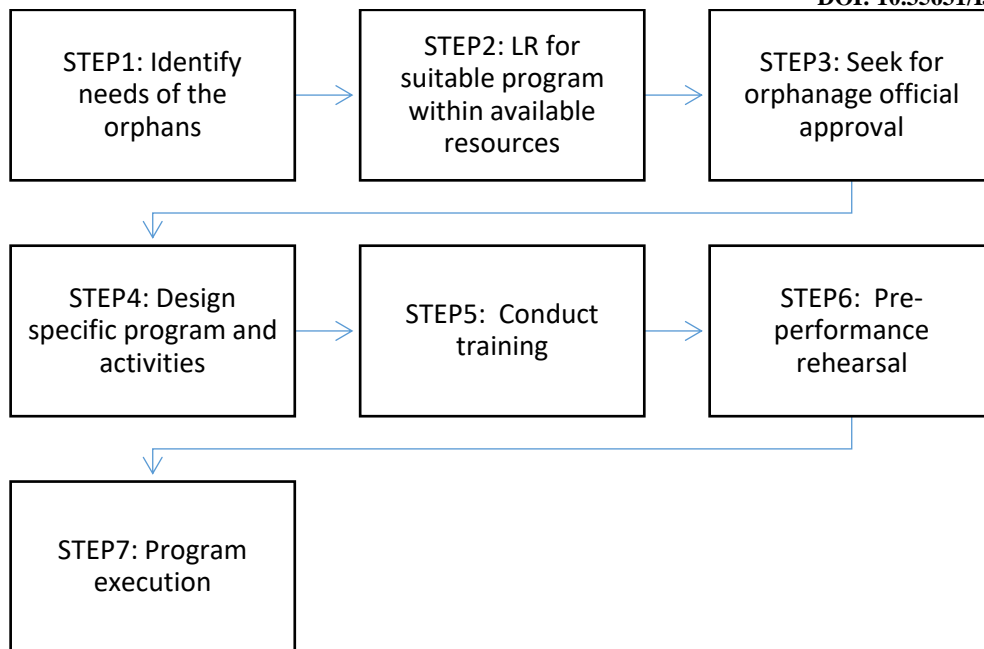


Figure 1. Steps in The Application of POPBL (Sayyidul Ayyam)

The application of POPBL (*Sayyidul Ayyam*) as shown in Figure 1 briefly describe as follows: Step 1: Identifying participants' needs. In this study, the orphanage requested a program that possibly sharpen participants' talents, refining their communication, teamworking skills, improving their self-esteem and most importantly, doing so within a limited budget.

Step 2: As the residents of the orphanage lack specific and sustainable activities for skill development, we conducted a literature review to identify a suitable program. Our exploration led us to the Problem-Oriented Project-Based Learning (POPBL) approach as suits the orphanage's objectives. Importantly, the approach aligns with the available facilities, talents, time, and resources at the respective orphanage.

Step 3: After identifying the available resources, we sought and obtained approval from the orphanage to divide the participants into three groups, each comprising members of different ages. The primary reason for that was for the older participants to serve as guides and mentors to the younger ones. Each group was closely supervised by a designated warden.

Step 4: Upon completing the grouping process, we engage in a comprehensive discussion to finalized task schedule for each group. This schedule considers the views, abilities, interests and comfort of each participant. Given that each group comprises 11 members, the assigned tasks are carefully decided to ensure balance weight of responsibilities.

Step 5: Coordination meetings and training session were scheduled involving both participants and wardens. The objectives were to ensure the execution of those training sessions. The collaborative effort aims to maintain adherence to the predetermined schedule, fostering effective communication and a smooth implementation of each training session.

Step 6: The day before the performance, a comprehensive rehearsal was conducted to ensure readiness of participants to perform their assigned tasks. This pre-performance rehearsal aimed to fine-tune and preparing the participants for the upcoming event.

Step 7: The performance day proceed as scheduled, with participants showcasing their tasks before a jury panel consisting of the orphanage manager, a lecturer from a nearby university, and other residents of the orphanage who were not in charge in that particular day. Following the presentations, commendations and prizes were awarded to all performers as a form of encouragement, aimed at motivating them to strive for even greater achievements in the future.

Results

A total of 32 male orphans aged between 9 to 16 years old participated in a Project oriented Problem Based Learning (POPBL) designed to enhance their self-esteem. The Rosenberg Self-Esteem Scale (RSES) was used to measure participants' level of self-esteem before and after the completion of the project. RSES uses a scale of 0 – 30, where a score less than 15 suggested low self-esteem.

Table 1
Respondents by Age

| Age | Frequency | Percentage | Cumulative Percentage |
|--------------|-----------|------------|-----------------------|
| 8 | 1 | 3.1 | 3.1 |
| 9 | 1 | 3.1 | 6.3 |
| 10 | 6 | 18.8 | 25.0 |
| 11 | 5 | 15.6 | 40.6 |
| 12 | 5 | 15.6 | 56.3 |
| 13 | 6 | 18.8 | 75.0 |
| 14 | 3 | 9.4 | 84.4 |
| 16 | 3 | 9.4 | 93.8 |
| 17 | 2 | 6.3 | 100.0 |
| Total | 32 | 100.0 | |

Source: Authors

Table 2 shows participants' level of self-esteem before the implementation of POPBL. 78.1 percent (N=25) participants recorded high level of self-esteem, while 21.9 per cent (N=7) recorded low level of self-esteem. The lowest and highest scores were 6 and 23 respectively.

Table 2
Self-Esteem Pre-Test Score

| Self-Esteem | Pre-Test Score | No. Of Respondents | Percentage |
|-------------|----------------|--------------------|------------|
| High | 15 - 23 | 25 | 78.1 |
| Low | 6 - 14 | 7 | 21.9 |

Source: Authors

The participants level of self-esteem was measured again after the implementation of POPBL using the same scale. The number of participants with high score increased from 25 before to 27 which represent 84.4 per cent of the total participants. Table 2 summarizes the score. The

lowest score also improved from 6 points to 11 points while the highest score remained at 23 points.

Table 3
Self-Esteem Post-Test Score

| Self-Esteem | Post-Test Score | No. Of Respondents | Percentage |
|-------------|-----------------|--------------------|------------|
| High | 15 - 23 | 27 | 84.4 |
| Low | 11 - 14 | 5 | 15.6 |

Source: Authors

62.5 per cent (N=20) of the participants had improved their self-esteem based on the RSES score, 21.9 per cent (N=7) of the participants did not record any improvement, while 15.6 per cent (N=5) of the participants recorded decrease in their RSES score. This is shown in Table 3.

Table 4
Difference Between Pre-Test and Post-Test Score

| Difference of Self-Esteem Score | No. Of Respondents | Percentage |
|---------------------------------|--------------------|------------|
| Positive | 20 | 62.5 |
| No Change | 7 | 21.9 |
| Negative | 5 | 15.6 |

Source: Authors

Paired samples T-Test was conducted to compare the level of self-esteem before and after the implementation of the POPBL. Table 4 shows that mean score was increased from 16.09 to 17.72, before and after the POPBL was implemented respectively, while the difference between participants' scores also reduced as shown by the lower standard deviation from 3.286 to 2.9428 respectively.

Table 5
Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|------|---------|----|----------------|-----------------|
| Pair 1 | Pre | 16.0938 | 32 | 3.28594 | .58088 |
| | Post | 17.7188 | 32 | 2.94284 | .52022 |

Source: Authors

The results in Table 5 shows that the participants' level of self-esteem improved significantly after the implementation of POPBL at 0.05 significance level [$t = -1.625$, $df = 31$, $p < 0.05$]. The results confirm that the implementation of POPBL as conducted in this study had improved the level of self-esteem of the participants. The implementation of *Sayyidul Ayyam* project successfully increased the level of self-esteem among orphans as was intended in the study.

Table 6
Paired Samples Test

| Pair | Pre - | - | Paired Differences | | | | T | Df | Sig. (2- Taile) | | | |
|------|-------|----|--------------------|---------------|---------------|-------------------------------|---|---------|-----------------------|--------|---|------|
| | | | Mean | Std. | Std. | 95% Confidence | | | | | | |
| | | | | Deviat ion | Error Mean | Interval of The Difference | | | | | | |
| | | | Lower | Upper | | | | | | | | |
| 1 | Post | 00 | 1.625 | 30 | 3.367 | .5952 | 6 | 2.83904 | .4109 | -2.730 | 3 | .010 |
| | | | | | | | | | | | | |

Source: Author

Discussion And Conclusion

Having high self-esteem is crucial in achieving mental wellbeing for teenagers, it plays a vital role in enabling them to lead a prosperous and fulfilling life. Self-esteem development occurs rapidly during adolescence. According to Banstola et. al., (2020) suggested that self-esteem is formed through experiences, it flourishes when a person develops trust in those around them. It matures when teenagers accept their authentic self, taking pride in their accomplishment and not feeling diminished by what they are lack. This process is further facilitated by the presence of caring adults who attend to the child's needs, particularly their emotional needs. The act of giving such attention communicates to the teenager that they are valued.

Even so, teenagers residing in orphanages frequently do not receive the attention and affection they require. Often due to problematic family background, inadequate facilities and restricted time in the orphanage may lead to low self-esteem. According to Banstola et. al., (2020), a lack of attention, emotional support such as praise and encouragement are among the causes to low self-esteem in teenagers. Individuals with low self-esteem are vulnerable to a range of social problems. According to Salerno et. al., (2015) those with low self-esteem are more likely to exhibit aggressive behaviours. Most notably, they tend to undervalue themselves. Teenagers with low self-esteem are potentially experiencing low psychological well-being (Lesmana, 2013). He further suggested that "the higher a person's self-esteem the higher their psychological well-being, and conversely, the lower the self-esteem, the lower the psychological wellbeing. With those notions in mind, conducting this study is sensible and as the result suggested we humbly proposed that the objective of the current study was achieved. The results of this study based on RSES items recommended that the level of self-esteem among participants were improved directly after the intervention. Non the less, our disability to do a follow up observation within three months and six months after the intervention can be considered as the limitation of this study and thus, we suggested a longitudinal observation in the future.

As the population of orphans continues to grow, it is possible that due to lack of exposure, we have unintentionally overlooked the development of these children's self-esteem. As continuous support, attention and love are insufficient to foster orphan's self-esteem, it becomes imperative to explore and implement alternative approaches. This study theoretically supports the past studies in underlining the significant of group work projects to enhance self-esteem among orphans. Practically, the current study provides guidance for care givers and orphanages' managements to intensify their home activities and improve their occupants 'self-esteem and psychological wellbeing. Providentially, self-esteem finds its roots in various

sources namely (i) social interaction (Fortunela, 2014), (ii) decision-making opportunities (Lian & Yusoo, 2009) and (iii) peer support (Li et al., 2014). These serve as the foundation for the formation of an approach known as Project Oriented Problem Based Learning (POPBL). Additionally, to make sure that all residents feel valued and included, the current study involves every occupants of the house. The project, aptly named as 'Sayyidul Ayyam' as it takes place on Fridays from 2:30 pm to 4:30 pm. The residents are divided into three groups where each was supervised by a warden. Each group was responsible to organize and run a session of 'Sayyidul Ayyam'. Among the tasks included as POPBL activities were reciting verses from the Quran, sharing stories from the Quran, performing nasyid and reciting doa. Each group is granted two-weeks period for preparation, task distribution, attending training sessions and finally even execution.

Through these activities, participants are indirectly exposed to three opportunities. First, they are engaging in social interaction; during discussion to a locate tasks, training session with the warden, and mutual assistance among themselves. Secondly, they have the chance to make decisions, such as making opportunities, this opportunity they get when deciding whether to agree or not with the agreeing or disagreeing with assigned tasks, or selecting tasks based on their capabilities. Lastly, they experience peer support through group exercises and seeking help from their peers.

The current study focuses on dynamic and integrated approaches tailored to the participants' specific needs which is to enhance their self-esteem. The results indicate a significant improvement in the participants' self-esteem level following the implementation of POPBL, with statistical significance at the 0.05 level [$t = -1.625$, $df = 31$, $p < 0.05$]. The implementation of the POPBL program in an orphanage in Kuantan has demonstrated a notable improvement in the participants' level of self-esteem. Therefore, it is recommended that (a) this program be considered as proactive measures to boost the self-esteem among institutionalized orphans. (b) It is imperative to longitudinally observe the effectiveness of this program to ascertain that the positive outcomes observed in the current study were not merely coincidental. Sustained effort to enhance the self-esteem among orphans should persist as improving their self-esteem should benefit their mental, physical, and cognitive development.

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